



# Identifying the Invisible Barriers to Diversifying the Teacher Pipeline: Dismantling Racialized Gatekeepers in Teacher Education

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## Abstract

In this mixed-methods study, we seek to understand the impact of the California Subject Examination for Teachers (CSET) on the makeup of the teacher pipeline. We are specifically interested in exploring how teachers of color are impacted by these tests when seeking to enter the teacher workforce. Findings from the data, both qualitative and quantitative, provide evidence that the tests negatively impact all four racialized groups as labeled by the California Teaching Commission (African American, Asian American, Hispanic American, and Native American), while also conveying racialized messages to candidates of color. In contrast to common rhetoric about the utility of these exams, we found the CSETs to hinder efforts to diversify the teacher.

**Keywords** Teacher education · Standardized testing · Equity · Teacher preparation · Social justice

## Introduction

So I'm actually done with the program and teaching, but the only thing actually keeping me from getting my credential right now is the CSET. (Lashante, 5th year elementary school teacher)

Since their inception a century ago, standardized tests have been instruments of racism and a biased system and have been seen as inaccurate and unreliable measures of learning (Rosales & Walker, 2021). Today a movement is growing across the

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country to resist testing abuse and overuse, as well as to promote authentic assessment; as we see many colleges and universities no longer require SATs, including the University of California systemwide

In the domain of teacher education, standardized assessments have allowed racial and class hierarchies to reproduce themselves year after year, creating barriers to both higher education and teaching careers. Virtually every step in the common teacher certification process risks disproportionately excluding prospective teachers of color, providing the greatest gatekeepers for Black and Hispanic teachers (Barnum, 2017). Research continues to show that teachers' scores on licensure exams have no bearing on their ability to raise student achievement and/or overall teacher quality (Chaplin et al., 2017; Kolman et al., 2017; Petchauer, 2018). Rather, teacher racial diversity is consistently found to matter in terms of student achievement, particularly for students of color (Tintiango-Cubales et al., 2015; Jackson & Knight-Manuel, 2019; Sleeter, 2011; Sleeter, 2015). Even with this evidence, teacher candidates continue to be required to pass high-stakes, standardized licensure exams, thus impacting the teacher pipeline and the cultural and racial diversity of the teacher workforce.

In this study, we seek to understand the impact of the California Subject Examination for Teachers (CSET) on the makeup of the teacher pipeline. According to the California Teaching Commission, candidates pursuing a teaching credential must show that they are proficient in the content area in which they are pursuing a credential. The CSET, a series of subject matter exams, is one way candidates can meet subject matter competency. Although the California Teaching Commission has taken necessary steps to broaden candidates' ability to demonstrate subject matter competency, at the time of this research most candidates were required to take CSETs to enter a teaching credential program and receive their credential.

We are specifically interested in exploring how teachers of color are impacted by these tests when seeking to enter the teacher workforce. Findings from the data, both qualitative and quantitative, provide evidence that the tests negatively impact all four racialized groups as labeled by the California Teaching Commission (African American, Asian American, Hispanic American, and Native American), while also conveying racialized messages to candidates of color. In contrast to common rhetoric about their utility, it may be argued that these exams hinder efforts to diversify the teacher pipeline and provide students with a world where students are able to learn from teachers who are like them and understand, honor, and value the cultural wealth of their intersectional identities, families, and communities.

To begin, we share the current context of teacher education in California, including current testing requirements. We then highlight existing research on: (a) why we need more teachers of color, (b) barriers to diversity in the teacher pipeline, and (c) the racialized impact of high-stakes entrance exams in teacher preparation. Next, we present our methods for the study and findings. We end with implications of this study for educational policy.

## Background

A predominantly white teaching force is one of the key factors perpetuating structural racism in our educational system (California Alliance of Researchers for Equity in Education, 2018; Picower & Kohli, 2017). Research shows that whether in K-12 schools or universities, a primarily white teaching force works to maintain and exacerbate the racial gap in educational success for an increasingly diverse K-12 student population (Haddix, 2017; Yarnell & Bohrnstedt, 2018; Redding, 2019; Gershenson et al., 2021; Kohli, 2009; Egalite & Kisida, 2018; Rasheed et al., 2020).

The difference that a more racially diverse teacher-educator and K-12 teaching force makes is multi-layered, including that well-prepared teachers of color are more likely to hold higher expectations for students of color, utilize culturally relevant pedagogies and curricula, serve as cultural brokers with communities of color, engage in critical discussions about race/racism, challenge racial inequities in schools, and overall make a positive difference on learning outcomes and academic performance for students of color and for school/program culture (Kohli, 2008; Pour-Khorshid, 2018; Sleeter et al., 2014;). Additionally, several studies have shown that students of color achieve better when taught by teachers of color (Bonilla et al., 2021; Carver-Thomas, 2018; Dee & Penner, 2017; Sleeter, 2011). Moreover, teachers and teacher educators of color have an important impact on white students, helping to undermine experiences and assumptions perpetuating white supremacy, challenging racism in the communities where it originates, and developing and enacting curriculum that empowers youth to love themselves and their community (Tintiango-Cubales et al., 2015).

In California, several overlapping trends in the teacher pipeline paint a dire picture of the growing shortage of public-school teachers, including the increasing shortfall of teachers who reflect the diversity of our communities and have the capacity to support all learners and advance equity and justice in education. According to recent data (see Carver-Thomas et al., 2021), the current workforce is already too small and unstable for the needs at hand. By far, the schools most impacted by this compromised teaching force are those predominantly serving students of color, Indigenous students, immigrant/refugee students, and students in high poverty areas, as well as students in “high needs” fields like special education and bilingual education. Teacher educators, too, are disproportionately impacted, with a wave of policies and so-called “reform” initiatives to address teacher quality and the teacher shortage that serve to hinder rather than facilitate the diversification of the teacher pipeline and the preparation of teachers to advance equity and justice (see: <https://nepc.colorado.edu/publication/seven-trends>). A concrete step we can take to dismantle structural racism is to bring more candidates of color into teaching.

## Current Testing Requirements

Long-standing barriers to diversifying the teacher population include the high cost of teacher education programs, low salary compared to the high cost of

living, and burnout. However, among the most onerous barriers are the numerous high-stakes exams that act as academic gatekeepers—discouraging or blocking teacher candidates from entering programs. (Boyer & Baptiste, 1996). As a prerequisite for applying for candidacy in California, students previously needed to pass a subject-specific battery of tests called the California Subject Examination for Teachers (CSET) or receive a subject-matter waiver from their undergraduate institution, which is difficult to do. Recently, the California Teaching Commission has contracted with the Evaluations Systems group of Pearson to assist in the development, administration, and scoring of the CSET. Pearson earns millions from the state for administering these tests. Teacher candidates are required to pay out-of-pocket, which often costs individuals \$300–\$400 to take the CSET one time. If the candidate does not receive a passing score, they must pay an additional \$100 for each section to be retaken. Even a score verification requires \$50 per test/subset/section. No fee waivers are available for low-income students.

In some cases, candidates are allowed to begin teacher education programs without having passed the CSET and California Basic Educational Skills Test (CBEST). Often, these individuals take and complete all required teacher education coursework, yet remain uncredentialed for years or even forever because they fail to pass the subject-matter competency tests.

As with most standardized tests, the implicit bias in discourse and framing succeeds in blocking many students of color and working-class students. These students—who have the passion and commitment, skills and knowledge, life experiences, and cultural-competence to be excellent teachers—are the ones who should be in classrooms in schools today. Such assessments have not been proven by research to produce a higher quality teaching force; they are not valid and reliable in predicting teacher quality (Angrist & Guryan, 2008; Buddin & Zamarro, 2009; Goldhaber, 2007) and most importantly they disproportionately filter out students of color because of the racial gap in scores between white students and students of color. This gap is not surprising, given the body of research on cultural and racial bias (i.e., Eurocentrism and white normativity) in standardized testing (Kohn, 2000; Lipman, 2004a, 2004b).

Over the last few years, the California Teaching Commission (CTC) has increased the number of options for students to meet the subject matter requirement (SMR), which previously could only be met through the CSET or an undergraduate-institution waiver. Now, candidates can meet the SMR through multiple pathways, including an undergraduate degree in the pertinent field (for example, a single subject English teacher candidate with a degree in English would not have to take a CSET), related undergraduate coursework, or a combination of coursework and CSET subtests. Candidates who do not meet the eligibility requirements for the SMR are still required to take the entrance exams. We see this most in our candidates who aim to teach Ethnic Studies in high school. An Ethnic Studies teacher candidate would need to take the Social Science CSET subtests; even if they have an undergraduate or graduate degree in Ethnic Studies, their coursework would not allow them to meet the SMR. However, a credentialed social science teacher could teach Ethnic Studies, even without any coursework or understanding of Ethnic Studies.

## Literature Review

To date, both the K-12 teaching profession and the academy, particularly in teacher education, continue to remain overwhelmingly white and struggle to meet the needs of students of color. It is well-documented that teachers of color are essential in creating positive learning experiences for an increasingly diverse student population as well as white students (Sleeter, 2011). Having greater racial diversity in the teaching profession has positive impacts on all students' educational experiences and outcomes (Sleeter, 2011) and especially makes a positive difference on academic performance for students of color (Yarnell & Bohrnstedt, 2018; Redding, 2019; Gershenson et al., 2021; Rasheed et al., 2020; Sleeter et al., 2014). Carver-Thomas (2018) argues that, "Recruiting and retaining a racially and ethnically diverse teacher workforce is crucial to ensuring that all young people have role models who reflect the nation's diversity and to meeting the needs of all students" (p. v). For students of color, this is especially important as they may demonstrate greater academic achievement and emotional development with teachers of color (Carver-Thomas, 2018). Although much research points to the importance of diversifying the teacher pipeline, teacher preparation programs and K-12 schools struggle to recruit and retain teachers of color. The numerous high-stakes exams play a significant role in preventing teacher candidates of color from entering or completing programs. (Boyer & Baptiste, 1996).

### Barriers to Diversifying the Teacher Pipeline

Even with the growing number of teachers of color, there still continues to be a large demographic mismatch between teachers and students. Carver-Thomas argues (2018):

Over the past 30 years, the percentage of teachers of color in the workforce has grown from 12% to 20%. Incoming teachers, as a whole, are even more diverse. However, the teacher workforce still does not reflect the growing diversity of the nation, where people of color represent about 40% of the population and 50% of students. And the share of Native American and Black teachers in the workforce is actually in decline, not growing like the populations of Latinx and Asian American teachers. Furthermore, teachers of color have higher turnover rates than White teachers. (p. v)

Although research continues to show that teachers of color play a significant role for increasing the academic achievement of students of similar backgrounds (Sleeter, 2011), fundamental constraints continue to limit the number of teachers of color. Ahmad and Boser (2014) explain:

Students of color have significantly lower college enrollment rates than do white students. Plus, a relatively small number of students of color enroll in teacher education programs each year. Finally, teacher trainees who are

members of communities of color score lower on licensure exams that serve as passports to teaching careers (p. 2).

### Hindering Candidates of Color

Several studies illustrate how eligibility testing fails to raise teacher quality or student achievement and instead disproportionately hinders candidates of color. This in turn can negatively impact student learning (California Alliance of Researchers for Equity in Education, 2019; Kohli, 2014; Ladson-Billings, 2005a, 2005b) and send racialized messages to candidates of color about their ability to become proficient teachers. For example, in a review of the extensive national data from the Schools and Staffing Survey (SASS), Angrist and Guryan (2008) found no evidence that more teacher-candidate testing increased teacher quality; rather, they found that testing reduced the number of new Latinx teachers, acting “more as a barrier to entry, than a quality screen” (p. 500). Buddin and Zamarro (2009) examined teacher characteristics, including success passing licensure exams and their connection with improved student achievement. The study looked at 5 years of reading and math achievement (California Achievement Test, 6th edition) of over 3000 students grades 2–5 in Los Angeles Unified School District (LAUSD), matched with their 16,000 teachers, and those teachers’ pass rates (including whether teachers had to retake exams) on three standardized tests required for initial certification: CBEST, CSET, and RICA. The researchers found that scores on these tests have little if any effect on student achievement.

In an analysis of extensive data from the PRAXIS licensure tests, Goldhaber and Hansen (2010) concluded that increased testing does not correlate with higher student achievement. They found that licensure tests provide only limited evidence of teacher effectiveness and that enforcing strict cutoffs has the potential to both adversely affect the outcomes for candidates of color and decrease workforce diversity. Stankous (2011) documented the difficulty of passing the CSET, even for candidates who are strong in the disciplines such as mathematics. Marilyn Cochran-Smith and colleagues (2018) found that none of the eligibility tests for teacher educators has predictive validity; whereas other researchers have found that such tests contribute to a pathway to becoming a teacher that is hostile to candidates of color (Kohli, 2009; Ladson-Billings, 2005a, 2005b).

Jackson and Knight-Manuel (2019) observed 24 teachers of color and their ability to effectively incorporate culturally responsive teaching into their curriculum. The authors found that teachers of color are better able to understand their students, including any perceived sense of barriers the students experience. These teachers also feel a sense of responsibility to take action against the dominant culture to create a more equitable education system for their students. From their findings, the authors concluded that the knowledge, skills, and experiences that teachers of color bring to their classroom can increase the knowledge of Black and Latino students as well as their college and career readiness.

## Racialized Impact

Many studies also point to the racialized impact of high-stakes entrance exams in teacher preparation. Graham (2013) studied 52 prospective teachers, the majority of whom were Black women, who were preparing for their Praxis 1 teacher-licensure exam. The participants were split into two cohorts that met twice a week to focus on preparing for their exams. Graham found that the participants did not believe the tests were an accurate measure of their desire and ability to be effective teacher as they did not depict their “real self.” He also found that they were conditioned to believe that they would not do well on the exams while also noting that those who were privileged had more access to resources allowing them to perform better on tests.

Petchauer (2014) followed 22 African American student teachers and found that these test-takers experienced psychological stressors while taking teacher licensure exams, including intimidation from being in a room of mostly white test-takers and negative experiences with the testing administrators. These experiences can lead to identity threats, which can end up negatively affecting the test-takers’ confidence, testing experience, and performance.

Petchauer (2013, 2018) also found race to be an extra dimension that is a part of Black teachers’ testing experience, which can negatively affect their results and/or confidence in taking these tests. The author followed a Black teacher who claimed she was white in the demographics portion of her teacher-licensure exam because she wondered if doing so would improve her score. Findings in this study indicate that stereotypes and the racialized nature of teacher licensure exams puts pressure on prospective Black teachers, which can affect their performance. The author suggests that schools should work to remove the racialized nature of teacher licensure exams to create a more equitable testing experience.

## Theoretical Framework

Critical Race Theory (CRT) began in legal studies (Bell, 1987; Crenshaw, 1989; Matsuda, 1997) and highlights race as a social construction and racialized oppression as a normal and pervasive aspect of everyday life for people of color (Bell, 1987; Yosso, 2005; Delgado & Stefanic, 2023). Guided by five principles, research in CRT in education (Kohli, 2008): (1) centralizes race and racism and its intersections with other forms of oppression (e.g., gender, class); (2) challenges dominant ideology; (3) represents a commitment to social justice; (4) values lived experience; and (5) uses interdisciplinary perspectives, including education, sociology, and psychology (Solórzano & Delgado Bernal, 2001).

For our study, Critical Race Theory (CRT) provides the central framework by which to comprehensively examine and understand the ways in which standardized testing perpetuates a racialized and unfair system of purportedly meritocratic practices within teacher preparation. Using CRT, we see standardized tests as normalized and made to appear neutral, despite that they have long functioned to racialize the teacher preparation process. These understandings provide an important framework

to examine the impact of the CSET on access to teacher education programs and credentials in California. We utilized CRT as a central framework to develop and guide the research questions, design, and analysis shared below.

## Research Design and Methodology

To understand the impact of the CSET on the makeup of the teacher pipeline in California, we create a mixed-methods approach to answer the following questions: (1) what has been the impact of the tests in California over the past two decades regarding racial diversity in the teacher pipeline (i.e., how many more students of color (in each of four groupings) versus white students have been prevented from even exploring teaching as a profession; and (2) what are some of the implicit messages and narratives that these tests have conveyed to people of color pursuing teaching?

For question (1), we gathered data from the California Teaching Commission (CTC) that spanned the past two decades and conducted a statistical analysis. For question (2), we engaged in a selective sampling, leveraging our university contacts, in order to get an overrepresentation of candidates of color from a variety of public and private institutions in Northern, Central, and Southern California. For each question, Critical Race Theory helps us to understand and examine the ways in which standardized testing play a significant role in preventing teacher candidates of color from entering or completing programs.

### Quantitative Data: Passing Rates from CTC

We requested from the California Teaching Commission (CTC) the Annual Reports on Passing Rates of Commission-Approved Examinations from 2013 to 2020. After multiple emails over the span of one year asking for the public data around CSET passing rates, we received from the California Teaching Commission (CTC), the following data pertaining to the CSET exam:

- How many candidates took each CSET examination for each credential type?
- How many had to take sections of the CSET repeatedly in order to pass (and which sections they had to retake).
- How many failed the CSET and did not advance to their credential.
- Disaggregated data that describes how many took each CSET by ethnicity, gender, and other identifiers, and how many experienced CSET failure and test retaking by ethnicity, gender, and other identifiers.
- How many candidates failed CSET and did not advance to credential, by ethnicity, gender, and other identifiers.
- Please provide the information in excel or word file so that data may be analyzed.

Quantitative descriptive design is used to specifically understand the impact of the CSET tests in California over the past two decades regarding racial diversity in the teacher pipeline. Given the scope of the research, the quantitative data is limited



in comparison to the qualitative data shared below. However, this data is essential to the study and important to highlight, as it provides significant differences in passing rates overall, with African Americans and Hispanic Americans approximately two–three times more likely to fail than white students.

### **Qualitative Data: Survey and Interviews**

We engaged in qualitative research to help us better understand, analyze, and more deeply explore the significance in differences highlighted in the passing rates.

To begin, we asked our university contacts to distribute a qualitative, open-ended online survey to candidates who have struggled with the CSET. Ninety-three participants replied to the survey. In the survey we asked questions related to participants' experiences with the CSET. The survey included the following questions: (1) What experience do you have working with teaching and working with youth? (2) What were the economic costs/barriers presented by the tests? (3) What is your estimation of the value of the tests? (4) Do they measure your suitability as a teacher? (5) Do they measure critical teaching skills and humanization? Why or why not? (6) What would you consider the best way to evaluate the suitability of a candidate for entering a teaching credential pathway? (7) Have you seen a way that the tests disadvantage you because of race, class, gender, gender orientation, immigration status, learning style, or other factors? (8) What has been the consequence of these tests as far as your teaching career?

Our research team analyzed the survey responses from these candidates to evaluate the kinds of barriers they encountered with the standardized tests. This data offered us in-depth insight into many of the challenges and consequences related to the CSET for teacher candidates, including the financial costs and feelings of dehumanization and illegitimacy as a teacher. We analyzed their survey responses for initial themes and then invited survey participants for follow-up interviews in order to dive more deeply into those themes. Of the 93, 20 responded and agreed to be interviewed. Of the participants interviewed, 9 identified as Hispanic female, 3 as Hispanic male, 1 White male, 1 Asian American male, 1 African American male, 1 African American female, 1 African American male, and 3 Asian American female. The initial themes we explored included: financial burden of tests, feeling delegitimized as a teacher, and being pushed out of the profession.

The candidates surveyed and interviewed differed in their teaching experience. Some were currently in teacher education programs, trying to pass the CSET; others had graduated from their teacher education programs but were working in classrooms on emergency credentials or in private schools. Others had graduated and earned their credential, but shared their struggle to pass the CSET after multiple attempts. Although they were in different places in their teaching career, there were clear overarching themes across the surveys and interviews. All participants identified as people of color, except one who identified as white.

The interview protocols were developed by the research team and included questions from the qualitative survey. The majority of candidates interviewed were candidates of color. They all had prior experience with youth work and teaching—some

in after-school programs, community service jobs, as well as professional positions as interns, emergency credential teachers, and employees of private or charter schools. We developed our qualitative findings into vignettes of the 20 interview candidates, painting a picture of the psychological and pedagogical impact of these examinations.

## Findings

The key findings in this research reveal the consequences of high-stakes testing on diversifying the teacher pipeline, providing evidence that the tests have disproportionate impact for all four race groups as labeled by the California Teaching Commission (African American, Asian American, Hispanic American, and Native American), while also conveying racialized messages to candidates of color.

## Quantitative Data

In analyzing the quantitative data, we found the following consistent results: Teacher candidates from African American and Hispanic American communities failed the CSET at a rate two to three times that of white candidates. The table below shows passing rates across all four racialized groups as labeled by the California Teaching Commission (African American, Asian American, Hispanic American, and Native American).

This quantitative descriptive data shows notable differences in passing rates overall with African Americans and Hispanic Americans more likely to fail the CSET compared to White candidates (Table 1).

The descriptive quantitative research shared above helps us to understand specifically the impact of the CSET tests in California over the past two decades regarding racial diversity in the teacher pipeline. We leveraged qualitative data as the primary research method to help deepen understandings of the impact of the CSET tests on teacher candidates.

## Qualitative Data

We engaged in an analysis of the qualitative data (participant surveys and interviews). In this analysis we were able to explore the impact of the CSET tests in California regarding racial diversity in the teacher pipeline and some of the implicit messages/narratives that these tests conveyed to people of color pursuing teaching through the participants' lived experiences and stories. Four major findings emerged that provide evidence of how the CSET exams serve as gatekeepers: (1) the CSET was disconnected from what teachers actually needed to know; (2) the CSET was culturally biased; (3) the CSET placed on students undue financial burden; and (4) the CSET conveyed racialized messages about teachers and teaching. We describe each of these findings in detail in the next section. Pseudonyms are used to protect the identity of the participants.

**Table 1** Test passing rates

<i>Multiple subjects 2017–2020</i>	
25,143 took test, 19,495 passed (77.5%)	
Passing rate:	
White	84.1
Asian American	81
African American	61.3
Hispanic American	69.3
Native American	73.3
<i>English 2014–2020</i>	
8861 took test, 7430 passed (83.9%)	
Passing rate:	
White	86.7
Asian American	86.1
African American	70.2
Hispanic American	76.6
Native American	73.1
<i>Math Foundational 2015–2020</i>	
3518 took test, 1868 passed (53.1%)	
Passing rate	
White	55.8
Asian American	63.8
African American	30.1
Hispanic American	31.3
Native American	× (insufficient data)
<i>Math 2015–2020</i>	
2588 took test, 1790 passed (69.2%)	
Passing rate	
White	71
Asian American	75.2
African American	56.2
Hispanic American	55
Native American	×

### Disconnect Between What the CSET Is Testing and What It Means To Be a Teacher

Many of the candidates we interviewed failed the CSET subsets by only one or two points. They were either in a teacher preparation program, or had graduated and were teaching or working on an intern credential or in a private school. While several respondents had passed the CSET, most had not yet passed. As they shared their stories in interviews, time after time again they expressed their frustration with the CSET and how the content which they were tested on did not connect or apply to what they were teaching in the classroom.

The joy that Valeria, age 22, holds for teaching radiates even in an interview. Having just finished a graduate degree in teacher education directly following an undergraduate dual-degree in ELA (English Language Arts) education and Chicana/Chicano Studies, a teaching job is within her grasp and has, in fact, already been offered by the high school she once attended. Valeria sees her youth as an asset to building relationships with her students as she has recently experienced many of the same life events. She identifies as Latinx, and enthusiastically shares her eagerness to draw on her heritage and studies to explore texts like Luis Valdez' 1978 play *Zoot Suit* with students saying,

... teenagers are so smart. Every revolution that's been created, from the Civil Rights Movement to Black Lives Matter, it was teenagers at the forefront. So I took that lens and worked with it when I taught *Zoot Suit* this past year to my juniors.

Later on, Valeria reflects on the revolutionary nature of her journey:

I'm entering a space of education that hasn't really been crossed over by people of color. Usually you have Latinx women teaching kindergarten or elementary school, but I'm entering this space where I have an ethnic sounding last name, but I'm going to be an English teacher.

For Isabelle, also identifying as Latinx, "I live and breathe teaching. It's my niche... I like helping kids figure things out, seeing that light bulb go off. ... No test is able to measure your ability to build relationships." Daniela adds, "I mean honestly, the ones that I usually hear that they haven't passed, it's all the bilingual people."

Other students who struggled with the CSET see a connection to the lack of economic and social opportunities available to their families, like Sofia (Maria): "I was born in a low- income community; my parents are immigrants, so they were undocumented and they came in from Mexico, so I am a first-generation student." Or others like Jamie, a Black teacher candidate, speak about not having access to test-preparation classes and other resources growing up and how that has put her at a disadvantage when it comes to standardized tests like the CSET. She says:

I grew up in Erie, Pennsylvania mostly with a single mom who just had a high school diploma, really. I certainly didn't get like good SAT scores. I didn't do any test prep for it and have money for that kind of stuff...so still to this day, I'm learning like what's that equation when you're taking a test, you know. It's kind of a privilege to know how to take a test.

Mahalia, who is Filipino American, echoes this sentiment: "I think they say more about your educational background and how good you are at taking tests, rather than what type of teacher you are."

As Mahalia indicates, while many of the candidates have a deep connection to the subject matter they teach, they find the kinds of questions in the CSET to be disconnected from what they actually need to teach. Christina, a Multiple Subject teacher candidate, explains:

... the CSET subtest, which covers ELA and history, I have not passed. I have taken it like five times ... It's the history part that I don't pass. I'm not a textbook person, so sitting reading and memorizing dates and pictures and things is difficult for me. I am more of a hands-on person, so I have tried the videos, the audio and visuals and all that, and it's still a struggle.

DeJuan voiced a similar sentiment: "the value of the test is like our capacity of regurgitating information." Many teacher candidates who responded to our survey described the CSET as feeling like a "brain dump." Anthony states his conflict as,

I want to become a social justice teacher to make history relevant to students' lives. And the CSET doesn't do a representative job, it is just more of a recall strategy/recall information and that kind of goes against my pedagogy of wanting students to critically think instead of just be receptacles of information.

Jamie takes issue with the aims of the CSET saying,

Specifically, with social studies with history and Ethnic Studies, I can learn a concept very easily, like if I know what the unit is or what the lesson is, let's say 1800s U.S. history ... I can learn that concept. I'm smart enough to learn. It's more about connecting with your students and how you teach that and a standardized test like CSET isn't going to gauge if someone can do that part of it, right?

While Ava points to blind spots of the CSET saying,

I have friends that I worked with in outdoor education who have very different learning styles than me, but they are amazing teachers because they can tap into those students who had similar learning styles to them that maybe aren't getting their needs met in classrooms because their teachers have to fit this like standardized way of understanding the world.

Other candidates reference the Multiple Subject CSET specifically as feeling like a "catchall" that does not correspond to what they teach. Honae focused on this:

I teach second grade English. And we had the performing arts tests, like on the CSET ... for that one you had to read music notes, you know? And I'm just like, we don't teach music unless you're joining a band or something. I learned how to read music notes when I was in elementary because I was in a band, but none of my teachers taught anything related to music, you know?

Meghan also struggled here:

While my credential program had classes on teaching P.E. and learning about child development, the arts portion was not covered. From having to know musical notes, to historical and cultural dances, as well as terms to describe paintings, having all this knowledge for a multiple subject credential seemed ridiculous. I only passed this subtest because I was able to sign up for a prep course that went into extreme detail about what would be on the exam.

## Cultural Bias of the CSET

As DeJuan analyzes his experience with the cultural bias of CSET, his story is told with wisdom and humor. After all, he has had a lifetime of navigating what DuBois calls “double consciousness,” the ability to live in his Black identity while negotiating the needs and demands of the dominant narrative.

You have to really understand what they’re asking you to do for that test... and they’re asking on that test to not be a woman or Black. They need you to take that test as a white man. You can’t be “biased”, everything has to be “justified”; you have to go in that test rooting for America. If they find out that you’re going to criticize America a little bit, you’re not going to pass.

After pausing to let that assertion sink in, he goes to an example:

When I first took the test, one of the essay questions asked about the migration of people on the earth and geography. I wrote all about the Trail of Tears: how Andrew Jackson forced Indigenous people on the Trail of Tears, killed them and relocated them and their land. And how the flowers and the seeds that were on their land could be harvested, but the white settlers did not take care of or understand the land. The creators of the test did not want to hear that. They wanted to hear about, you know, Manifest Destiny and the railroads and how it allowed us to move things and expand West.

We are living in a time when scholarship and social awareness are contesting the taken-for-granted views of history and the knowledge claims of traditional schooling. While dynamic reevaluation of education goals is demanding a humanizing curriculum of inquiry, the world view reflected in the CSET continues an outdated, Eurocentric pedagogy and content. Candidates of color experienced alienation and frustration when they realized this is what was tested.

As an example, Leila argues that “It’s a wealth test; it’s an antiquated system and it’s designed to protect the status quo and keep pushing out mediocre teachers. I refuse to let my passion be tested away.” And Fernando adds, “My experience as a Mexican or Chicano male is very different to a lot of the people who create the test and, in that sense, it throws it off completely.” Sofia is emphatic, “The social studies subtest is really racist. In schools in general, we’re taught a history that isn’t ours, especially if you’re a person of color and it’s really hard to connect with when you’re not seen in that history.”

In addition to racial bias, the lack of accommodations for neurodiverse candidates is an additional barrier to many potential teachers. “Not every person is a great test taker,” shares Isabelle, a teacher candidate with a minor hearing and visual disability. “I had a 504 but when I asked for extended time on the CSET, they refused because I had to have a doctor’s note. I sent them proof and they still denied me.”. Her experience also highlights the discrepancy between a state that asks its teachers to be well-versed in providing accommodations to students with a variety of needs, but is then unwilling to provide accommodations to teacher

candidates who do not fit certain unspoken norms. There is a clear challenge for many candidates when it comes to diversifying California's body of educators.

### Financial Burden

So, I've been going at this (testing) for the entire year, along with the struggles of the pandemic and full-time teaching," explains Valeria, "and I was also working at Starbucks on the weekends for like 70% of this past year until I finally just had it. I probably spent about \$2,000 on tests alone.

We found that teacher education candidates, especially those least able to bear the financial burden of the tests, were the ones who had to pay the most because of the need to retake sections, sometimes over and over. Students reported huge costs, such as, "I've probably spent well over \$1000, maybe even \$2000 at this point," and, "I'm sure I've easily spent over \$1,000 on the CSETs," and, "I spent probably \$1,000 on just the CSET, not taking into consideration RICA, Cal TPA and then my Master's application and more. ... Add to that my living expenses, taking care of my kids, and tuition costs." Christian explains,

When you got to spend \$100 on a test that you don't know if you're going to pass for sure not, it kind of limits you of wanting to apply because the cost of living in Bay area is expensive, and you don't want to spend the money...especially when you don't know you are going to pass and it will be wasted.

Amanda, identifying as Latinx, works as a transitional kindergarten teacher at a local charter school. She was in her fifth year of teaching when we interviewed her and had yet to pass the CSET. Like others interviewed, she has spent thousands of dollars on test preparation materials and exams trying to pass her test to receive her credential. She explained:

CSET the math one is the only one that I pass on the first time. CSET 2 and CSET 1, I had taken multiple times, and each time you take it that is an additional hundred, hundred dollars, I believe. So it is a lot of money ... I worked two jobs to help pay for it, on top of the tuition and the books or anything else that we needed ... if you get loans that's great but you also have to pay all that money back. So for me it was just best to work two jobs.

The CSET not only prevented her from getting her credential even though she was a successful and accomplished teacher, but it also caused her deep financial and emotional pain. This experience was similar for many of our participants and students. Anthony shares,

I've had to retake the CSET three times, which was about \$600 in total. I tried different websites like Study.com and I paid for study-site subscriptions that were 70 bucks a year. It kind of adds up and you start to realize that you're trying all these different things to pass one test.

Isabelle, who had to retake a math subtest multiple times, says, "So you're shelling out money every time you don't pass and you have to retake. It's time consuming

and there's really not a lot of help." Student frustration was summarized in the comment, "I just don't understand why it is so cost-prohibitive to become a teacher."

### Delegitimized as Teachers

Ultimately, the inability to pass CSET has made many of these excellent teachers feel discouraged or illegitimate as future teachers. Anthony explained the feeling as dehumanizing. It makes you feel as if you're not qualified, nor is the content you want to teach, nor the time spent making lesson plans. Because of a single test, it takes away from your ability to teach or become excited about teaching.

Michael found himself backed into a corner when he struggled to pass the science CSET 3 times. As someone who had taken AP exams in high school, he has become disheartened by his failure on what he sees as tests of a similar difficulty. He says, "I gave up pursuing the options of a Single Subject science and English because of the tests."

With testing options canceled due to the pandemic, many educators like Sylvia had to study for the CSET alongside completing courses for their degree and student teaching requirements. She says, "I have plenty of friends who quit the program because of the CSET being too stressful and I agree."

Also feeling delegitimized by the CSETs, Valeria shares:

Me finishing my credential coursework, I don't know...to me, it seems really unfair that I've taught this entire past year and have proved myself as, in my perspective, a really great educator. But at this one point, these, like, standards [CSET exams] are telling me that maybe I'm not cut out for it. And even like, I don't know, even like the language, like I don't have the basic skills requirements to be a teacher.

Lashante, who identifies as a Japanese-Black American woman, found herself taking the CSET multiple times, fearing she would lose her position at the charter school because passing the CSET was holding her back from getting a credential. As she explained:

It's also like I have to pass it in order to teach again next year, you know? So it's been very, like, stressful thinking about the tasks, especially because we paid so much just to, like, finish the teacher preparation program and things like that, that this one little or three little tests are like keeping us from, you know, passing.

The feelings of stress were also exasperated by feelings of being delegitimized as a teacher. As a Japanese-Black woman, Lashante was well aware of the history surrounding standardized testing, and the development and use of intelligence testing was popularized as a tool to implement eugenic measures. She explains:

And I know too, like how the CSET was created. You know, like, especially like to keep teachers of color back from being in the classroom, like back in the day, you know? So I just feel like right now there's, it's not necessary [the



CSET] and it's just really keeping a lot of people I know back, you know, but I do teach right now, but I know like for my job too.

Additionally, Christian, an undergraduate Ethnic Studies Latinx major, middle school teacher, and youth counselor, also shared his feelings about the racialized messages not passing the CSET conveyed:

You feel like you're worthy enough to become a teacher and it kind of is a kind of demoralizes you in a way about your career choice. ... It kind of makes you feel like you're you're not legitimized enough to become a teacher.

When we interviewed Christian, he had already spent \$600 trying to pass the CSET. At his school, where he taught with an intern credential and lower pay, he was deeply loved by his students and community. He centered his teaching in hip-hop pedagogy and Ethnic Studies.

For many teacher educators from marginalized communities, failing the test can feel like a confirmation that they do not belong in the field. Ava mentions the shame she felt when struggling to pass the Single Subject Science CSET, saying, "The lack of women in science education made me question whether or not I was a real scientist, because the science that I have been doing, practicing, and teaching was more on the ground and less standardized or in the laboratory."

Valeria shares that the requirement of the CSET feels like an invalidation of the hard work candidates have put into an undergraduate (and sometimes graduate) degree. She says, "Why would we be going through all of these courses and incurring debt if we were going to be narrowed down to this one exam, that's going to tell somebody that doesn't know us that we're lesser than we know?"

## Conclusion

For this study, Critical Race Theory (CRT) offered us a framework to understand how public policy and the use of standardized testing perpetuates the status quo and an unfair system within teacher preparation. Findings from the data, both qualitative and quantitative, provide evidence that the tests negatively impact all four racialized groups, while also conveying racialized messages to candidates of color. It can be argued that these exams hinder efforts to diversify the teacher pipeline and provide students with a world where students are able to learn from teachers who are like them.

Through the data, we learned that those who had difficulty with the tests were forced to leave the profession or prolong by months or years their pathway to teaching. We also learned that teacher candidates encountered consequences that we hadn't considered when undertaking the study. Far from improving the quality of teachers populating public schools for the next generation of Californians, these tests drive talented teachers out of the profession or push them to work in private or charter schools who will employ them without credentials, or to work on temporary credentials with less pay and job security. The cost of tests adds another barrier for

candidates who are balancing part or full-time jobs and student loans to barely get by during their credential studies.

As candidates discussed the challenges they faced in the tests, they consistently reported that the content area knowledge required to pass was irrelevant to the teaching they would do. In some cases, they reported that the tests asked for detailed recitation of minor facts that were outside of their teaching portfolio. In addition, they pointed out that the tests failed to call for understanding of humanizing education or the capacity to develop critical thinking and inquiry skills in their students.

The findings of this study offer incontrovertible support to the proposition that California has done irreparable damage to the teaching careers and pathways of thousands of excellent teachers in just the past couple decades. Teachers of color are faced not only with the financial burden related to high-stakes testing, but also feelings of being delegitimized as professionals while facing the internalizing of racist messages of standardized testing. Although the CTC has increased the number of pathways for candidates to become teachers, we argue that the state should put an end to the requirement that candidates pass the CSET tests and any high-stakes tests. Such tests have not been proven by research to produce a higher quality teaching force; nor are they valid and reliable in predicting teacher quality. However, these tests do disproportionately filter out students of color because of the racial gap in scores between white students and students of color in general. This gap is not surprising, given the decades of research on cultural and racial bias (i.e., Eurocentrism and white normativity) in standardized testing. And, while teachers of color are needed in all fields and grade levels, they will be in particular demand as more high schools across California require Ethnic Studies coursework, given that teachers of color bring life experiences that support effective Ethnic Studies pedagogy. Those with undergraduate and graduate degrees in Ethnic Studies still cannot use such coursework as a way to meet the subject matter requirement. They must still take the Social Science and History CSET, which may directly conflict with their expertise and understanding of Ethnic Studies.

The findings further suggest models for how institutions are effectively using a variety of more authentic criteria (including previous university coursework, supervisor evaluations of work in schools and/or community settings, and experience addressing issues of diversity and justice) to determine eligibility for program entrance and completion. Our findings provide support for ways institutions can develop and implement their own process for ensuring that diversity and justice are at the heart of admissions to teacher credentialing programs. And, even as the California legislature is considering changes in response to this research and broad demands from education unions, we believe more can be done. This study offers evidence and arguments that can be used in other states as the struggle to diversify the teaching force continues. Lastly, as California has taken some steps to broaden pathways for candidates to become teachers, we hope this research can provide support to other states that are also hoping to end standardized testing in teacher preparation.

In a time of increased public awareness and dialogue about white supremacy, racism, xenophobia, sexism, homophobia, and religious persecution, we are called to confront these struggles as they pertain to public education. This study highlights the importance of rethinking high-stakes testing in teacher preparation, as well as

the ways in which we think about teacher education generally. Educational equity and democratic ideals can be advanced through teacher education by offering candidates a more diverse and inclusive set of experiences and perspectives, critical and intersectional frameworks for viewing the world, and cultural assets for rethinking human relationships, community building, social change, and personal healing.

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