Tackling Teacher Shortages

What We Know About California's Teacher Workforce Investments

Desiree Carver-Thomas, Melanie Leung-Gagné, and Danielle Jeannite

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Executive Summary

Like many states across the nation, California is facing persistent teacher shortages. School districts continue to find it difficult to fill vacancies with fully credentialed teachers, especially math, science, special education, and bilingual education teachers. Teacher shortages impact student learning as districts resort to relying on a revolving door of underprepared teachers and substitute teachers, increasing class sizes, and cutting course offerings altogether. Students of color and students from low-income backgrounds bear the brunt of these consequences, as teacher shortages are most severe in schools serving more of these students.

To tackle teacher shortages, especially in high-need schools, California has invested more than $1 billion to strengthen the teacher workforce. Much of this funding has been allocated since 2021 and began to be implemented in 2022 or 2023. These investments were specifically designed to increase teacher supply in shortage areas, make teacher preparation more affordable and accessible, and incentivize well-prepared and accomplished teachers to teach in high-need schools. Three of California's largest investments in the teacher workforce are the Teacher Residency Grant Program ($672 million), Golden State Teacher Grant Program ($521 million), and National Board Certified Teacher Incentive Program ($250 million). In the initial years of administering these grants, state agencies have focused on establishing implementation processes and raising awareness about these programs. Data from the state's early investments show that these programs are gaining traction. However, they are funded through one-time allocations that are nearing expiration. This raises two questions: (1) To what extent are these investments supporting much-needed teacher workforce development strategies, and (2) Are they still needed in the current context?

This report addresses these research questions by analyzing the California Department of Education Teaching Assignment Monitoring Outcomes data from 2020–21 to 2022–23 to gain a timely understanding of teacher shortages in the state. To understand the uptake and impact of California's major teacher workforce investments, we examined data from state agencies and conducted interviews with teacher preparation programs, district leaders, and grant recipients.

Overall, we find early signs of improvement in the teacher workforce, even as teacher shortages in several fields remain a serious challenge. Beginning in 2020, California saw an uptick in the number of candidates completing teacher preparation programs, although this number dipped in 2022. The state investments have led to large increases in the number of teachers prepared through residency programs, which research shows is a high-retention pathway that effectively prepares teachers for the classroom. Financial supports through the Golden State Teacher Grant, which cover basic living expenses and tuition, have been critical for sustaining teacher candidates who commit to teaching in a high-need school through their preparation. Finally, the number of teachers pursuing National Board Certification—which research shows is linked to teacher effectiveness—more than tripled after the subsidy and incentive program became available in 2022, a trend mirrored in high-need schools.

Importantly, data from the state's early investments show that these programs are just now being fully implemented, and they are having an impact in a large number of communities. The impact of these investments will be fully realized and understood in the coming years as funded preparation programs ramp up, teaching candidates complete their programs and enter the workforce, and data become available to trace these developments.

Key Findings

California has seen a modest increase in newly prepared teachers. The number of candidates completing traditional teacher preparation programs increased by about 10% between 2019 and 2020. 2021 saw another sizable 14% increase in completers. These completer increases came after initial state investments in teacher residencies and the Golden State Teacher Grant went into effect. The COVID-19 pandemic also impacted teacher workforce trends during this time. Additional years of data will shed light on the extent to which the state sees continued increases in teacher preparation completions in line with its continued investment in the teacher workforce.

California teacher shortages continue. While the number of teacher preparation program completers has increased, in 2022 California graduated only half as many new teachers through a traditional preservice preparation program as it did at its peak in 2004. Additionally, substandard credentials and permits tripled between 2013 and 2023, making up more than half of all new California teaching credentials issued in 2023.

Teacher shortages disproportionately impact students in high-need schools. In 2022–23, the most recent year with available data, 83% of teacher full-time equivalents (FTEs) in priority schools were fully credentialed with clear or preliminary credentials for their teaching positions. In comparison, 87% of teacher FTEs were fully credentialed in non-priority schools. The state's highest-need schools were nearly three times as likely to fill teaching positions with interns and teachers on emergency-style permits or waivers, compared to the lowest-need schools.

The Teacher Residency Grant Program has supported a large number of teacher residents. Between 2020 and 2023, the Teacher Residency Grant Program supported nearly 1,400 residents. In total, teacher residency programs graduated nearly 5,000 residents between 2021 and 2024. In 2021 alone, residents accounted for about 10% of newly prepared California teachers. The majority of residents were people of color, and many pursued credentials in severe shortage areas. Of the residents enrolled through 2023, around 40% enrolled in special education, 34% enrolled in STEM fields, and 27% were pursuing a bilingual authorization.

The Golden State Teacher Grant, which is projected to have funds exhausted by 2025, made teaching possible for recipients who commit to teaching in high-need schools. Grant recipients reported that the scholarship made the teaching profession a more financially feasible option and that they otherwise would not have been able to pursue teaching. One teacher recalled only having $5 in his bank account and wondering if he should drop out of his preparation program: "I would not have continued my teaching career whatsoever without the Golden State Grant." Additionally, several grant recipients noted that they planned to remain teaching in a high-need school for longer to meet their service requirements.

The National Board Certified Teacher (NBCT) Incentive Program has motivated many more teachers in high-need schools to pursue certification, including teachers of color. An important goal of this program is to increase the supply of highly accomplished and effective teachers in high-need schools. NBCTs can also serve as mentors to support early-career teachers. The number of candidates pursuing certification more than tripled after the incentive program began in 2022, with a significant increase in the number of teachers of color pursuing National Board Certification. This trend is mirrored in high-need schools, where the number of teachers pursuing Board certification jumped fourfold from 415 in 2020–21 to 1,764 in 2022–23.

Policy Recommendations

Over the past few years, the state of California has made serious efforts to address long-standing teacher shortages, with a concerted focus on strengthening the teacher workforce in the highest-need schools. Through investments in the Teacher Residency Grant Program, Golden State Teacher Grant, and National Board Incentive Program, the state has planted seeds that are beginning to sprout. The state will need to continue to tend to those early investments to reap their full potential. Recommendations are:

- **Ensure continued funding for Golden State Teacher Grants.** GSTG funds are quickly being spent down and are likely to be exhausted before they expire in 2026. The contributions to individual candidates have been reduced from $20,000 to $10,000. The state should commit funds to the GSTG so that the program can continue to build a strong pipeline into teaching.
- **Plan for strategic sustainability for teacher residencies that have been launched and for continued expansion.** State funding can go toward establishing additional residency programs, continuing to support residency stipends and expenses for existing residency programs, and conducting research on supporting the expansion and sustainability of residency programs.
- **Support ongoing funding, continued uptake, and impact studies of the National Board Incentive Program.** This program is in the early years of implementation and has the potential to reach many more teachers with continued investment, support for uptake, and studies on the effect of the program in priority schools.
- **Gather and report additional data on all of the state workforce programs to understand their use and impact.** Currently, data on the state's teacher workforce investments are limited. Increased data collection and reporting on these programs are imperative for policymakers' ability to understand the characteristics of teachers who are participating in these programs, how successfully participants are completing them, and the extent to which teachers are filling much-needed roles in the state.

Understanding Teacher Shortages

Each summer, districts across California are tasked with filling vacancies before the first day of school. In recent years, this has become more difficult as districts struggle to attract and retain fully credentialed applicants, particularly in high-need subjects like math, science, and special education, as well as the additional teachers needed for the expansion of universal prekindergarten. In response, the state of California has invested more than $1 billion to strengthen the teacher workforce, much of which has been allocated since 2021. With the strain of the pandemic moving into the past, are state dollars supporting effective teacher workforce development strategies? This report examines the most recently available data on how the state's major investments in the teacher workforce have been taken up amid long-standing teacher shortages (see Technical Appendix for more details about the data and analysis).

According to David Robertson, Assistant Superintendent of Human Resources at Vacaville Unified School District in California, the challenge of filling positions at the start of the 2024–25 school year was part of a longtime trend in the state. As he put it:

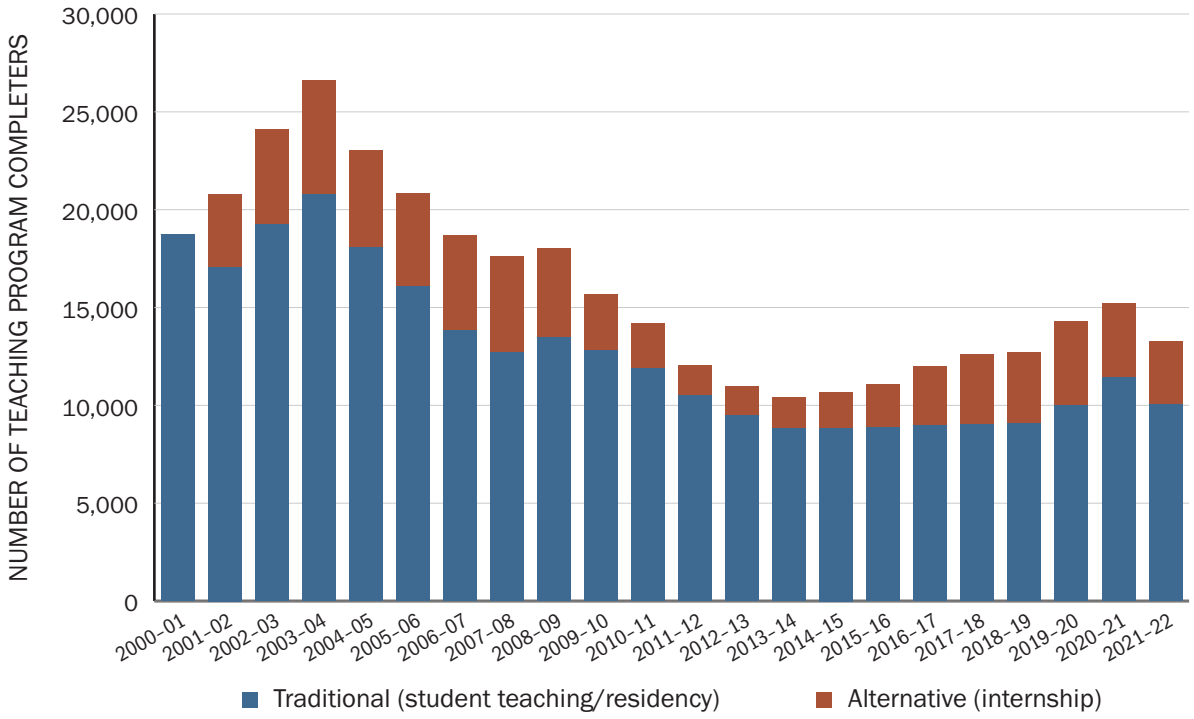
> In the past, I could just post a job on EDJOIN and I'd get 15 applicants, or do a job fair and I'd get 250 people show[ing] up for the 20 jobs that we have. That doesn't exist anymore. The hardest part is we're all competing for the same 50 candidates at UC Davis, or the 180 at Sac State, or the 120 that are at [Cal State] East Bay. It's just constant competition.[1]

Consistent with Robertson's observations, the number of teacher preparation completers in California has dropped dramatically over the last 2 decades (see Figure 1). Between 2004 and 2014, the number of teachers prepared in traditional teacher preparation programs in the state decreased by nearly 60%. These numbers have been slowly climbing since 2015 but are still only about half of what they were at the state's peak in 2004.[2]

Traditional teacher preparation programs offer candidates coursework and clinical practice through student teaching or a residency. This type of comprehensive preservice preparation supports teachers in managing the challenges of teaching once they enter the classroom. If the state could return to graduating about 20,000 teaching candidates each year through a preservice preparation program, as it did 2 decades ago, and improve teacher retention, which is a major cause of vacancies and shortages, that could eliminate the demand for teachers on substandard credentials and permits. In addition, as we will discuss, solving teacher shortages also requires that well-prepared teachers are equitably distributed across the many schools in the state and in high-need subject areas.

Unfortunately, California students bear the consequences when districts lose out in the competition for fully credentialed teachers, an increasingly scarce resource, and instead turn to long-term substitutes, teachers on emergency-style permits and waivers who may not have any teacher preparation experience, or interns who are teaching while completing a teacher preparation program. Districts may also increase class sizes or cut course offerings altogether. These temporary fixes negatively impact student achievement.[3]

Figure 1. California Teacher Preparation Completers by Pathway, 2000–01 to 2021–22



Note: Due to changes in enrollment data collection practices, data prior to 2012–13 need to be interpreted with caution.

Source: Learning Policy Institute analysis of U.S. Department of Education. *Higher Education Act Title II State Report Card System* [Data set] (accessed 6/27/2023).

Further, hiring teachers who are not fully credentialed can perpetuate shortages, as these teachers are more likely to leave their positions and need to be replaced year after year. A 2021 report found higher turnover among underprepared teachers in California, with 40% of new teachers hired on permits or waivers leaving teaching altogether by the end of their third year.[4] Those entering as interns also had higher turnover rates. A high level of teacher churn further impacts student achievement while exacting financial costs to recruit, hire, and train new teachers, estimated at about $25,000 per teacher in a large district.[5] Importantly, the costs and consequences of teacher shortages disproportionately impact students of color and students from low-income families who are more likely to attend schools contending with high turnover rates and chronic difficulties filling positions.[6]

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Over the past decade, as the number of teacher education graduates dropped and demand for teachers increased, the California teacher workforce has been plagued by teacher shortages, reflected in an insufficient supply of fully credentialed teachers to meet district demand for new teaching positions or replacements for teachers who leave. Shortages grew further when the American Rescue Plan Act (ARPA) funds reached California alongside state funds and increased schools' financial capacity to hire new staff. Thus, these funds increased the demand for teachers, counselors, and other staff as districts increased supports for mental health needs and learning recovery for students affected by the pandemic, but there were not enough teachers and other staff to fill these new positions.[7]

Recently, the state of California has made historic investments to strengthen the teacher workforce, including more than $1 billion to support teaching candidates to enter the profession through high-retention pathways like teacher residencies and service scholarships for candidates to enroll in preservice teacher preparation programs at California colleges and universities. In this report, we describe three of California's largest investments in the teacher workforce:

1. **The Teacher Residency Grant Program** ($672 million) funds efforts to plan, initiate, or expand teacher residency programs that partner teacher preparation programs (TPPs) with districts to train teachers well, including stipends of at least $20,000 for residents who commit to teach in the sponsoring district.
2. **The Golden State Teacher Grant Program** ($521 million) offers up to $20,000 in scholarships to teaching candidates enrolled in a TPP who commit to teach in a priority school where students with identified needs (low-income, English learner, or foster care) constitute more than 55% of the student body.
3. **The National Board Certified Teacher Incentive Program** ($250 million) offers a $2,500 subsidy for teachers to pursue National Board Certification and a $5,000 annual salary incentive for National Board Certified teachers who teach in priority schools for up to 5 years.

The bulk of those funds have just begun to go into effect in the last 2 to 3 years. However, as these programs were funded with one-time grants during years of surplus, most will come to an end in the next year or 2 unless renewed. Thus, it is all the more important to understand how these funds have been used in recent years.

What is the current status of the teacher workforce in California? And how are these programs contributing to potential solutions to the state's long-standing teacher shortage problem? This report examines these questions by looking at existing data, including state teacher preparation data, teacher credentialing data, and teaching assignment data. Because these data can lag by several years, we also conducted interviews and focus groups with TPPs, district leaders, and grant recipients who can shed light on current on-the-ground realities shaping the teacher workforce (see Technical Appendix).

Terms and Definitions Used in This Report

Teacher shortage refers to the lack of fully certified teachers available to meet the demand for teaching positions.

Full credentials include (1) *preliminary credentials*, awarded to individuals who successfully complete a California Commission on Teacher Credentialing–approved teacher preparation program and the required state assessments, and (2) *clear credentials*, awarded to preliminary credential holders upon successful completion of an induction program. Preliminary credentials are valid for 5 years and clear credentials are renewable every 5 years.

Substandard credentials and permits include (1) *provisional internship permits*, *short-term staff permits*, and *waivers*, which are 1-year emergency-style permits used to fill immediate and acute staffing needs with individuals who have neither completed teacher preparation programs nor demonstrated subject matter competence to teach a particular grade, course, or student population; (2) *limited assignment teaching permits*, which allow fully credentialed teachers to teach outside of their subject area to fill a staffing vacancy or need; and (3) *intern credentials*, which are awarded to teachers in training who have demonstrated subject matter competence but have not completed a teacher preparation program or met the performance assessment requirements for a full license.

Out of field refers to someone teaching on a limited assignment teaching permit who has a teaching credential but has not yet demonstrated subject matter competence in the subject area(s) or student population associated with the assignment.

Ineffective refers to a teaching assignment filled by someone without authorization or who was authorized by emergency-style provisional internship permits, short-term staff permits, or waivers.

Inexperienced teachers are teachers with 2 or fewer years of teaching experience.

Priority schools are schools with a 55% or more unduplicated pupil count of students identified as English learners, eligible for free or reduced-price meals, or foster youth.

Highest-need schools are the top 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth.

Lowest-need schools are the bottom 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth.

A Modest Increase in Newly Prepared California Teachers

Prior research demonstrates that the supply of fully credentialed teachers is a major factor influencing California's long-standing teacher shortage.[8] Over the last 2 decades, a major decline in the number of teacher candidates enrolling in and completing teacher preparation has led to too few fully credentialed teachers entering the workforce each year to meet the demand for teaching positions in California districts.[9]

In addition to the long-term decline in teacher preparation enrollments, recent data also show an overall 3% decline in teaching candidates enrolling in teacher preparation between 2019–20 and 2022–23

(from 41,978 to 40,739).[10] As noted, with fewer teaching candidates enrolling in TPPs overall, California has produced far fewer TPP graduates (or completers) in recent years than it did in the early 2000s (see Figure 1).

However, California saw a modest uptick in the number of candidates completing traditional TPPs between 2019 and 2020, with a 1-year increase of about 10% (from 9,054 to 9,980 completers).[11] 2021 saw another sizable 1-year increase of 14% in completers (from 9,980 to 11,424). These completer increases came after initial state investments in teacher residencies and the Golden State Teacher Grant went into effect, which may have supported additional candidates to go into the profession. Of course, these years also coincide with the early years of the COVID-19 pandemic, which also influenced teacher workforce trends.

To better understand teacher preparation trends in the state, it is useful to look at patterns in the California State University (CSU) system, which historically prepares about half of new teachers.[12] The CSU saw a steady 6% increase in teacher preparation enrollments between 2019–20 and 2022–23 (from 17,490 to 18,470).[13] Meanwhile, enrollments were either flat or declining in private institutions of higher education, University of California programs, or local education agencies (LEAs). Steady increases in CSU enrollment suggest that these programs may have become more attractive to potential candidates or had greater capacity to enroll additional candidates. However, this growth in enrollment had not yet translated into gains in the number of teachers licensed in those years. The number of credentials issued by CSUs declined by 13% between 2018–19 and 2022–23.[14]

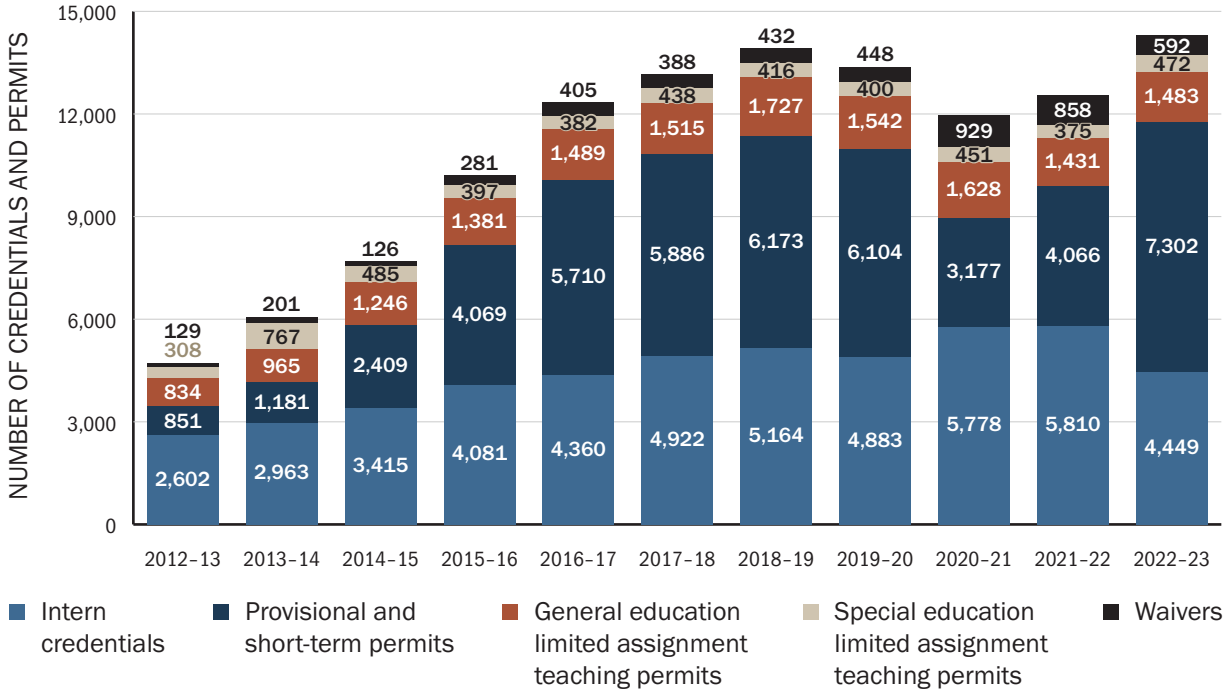
California Teacher Shortages Continue

Despite some promising increases in the number of traditional preparation completers, California is still contending with a major teacher shortage problem. A key indicator of teacher shortages is the number of substandard credentials and permits issued by the state each year, which by law should be issued only when fully credentialed teachers are not available.[15] These data indicate that California has had a long-standing and severe teacher shortage. Substandard credentials and permits tripled between 2013 and 2023 (see Figure 2).

Further, this increase has been driven by a dramatic growth in provisional and short-term permits, which have increased more than eightfold since 2013. In other words, the least prepared teachers are growing at the fastest rate. Notably, there was a dip in substandard credentials and permits between 2018–19 and 2020–21, before they rebounded and reached a record high in 2023. The dip could have been due, in part, to the availability of teacher testing waivers issued during the pandemic, although additional research will be needed to determine that with certainty.[16] In addition, increased hiring occurred in 2021–22 and 2022–23, which may have been in response to ARPA funding and state investments. These funds were allocated to learning recovery efforts, student health and mental health needs, and the expansion of transitional kindergarten and expanded learning programs.[17]

These substandard credentials and permits account for a sizable share of the new teaching authorizations the state of California issues each year. In fact, substandard credentials and permits made up more than half of all new California teaching authorizations issued in 2023.[18] While some of these were issued to fully prepared and credentialed teachers needing to teach a class outside of their field of credentialing, others were issued to individuals who held no other qualifications; that is, they had not completed teacher preparation programs or demonstrated subject matter competence to teach a particular grade, course, or student population.

Figure 2. Substandard Credentials and Permits, 2012–13 to 2022–23



Source: Learning Policy Institute analysis of California Commission on Teacher Credentialing. (2024). *Teacher supply: Interns, permits, and waivers* [Data dashboard] (accessed 12/16/2020; 4/23/2024).

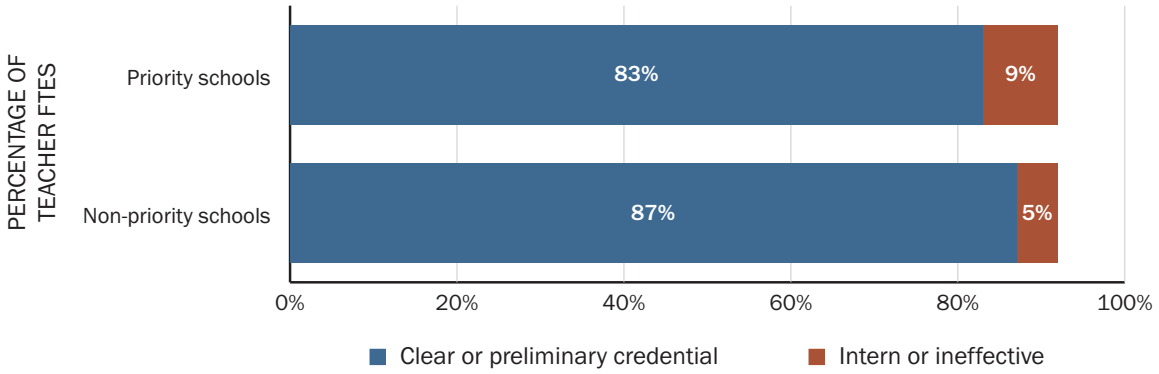
Shortages Disproportionately Impact Students in Priority Schools

Teacher shortages can impact students in schools across California. However, shortages disproportionately impact students in priority schools, which serve more students who can benefit from additional resources and supports, including English learners, students eligible for free or reduced-price meals (FRPM), and students in foster care. Priority schools have 55% or more unduplicated counts of such students. Priority schools are more likely than non-priority schools to hire underqualified teachers and beginning teachers in their first 2 years of teaching; this is even more so in the highest-need priority schools serving the greatest share of English learners, students eligible for FRPM, and students in foster care. These shortages are also particularly acute in math and science. Although significant shortages of special education and bilingual teachers are well documented, the data we use in this study do not allow us to examine these trends.[19]

Access to Fully Credentialed Teachers

In 2022–23, the most recent year with available data, 83% of teacher full-time equivalents (FTEs) in priority schools were fully credentialed with clear or preliminary credentials for their teaching positions (see Figure 3). In comparison, 87% of teacher FTEs were fully credentialed in non-priority schools. Priority schools were nearly twice as likely to fill teaching positions with interns and teachers on emergency-style permits or waivers, defined by the state as "ineffective," compared to non-priority schools.

Figure 3. Distribution of Credential and Permit Types Among Teacher FTEs in Priority vs. Non-Priority Schools, 2022–23

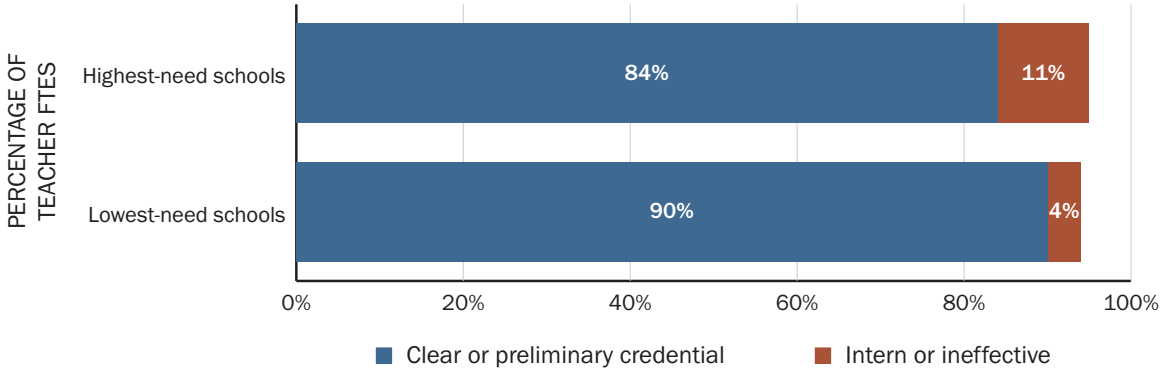


Notes: Percentages do not add to 100 due to omitted categories, rounding, and missing data. "Out-of-field," "Unknown," "Incomplete," and "Not applicable" categories are omitted. Highest-need schools are the top 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. Lowest-need schools are the bottom 10% of such schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. FTE = full-time equivalent.

Sources: Learning Policy Institute analysis of California Department of Education. *Teaching assignment monitoring outcomes* [Data set] (accessed 7/11/2024); California Department of Education. *California Longitudinal Pupil Achievement Data System* [Data set] (accessed 7/11/2024).

The disparities were even greater between the highest- and lowest-need schools in the state.[20] The state's highest-need schools had just 84% fully credentialed teacher FTEs compared to 90% in the lowest-need schools (see Figure 4). In the highest-need schools, 11% of teacher FTEs were interns or ineffective compared to just 4% in the lowest-need schools, nearly three times the proportion.

Figure 4. Distribution of Credential and Permit Types Among Teacher FTEs in Highest- vs. Lowest-Need Schools, 2022–23



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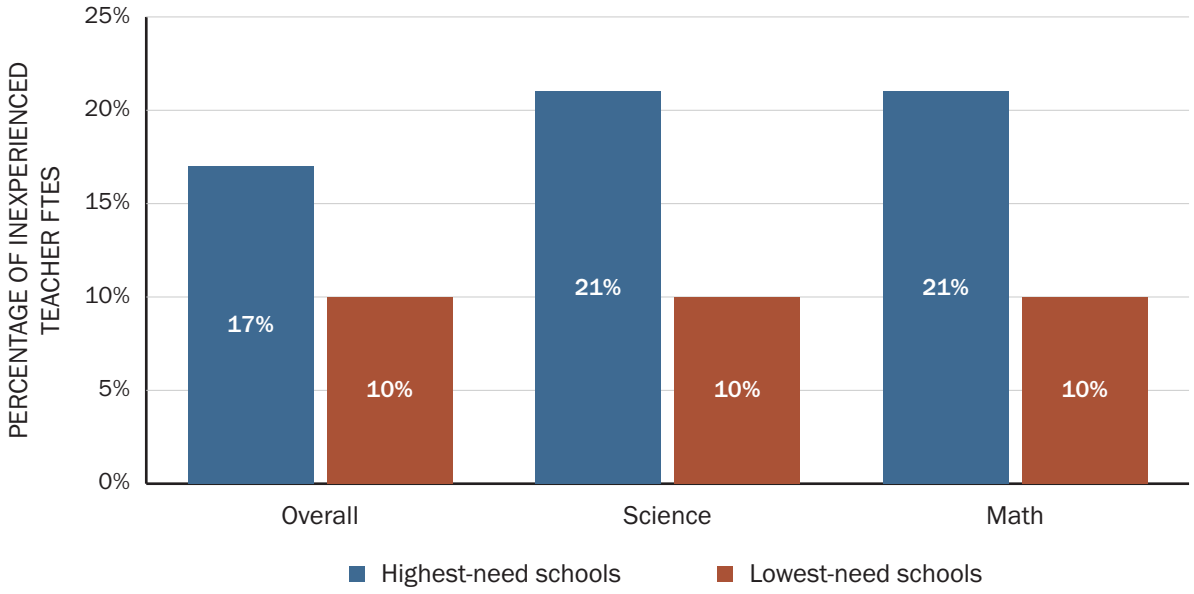
Access to Experienced Teachers

In addition to having more teachers with substandard credentials and permits, priority schools also had more teachers in their first 2 years of teaching, defined as "inexperienced." In fact, the state's highest-need schools had nearly twice the proportion of inexperienced teacher FTEs compared to the lowest-need schools (see Figure 5). The disparity was even greater for math and science assignments.

Figure 5. Percentage of Inexperienced Teacher FTEs in Highest-Need vs. Lowest-Need Schools, Overall, in Science, and in Math, 2022–23



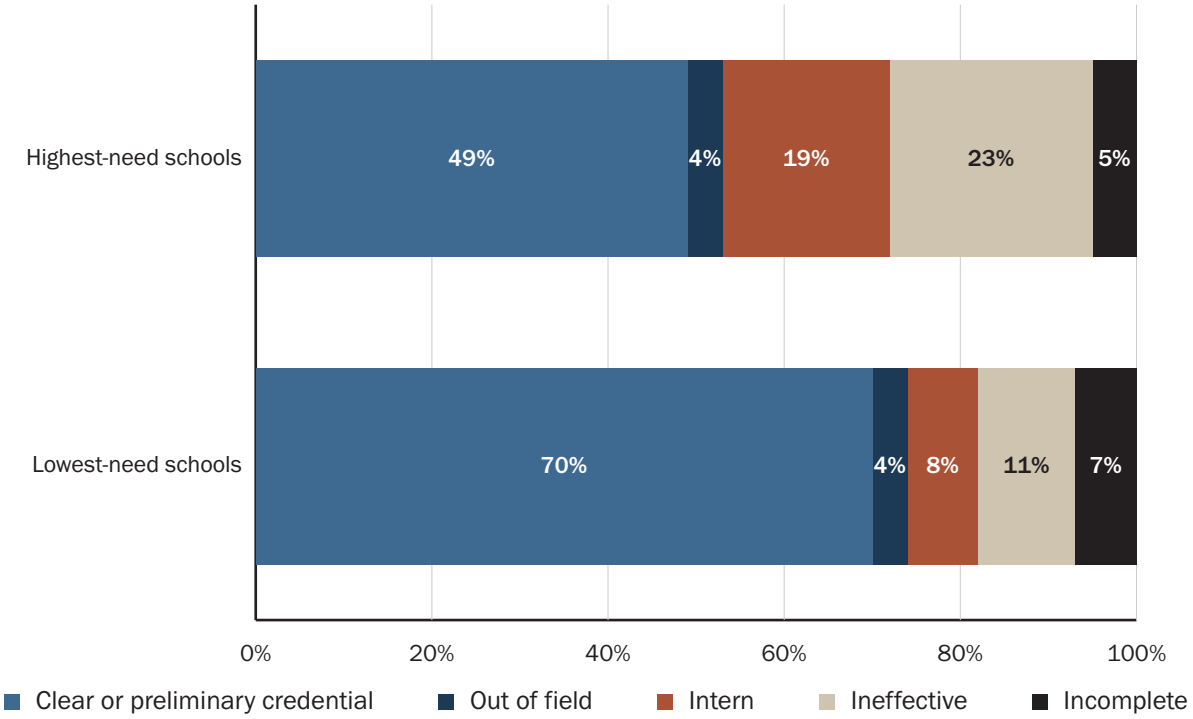
Notes: Highest-need schools include the top 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. Lowest-need schools include the bottom 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. FTE = full-time equivalent.

Sources: Learning Policy Institute analysis of California Department of Education. *Teaching assignment monitoring outcomes* [Data set] (accessed 7/11/2024); California Department of Education. *California Longitudinal Pupil Achievement Data System* [Data set] (accessed 7/11/2024).

One important way to examine credential data is to focus on the newest teachers who are just entering California schools, as these teachers reflect how the composition of the workforce is changing. Disparities in fully credentialed teacher FTEs were especially pronounced among inexperienced math teachers.[21] Fewer than half (49%) of inexperienced math teacher FTEs were fully credentialed in the highest-need schools compared to 70% in the lowest-need schools (see Figure 6). A full 42% of inexperienced math teachers in the highest-need schools were identified as interns or ineffective compared to 19% of inexperienced teachers in the lowest-need schools. These outcomes were similar, though less pronounced, among inexperienced science teachers. In the lowest-need schools, 69% of inexperienced science teacher FTEs were fully credentialed (20% identified as interns or ineffective), compared to 54% in the highest-need schools (40% identified as interns or ineffective).

In other words, not only do students in the highest-need schools have more inexperienced math and science teachers than their peers in the lowest-need schools, but those inexperienced teachers were also more likely to have little to no preparation to teach their subject matter. This striking disparity has significant implications for student achievement, especially as the state begins to implement the 2023 Math Framework, a set of guidelines on teaching math with a focus on developing deep conceptual understanding.[22] It also highlights a distressing contradiction that those students identified to receive more supportive resources are in fact less likely to receive the most crucial resource: a well-prepared and experienced teacher.

Figure 6. Distribution of Credential and Permit Types Among Inexperienced Math Teacher FTEs, 2022–23



Notes: Percentages do not add to 100 due to omitted categories, rounding, and missing data. "Unknown" and "Not applicable" categories are omitted. Highest-need schools include the top 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. Lowest-need schools include the bottom 10% of schools by unduplicated pupil count of students who are identified as English learners, eligible for free or reduced-price meals, or foster youth. FTE = full-time equivalent.

Sources: Learning Policy Institute analysis of California Department of Education. *Teaching assignment monitoring outcomes* [Data set] (accessed 7/11/2024); California Department of Education. *California Longitudinal Pupil Achievement Data System* [Data set] (accessed 7/11/2024).

It should be noted that priority schools have received additional funding through the state's Local Control Funding Formula (LCFF) supplemental and concentration grants since 2013 and, in theory, these funds should support improved staffing in these schools. Indeed, evidence shows that LCFF has improved student outcomes in priority schools, largely as a function of greater instructional investments, including reduced class size, increased teacher salaries, and greater teacher retention.[23] However, we find that

priority schools still have a lower percentage of fully credentialed and experienced teachers, suggesting that the distribution of district funding alone has not been sufficient to resolve long-standing inequalities caused by a lack of fully credentialed teachers in the state's teacher workforce.

State Teacher Workforce Investments Are Rolling Out

California policymakers funded an array of teacher recruitment and preparation investments from 2018 to 2023 intended to address teacher shortages and increase teacher diversity. These investments were specifically designed to increase teacher supply in shortage areas, incentivize well-prepared and accomplished teachers to teach in high-need schools, strengthen teacher preparation, and make teacher preparation more affordable and accessible. This section describes three of California's largest investments in the teacher workforce: the Teacher Residency Grant Program, Golden State Teacher Grant Program, and National Board Certified Teacher Incentive Program. As we will explain, these programs are experiencing noteworthy successes in local communities. Several other smaller investments in the teacher workforce are not included here, such as the Classified School Employee Teacher Credentialing Program and Integrated Undergraduate Teacher Preparation Grant.

California has allocated more than $1 billion to fund the three grant programs we highlight here, all of which were funded with one-time appropriations spent over several years (see Table 1). This section provides preliminary data on how these funds have been taken up and about how the programs are being experienced in the field.

Importantly, data from the state's early investments show that these programs are just now being fully implemented. However, the impact of these investments will be fully realized and understood in the coming years as funded preparation programs ramp up, teaching candidates complete their programs and enter the workforce, teachers earn National Board Certification, and data become available to trace these developments. Still, data available now provide insight into the progress made to date and the potential benefits of such programs in the future.

Table 1. Teacher Investments and Funding Levels, 2018–2023

Program	Funding years	Total funding, in millions
Teacher Residency Grant Program	2018–2027	$672M
Golden State Teacher Grant Program	2019–2026[a]	$521M
National Board Certified Teacher Incentive Program	2021–2026	$250M

[a] California Department of Finance estimates that Golden State Teacher Grant funding will be exhausted in 2025.

Note: Funding years include a start date, at which point the program was funded, and an end date, by which state funding must be spent or encumbered under current legislation. Encumbered funds are committed funds that are set aside to be spent down by a later date.

Sources: Learning Policy Institute analysis of California State Assembly Budget Subcommittee No. 3 on Education Finance. (2024, March 12). *Agenda*; Education Code 44415; AB-178 Budget Act of 2022; Personal correspondence with California Department of Finance (2025, January 21); State of California. (2022). *2022–23 state budget: California Student Aid Commission*; State of California. (2024). *2024–25 state budget: California Student Aid Commission*.

Teacher Residency Grant Program

The Teacher Residency Grant Program (TRGP) provides competitive grants to local education agencies—that is, districts and county offices of education—in partnership with educator preparation programs to build teacher residency programs. Residency programs have a strong emphasis on clinical training, offering candidates supervised teaching alongside a designated mentor for at least half-time over one full school year as they complete their credentialing coursework.[24] Residents earn a stipend during their preparation and, in exchange, agree to work in their residency district for at least 4 years. The goal of the program is to increase the supply of teachers in designated shortage fields—including bilingual education, math, science, STEM, special education, multiple subject instruction, and transitional kindergarten—and to recruit and retain a diverse teacher workforce.

After an initial allotment of $52 million for TRGP in 2018, Governor Gavin Newsom and the state legislature made significant investments in the program in 2021 and 2022 for a total of $672 million (see Table 2). Funding supports three different types of competitive grants: Capacity Grants to plan new residency programs, Implementation Grants to start new residency programs, and Expansion Grants to expand existing residency programs. Residency programs may receive up to $40,000 per resident and have flexibility on how they use the funds. For example, grants can go to coursework, mentor teacher stipends, residency program staff, induction, and stipends for residents. Starting in 2023, programs were required to provide residents with a living stipend of at least $20,000.[25]

Table 2. Teacher Residency Grant Program Funding

Year awarded	Grant closes	Focus areas	Total funding, in millions
2018	2023	• $52M for establishing and expanding teacher residency programs in special education, STEM, and bilingual education[a]	$52M
2021	2026	• $25M for Capacity Grants • $325M for Implementation and Expansion Grants	$350M
2022	2027	• $10M for School Counselor Residency Capacity Grants • $20M for the State Residency Technical Assistance Center • $174M for Implementation and Expansion Grants • $66M, use to be determined[b]	$270M
Total			$672M

[a] In 2018, $75 million was allocated for establishing and expanding teacher residency programs. However, unspent funds were returned for a total of $52 million in funding.

[b] Funds have not yet been transferred to California Commission on Teacher Credentialing.

Sources: Learning Policy Institute analysis of California Commission on Teacher Credentialing. (2024, April). *Update on the residency grant programs*; Education Code 44415; AB-178 Budget Act of 2022; Personal correspondence with California Department of Finance (2025, January 21).

The Commission on Teacher Credentialing (CTC) used the state's 2018 TRGP funds to award 22 Capacity Grants and 38 Implementation and Expansion Grants to new and existing teacher residency programs.[26] In addition, the CTC has awarded nearly all of the 2021 Capacity Grant funds to 98 residency programs and is accepting applications for the last $2 million of those funds.[27] The agency expects the application process to be especially competitive since this will likely be the last round of Capacity Grant awards. Finally, using the 2021 and 2022 TRGP Implementation and Expansion Grant funds, the CTC awarded grants to 137 new and existing residency program grantees between May 2022 and April 2024, which the agency estimates will total about $420 million.[28] In total, the CTC has awarded 295 grants and the vast majority of authorized funding to support the planning, implementation, or expansion of teacher residency programs in the state. Indeed, of the $555 million appropriated and dispersed to date for teacher residency capacity, implementation, and expansion grants, the CTC has allocated $475.4 million, or 86% of available teacher residency funding.[29]

A partial look at the initial outcomes of the grant is provided by the WestEd California Teacher Residency Grant Program Dashboard, which provides a snapshot of these data reports for 48 programs—33 funded with the state's initial 2018 funding and 15 programs that received 2021 funding. As of July 2024, the dashboard reported that California residencies graduated nearly 1,400 TRGP-funded residents from those 48 programs.[30] These data do not yet include the remaining 122 residency programs funded with 2021 and 2022 Implementation and Expansion grant funds, some of which may have already graduated residents,[31] nor do they yet include 2023–24 graduates.

An updated look at residency outcomes can be gleaned from surveys the CTC collects from TPP completers, which show that teacher residency programs graduated nearly 5,000 residents between 2021 and 2024.[32] In 2021 alone, residents accounted for about 10% of newly prepared California teachers.[33] Not all of these residents are funded through the TRGP. However, residency programs have taken hold in districts across the state, with programs also drawing on federal Teacher Quality Partnership grants, Hawkins Centers of Excellence funds, and district funds.[34] While districts receiving TRGP funds must contribute matching funds or in-kind support, some have gone beyond these requirements to expand what they see as a highly successful strategy for preparing and recruiting teachers.[35]

Indeed, districts are increasingly demanding residencies, and as preparation programs learn how to do this work, some—like Sonoma State University—are expanding to a growing number of districts (see Sonoma State University: A Hub for TRGP Residencies). Alder Graduate School of Education is another TPP that has been preparing a significant number of residents. The program expanded from working with one LEA in 2010 to nearly 40 by 2024, serving exponentially more residents over those years.[36] The preparation program enrolled just 20 residents in 2010–11 but 565 residents in 2024–25.[37] All told, about 1,500 residents had completed an Alder GSE residency program as of December 2023.[38]

Sonoma State University: A Hub for TRGP Residencies

Sonoma State University is a Hispanic-serving institution serving the North Bay region of the state, including Sonoma, Lake, Mendocino, Napa, Marin, and Solano counties. Sonoma State partnered with Napa Valley Unified School District (NVUSD) and Santa Rosa City Schools to apply for a TRGP Capacity Grant in 2018. After planning, they launched the North Bay Teacher Residency program in 2019 with six residents in bilingual and STEM fields. With subsequent TRGP grant awards, Sonoma State has expanded its offerings from one TRGP residency to eight (two of which will launch in 2025). In 2024–25, Sonoma State TRGP funds supported 53 residents across six residency programs that partner with seven districts in more than four North Bay counties. These programs are filling crucial district needs for STEM, bilingual, special education, early childhood, and multiple subject teachers. (See table below.)

Sonoma State University Teacher Residency Programs

Launch date	Residency program	Credential areas
2019–20	North Bay Teacher Residency (This later split into two residencies.)	Bilingual, STEM
2022–23	North Bay STEM Teacher Residency[a]	STEM
	North Bay Bilingual Teacher Residency[a]	Bilingual
2023–24	Petaluma Regional Diversity, Equity, and Inclusion Residency	Multiple Subject, Bilingual, Special Education
2024–25	Novato Cultivating Community Connections	Multiple Subject, Bilingual
	Ukiah Rural Teacher Residency	Multiple Subject
	North Bay Early Childhood Specialist	Multiple Subject, PK–3, Special Education
2025–26	Windsor Initiative to Diversify Education	Multiple Subject, Bilingual
	Round Valley Teacher Residency	Multiple Subject, Bilingual

While residents complete coursework at Sonoma State, they are placed at school sites in cohorts of residents pursuing the same certification. They learn under the guidance of a mentor teacher for an entire school year and also receive weekly support from a Sonoma State clinical practice supervisor. With $40,000 per resident from TRGP, Sonoma State residents receive a stipend of at least $34,000 for the year. Additional funding, such as the CSU Residency Scholarship and a new grant from the federal Hawkins Centers of Excellence grants (targeted to minority-serving institutions), further subsidize tuition costs and make the program more accessible to those who might not otherwise have pursued preservice teacher preparation.

Sonoma State has made a concerted effort to make high-quality teacher preparation available to rural communities in the region. Two of the newest residencies—Ukiah Rural Teacher Residency and Round Valley Teacher Residency—are in Mendocino County, between 70 and 130 miles north of Sonoma State. The Round Valley residency will focus specifically on preparing teachers who will teach in Indigenous communities. Sonoma State developed a partnership with Mendocino Community College to offer a hybrid learning model. Residents take most courses online but meet monthly for an in-person class with a Sonoma State professor at the community college.

According to Rhianna Casesa, Director of Sonoma State's teacher residency programs, there is a crucial need in the region for teachers with bilingual authorizations, as "dual language programs are growing exponentially, so there's just this perpetual need." Gina De Luca, Assistant Director of Human Resources at NVUSD, who coordinates the first bilingual residency Sonoma State launched with TRGP funding, adds:

> We have a large Spanish-speaking population here in the county of Napa, and we have two elementary dual immersion schools. We believed that there was high interest all over our district with families wanting to enroll their children, and we wanted to make sure that we were continuing to staff those schools with very high-quality, properly credentialed teachers.

Between 2019–20 and 2024–25, Sonoma State TRGP residencies supported 41 teachers earning a bilingual authorization, a massive increase enabled by TRGP. With this pipeline, NVUSD has been able to staff its positions that require bilingual authorization each year and is working to expand dual immersion to the middle and high school levels.

Teacher residencies have expanded and diversified the teacher pipeline at Sonoma State. Casesa notes that due to their TRGP-funded residencies, "We have more residents than traditional student teachers or interns across all of our programs. There are a lot more BIPOC teachers in our residency program than there are in the student teaching or intern pathway. We used to have a really hard time recruiting residents for special education because many were going into the internship pathway. Now that we have a larger stipend and some scholarships, we have more residents in our special ed program than we've ever had."

Of the 40 TRGP-funded residents who completed preparation between 2020 and 2023, 93% were still teaching in 2024. Another 80 residents are due to complete their programs by 2025. Unfortunately, without continued funding, these programs will likely shutter. According to Casesa:

> It's not because there's a lack of interest or a lack of need. There's just not funding for it. To continue would require more funding, particularly for stipends because that's what we find most enticing.

[a] These emerged from the original North Bay Teacher Residency program.

Source: Sonoma State teacher preparation data and documents provided by special request and in interviews. (2024).

Studies on the implementation of TRGP highlight the benefits of residency programs and the key components included in the TRGP.[39] A study of successful California residency programs finds that the minimum $20,000 living stipend residents receive is a top factor attracting teaching candidates into residency programs.[40] As one Kern Urban Teacher Residency graduate explains:

> I'm so glad I went this route, and I'm so glad I got to have a mentor and also a safe space to practice. The stipend was also a big part of it because unfortunately almost no one can survive on no income. And if that wasn't part of the program, I don't think I would have been able to do it, since I have a mortgage and a car payment and all that fun stuff.

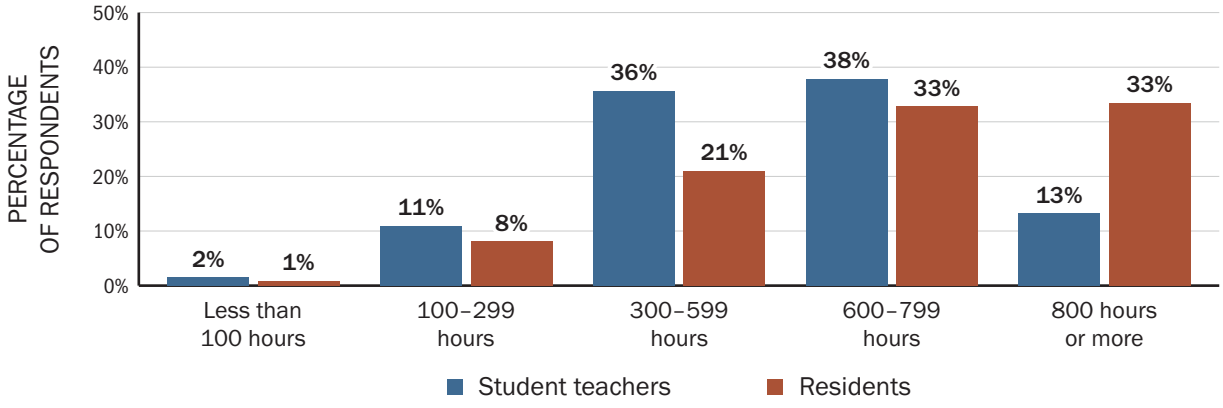
The stipend allows teaching candidates to complete a rigorous residency program that prepares them for the classroom. A graduate of Tulare County's Teacher Residency for Rural Education explains that they began the residency with observation and gradually took over classes:

> Now, [in spring of the residency year], I'm teaching the majority of the classes. I feel like that's been seamless for me, as opposed to just being thrown into the fire as an intern teacher.

An analysis of 2021 California TPP completer surveys found that residents were more likely to rate their programs as very effective compared to completers of other pathways.[41] Residents had more intensive clinical experiences and support than did student teachers and received high levels of feedback. Two thirds of residents (66%) reported completing at least 600 hours of student teaching (see Figure 7). Just 51% of candidates in a traditional student teaching program completed as many hours, and interns completed little or no student teaching.[42]

Figure 7. Estimated Clinical Hours for Residents and Student Teachers, 2020–21

Approximately how much time did you spend in student teaching (in the classroom of a cooperating teacher) as part of your supervised fieldwork?



Note: This analysis is restricted to student teacher and residency completers from 2020–21 who responded to the Commission on Teacher Credentialing survey question on student teaching hours (*N* = 8,901).

Source: Patrick, S. K., Darling-Hammond, L., & Kini, T. (2023). *Early impact of teacher residencies in California* [Fact sheet]. Learning Policy Institute.

Residents have been found to be more likely to pass teaching performance assessments on a first attempt compared to candidates entering through internships or student teaching pathways.[43] According to the WestEd TRGP dashboard, those particular resident candidates also had high rates of earning a credential and more than 85% of graduates of residencies in the first two cohorts were still in the classroom as of the 2022–23 school year.[44] By comparison, just 75% of interns and 58% of teachers on emergency-style permits remained in California classrooms for at least 3 years.[45]

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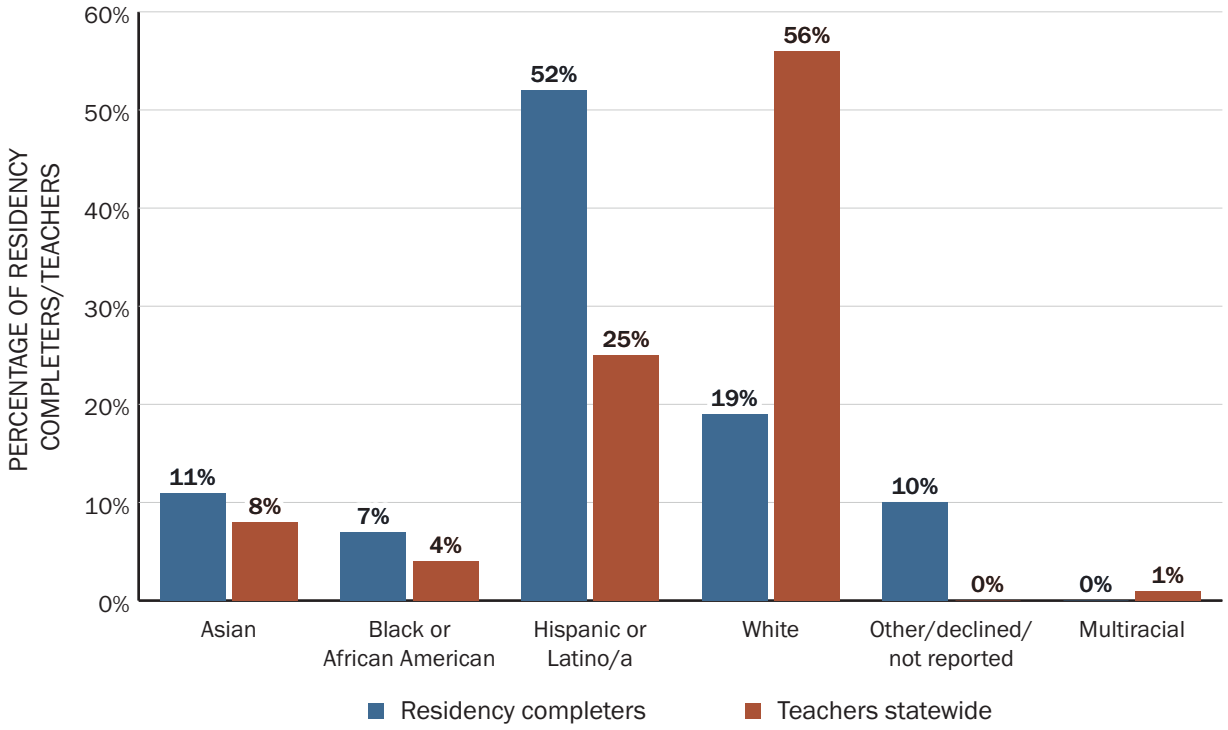
Residents who received TRGP funds were also more racially and ethnically diverse than the current teacher workforce, and a large majority of residents (at least 70%) were people of color (see Figure 8). Of the residents who completed preparation between 2020 and 2023, around 40% enrolled in special education; 34% were in STEM fields; and 27% were pursuing a bilingual authorization.[46]

Figure 8. Teacher Residency Grant Program: Demographics of 2022–23 Residency Completers



Source: California Commission on Teacher Credentialing. (2024, April). *Agenda item 3E: Update on the residency grant programs*.

Research suggests that employers find teacher residents to be well prepared to fill positions in high-need schools that often struggle with shortages.[47] A Salinas City School District principal said of TRGP residents in the district:

> [The residents] are part of the community. They are so well prepared. They have the classroom management [and] the academic engagement of the students, because they're with very good role model teachers. … They already know the school, the staff, and our systems. They are ready to take a teaching position.[48]

Districts across California have committed to and invested in the teacher residency model to strengthen their teacher workforce. PK Diffenbaugh, Superintendent of Monterey Peninsula Unified School District, an Alder Graduate School of Education partner, notes that their district invests in residencies for several reasons, including:

> the quality of the program, because of our high rate of need, and because our principals consistently rate the residents as higher quality than other candidates. … One thing that I've been really surprised and pleased with is the number of mentors who, in the surveys at the end of the year, say, "I'm more likely to stay in [the district]" … because they're growing in their own professional expertise.[49]

WestEd has been conducting an ongoing evaluation of the TRGP. A 2023 WestEd report noted the need to increase resident pay and benefits, support better collaboration between LEAs and institution of higher education partners, and support residency sustainability.[50]

Golden State Teacher Grant Program

The Golden State Teacher Grant (GSTG) Program is a state scholarship program administered by the California Student Aid Commission (CSAC) for candidates pursuing a teaching credential. The goal of the program is to increase the supply of teachers who are fully prepared to teach in priority schools, where they are most needed.

In 2020, $15 million from the U.S. Department of Education's Individuals with Disabilities Education Act funded the program for candidates pursuing a special education credential. One-time funds in 2021 supported candidates in critical teacher shortage subject areas—including bilingual education, math, science, STEM (including career technical education in STEM), special education, multiple subject instruction, and transitional kindergarten. In 2022, it was expanded to all school counselor and teaching candidates who committed to teach in a priority school (see Table 3).

Table 3. Golden State Teacher Grant Program Funding

Year	Priority area	Appropriated funding, in millions	Amount dispersed, in millions
2020–21	Special education	$15M	$7.6M
2021–22	Teacher shortage areas	$500M	$48.6M
2022–23	All teachers and counselors	$0	$136.2M
2023–24	Special education	$6M	$187.5M
Total		**$521M**	**$379.9M**

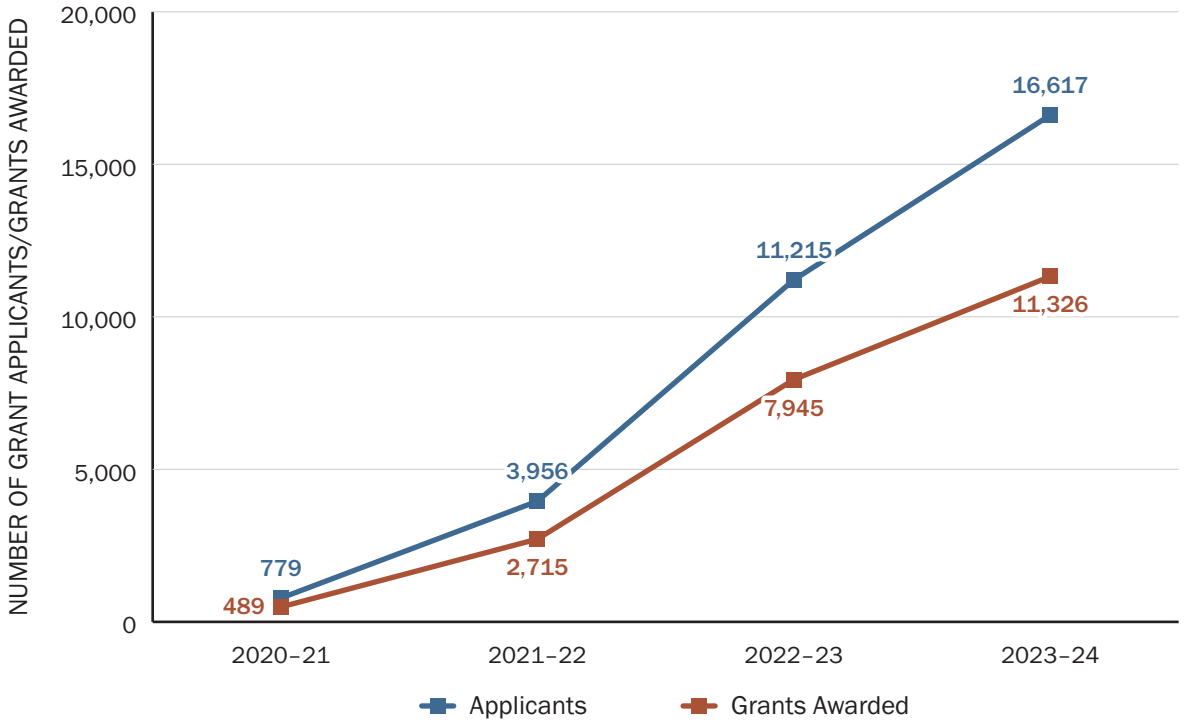
Note: In some years, grant funds were dispersed after the funding year because Golden State Teacher Grant funds can be spent down or encumbered until the end of the grant's funding period. Encumbered funds are committed funds that are set aside to be spent down at a later date.

Sources: State of California. (2022). *2022–23 state budget: California Student Aid Commission*; State of California. (2024). *2024–25 state budget: California Student Aid Commission*.

In the first 2 years of the grant program, students enrolled in CTC-approved professional preparation programs could receive up to $20,000 toward program completion, including tuition and other expenses. To stretch funding that was running out, new GSTG applicants applying for funds in 2024–25 were eligible for up to $10,000 in grant funding.[51] Recipients of the $20,000 awards are required to complete their program, earn a credential within 6 years of receiving funds, and commit to work at a California priority school for 4 years within 8 years of program completion. Recipients of $10,000 awards must complete 2 years of service within 4 years.

The GSTG program is extremely popular. CSAC has received increasing numbers of applicants each year, and the number of grants awarded has also grown (see Figure 9).[52] According to CSAC, applicants who did not receive grants may not have enrolled in an eligible program or may have received other aid that left no remaining unmet need. Of the $521 million funded for GSTG since 2020–21, CSAC awarded approximately $380 million as of 2023–24. The program is authorized through 2026; however, CSAC received more than 11,000 grant applications for 2024–25 as of early September 2024 and was still accepting applicants.[53] Awarding $10,000 grants to each of the applicants who applied could exhaust grant funding by 2025.

Figure 9. Number of Golden State Teacher Grant Applicants and Grants Awarded, 2020–21 to 2023–24



Source: California Student Aid Commission data provided by special request. (2024).

Data on participation in GSTG are limited. There are not yet data publicly available on candidate characteristics, program completion rates, hiring rates, or teacher retention. To learn more about participation in the program, we interviewed GSTG grant recipients and collected data from educator preparation program leaders.[54] GSTG recipients explained that the grant played a crucial role in supporting their preparation in the following ways:

- **The GSTG attracted candidates to the teaching profession.** Grant recipients reported that the scholarship made the teaching profession a more financially feasible option and that they otherwise would not have been able to pursue teaching. Candidate comments included the following:
  - "Loans were not an option for me. Knowing that my tuition was going to be paid made my decision to become a teacher a lot easier. I am coming from a role where I had a large pay cut and now I am in my purpose. This is to the end. This is not a 4- to 5-year commitment. This is for my lifetime."
  - "My passion shifted in the past few years, and I wanted to become a teacher. But without GSTG it would have taken longer. I would have needed to pay down other loans first—in particular my BA loans. I would have put off becoming a teacher for another 10 years to pay down those loans. So without GSTG, a loan would have halted my teaching career."

- "I was working in the after-school program and I wanted a change. I saw the disparities and knew I needed to make the change. When I applied to become a teacher, I didn't know the GSTG was available. [My program] helped me find out about it. And when I got it, it was a big load off my back. I didn't have to think about putting food on the table and could focus on schoolwork. This is an opportunity to give back to the community. And I don't take it lightly and it's not easy. I give it 110%. I didn't have anyone who looked like me. And right now I am the only African American male teacher on the campus. It makes the world of the difference to see yourself in the classroom."[55]

- **The GSTG reduced stress and covered tuition and other important expenses while candidates completed rigorous and demanding preparation programs.** GSTG recipients explained that whether they participated in a teacher residency or student teaching, their programs were incredibly demanding and precluded them from holding a full- or part-time job.

  Irene Morales, LAUSD social science teacher and graduate of a 2-year UCLA credential and master's program, explained that she and her classmates had to "leave our houses every day by 7:00 a.m." to spend a full school day at their student teaching placement sites, followed by hours of evening classes. She explains further:

  > We wouldn't get back [home] until 9:00 p.m. at night, every night, during the week. It really didn't give us time to do anything else, so it really would have been impossible to work.

  The GSTG funds helped recipients pay for preparation costs including tuition, textbooks, certification fees, and exam preparation, as well as living expenses. For Raúl Ortiz, LAUSD science teacher and graduate of the Alder Graduate School of Education (Alder GSE) residency program, GSTG funding was a lifeline. Before applying for the GSTG program, Ortiz put all of his residency stipend toward rent and "had to apply for food stamps" to make ends meet. When Ortiz found out about the GSTG program, he states, "I finally had an answer." After paying off his tuition, he was able to put the remainder of his grant toward "rent, electricity, car insurance, because I had to buy a car to get to my [school]." This allowed him to persist in his preparation program. Reflecting on the first few months of his preparation program, he noted:

  > At that point in my life I wasn't thinking about how [teacher preparation] is going to benefit my future. … I was thinking, "I only have 5 dollars in my bank account and I need a job. Do I continue this program?" I would not have continued my teaching career whatsoever without the Golden State Grant.

  Grant recipients echoed the sentiment that the GSTG enabled them to make ends meet by covering tuition, preparation expenses, and living expenses, including rent and gas, caring for their children, and unexpected emergencies that could have derailed their preparation. Selena Miranda-Mooney, Alder GSE graduate and Monterey Peninsula Unified School District elementary teacher, reports that "receiving the Golden State Grant was a relief." As she puts it, "I already have debt from my undergraduate education, and I was a little bit worried." However, with the GSTG, Miranda-Mooney notes:

  > The loan that I had to take for my master's program was much lower than it would have been without the grant. … I'm not stressed out too much about the state of my student loans. My monthly payment is pretty affordable.

Interviewees noted that having GSTG funds and not having to squeeze in work allowed them to focus on their preparation programs. Izac Parra, a student studying school social work at California State University, Sacramento, put it this way:

> Once I was able to secure the [GSTG] funding, I was able to leave my job and focus on classes. I just had a much easier time not having to think about the financial side of things every day and not having to sacrifice class time for work hours.

- **The GSTG made entry to teaching possible for recipients who were eager to teach in priority schools.** Many of these recipients also planned to continue teaching in a priority school after completing their service requirement. Miranda-Mooney described how valuable the GSTG was in supporting her desire to teach in a priority school:

> I grew up in South Los Angeles. I went to a lot of Title I schools growing up. To be the teacher of students who look like I do just feels really gratifying. This program is just really helpful in supporting me to work at a priority school with students who need people to show them that you can have higher hopes for yourself. I wouldn't consider working at a different school setting. I love the people that I work with and the students. It feels really good to show them things that I wish I could have seen at a younger age.

Similarly, Milen Coronado, an LAUSD transitional kindergarten/kindergarten teacher who obtained their teaching credential from UCLA, put it this way:

> I want to work anywhere where I'm needed because I know teachers are in need. I would stay here even past [the] requirements for any grants that I have.

While all GSTG recipient interviewees reported that they were pleased to work in a priority school, the grant also encouraged some recipients to stay in those schools longer than they might have otherwise. Grant recipients noted that they have put off plans to move out of state, to other California counties, or to schools closer to their homes in order to meet their GSTG service requirement.

It is worth noting that uncertainty about the future of the grant appears to be contributing to uncertainty about whether candidates can plan to continue in their programs and enter teaching. Adrian Soto, an LAUSD chemistry and computer science teacher and student in a 2-year UCLA teacher preparation program, received $5,000 of his award in 2023–24 and was eligible to receive the remaining $15,000 for his second year in 2024–25. However, Soto explains that he received an email indicating that "anyone that qualified for the Golden State Grant [should] make other plans because it's up in the air."

UCLA graduate and LAUSD middle school English teacher Mel Molina noted that uncertainty about the scholarship program could be deterring others from considering the program. Molina spoke on one potential candidate's concerns:

> I know the Golden State Grant is kind of iffy right now, and that was something that was making her really anxious. Just the uncertainty of that. Having initiatives like the Golden State Grant and residencies really allows for more diverse educators, which is what our schools [need]. I feel very grateful for the opportunity to have been able to receive the grant before [now] because it's so precarious. I just really hope that it continues so that other teachers like my cohortmates can access the profession.

National Board Certified Teacher Incentive Program

A third major program is a set of incentives for experienced and accomplished Board-certified teachers to teach in priority schools. The National Board of Professional Teaching Standards administers the National Board Certification program, a prestigious program designed to "develop, retain, and recognize accomplished teachers and to generate ongoing improvements in schools nationwide."[56] Although early data on the program are limited to the number of teachers accessing the program and do not yet address how participation impacts teacher placement, retention, or student outcomes in California schools, these data provide promising indications that the incentive is supporting participation in the Board certification process.

Research on National Board Certification demonstrates that it is related to greater student achievement. For example, a randomized control trial of a sample of LAUSD teachers found that students of National Board Certified teachers (NBCTs) showed greater improvement on reading and math standardized exams than did students whose teachers were unsuccessful National Board applicants.[57] Other studies similarly find that students of NBCTs outperform students of non-NBCTs, and these differences are most apparent in math.[58] A study of Florida NBCTs also found evidence that students of non-NBCTs performed better in math when their schools had NBCT mentors.[59] In addition, National Board incentives have been shown to attract and retain NBCTs in high-poverty schools.[60]

The 2021–22 California budget included $250 million in one-time funds for the California Department of Education (CDE) to award two grant programs to incentivize teachers to earn National Board Certification and for NBCTs to teach in priority schools. First, teachers can receive the National Board subsidy, which offers up to $2,500 to any credentialed teacher in a priority school to pay National Board Certification costs. Second, if an NBCT agrees to work at a priority school, they are eligible for the National Board Incentive, an award of up to $25,000 over 5 years.

An important goal of this program is to increase the supply of highly accomplished teachers in the schools where they are most needed. Whereas the TRGP and GSTG programs incentivize newly prepared teachers to enter priority schools, it is also important that students in priority schools have access to veteran teachers who are skilled in meeting student needs and can mentor and support their peers to improve teaching and learning schoolwide.[61] The grant program also encourages NBCTs to stay in the priority schools where they are needed most.[62]

Since 2021–22, CDE has awarded more than $33 million to LEAs who pass on the salary incentive to their eligible NBCTs. In addition, CDE has awarded subsidies to teachers pursuing National Board certification. The agency received more than 2,300 subsidy applications for 2023–24 alone.[63] Notably, it can take 1 to 3 years for a teacher to become Board certified as they complete various components of the program, so grant funding would be spent down gradually during that time.

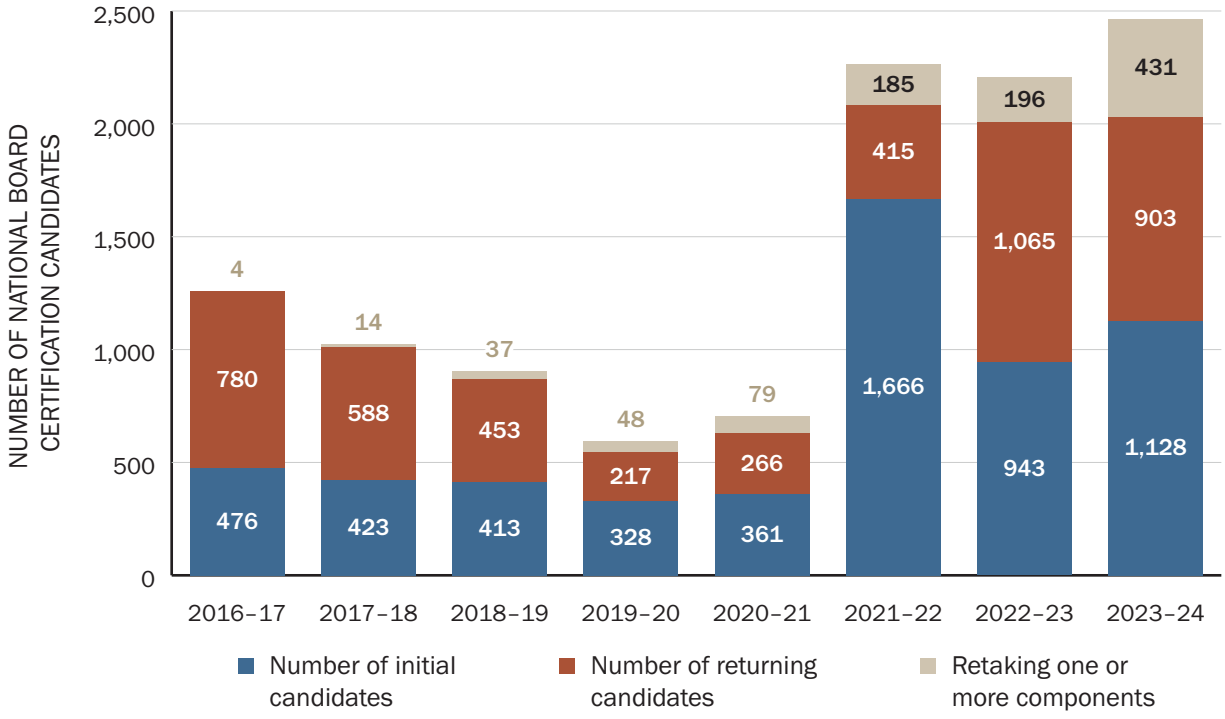
The number of candidates pursuing certification more than tripled after the National Board subsidy and incentive became available in 2022 (see Figure 10). The greatest increase was in initial candidates who were beginning the certification process for the first time, although there were also increases in returning candidates who were

The number of candidates pursuing certification more than tripled after the National Board subsidy and incentive became available in 2022.

continuing the process from a prior year and candidates who were retaking components that they had not passed on a prior attempt. These figures include all National Board candidates, not just those in priority schools. However, CDE reported that priority schools also saw a significant increase in teachers pursuing Board certification, from 415 in 2020–21 to 1,764 in 2022–23.[64]

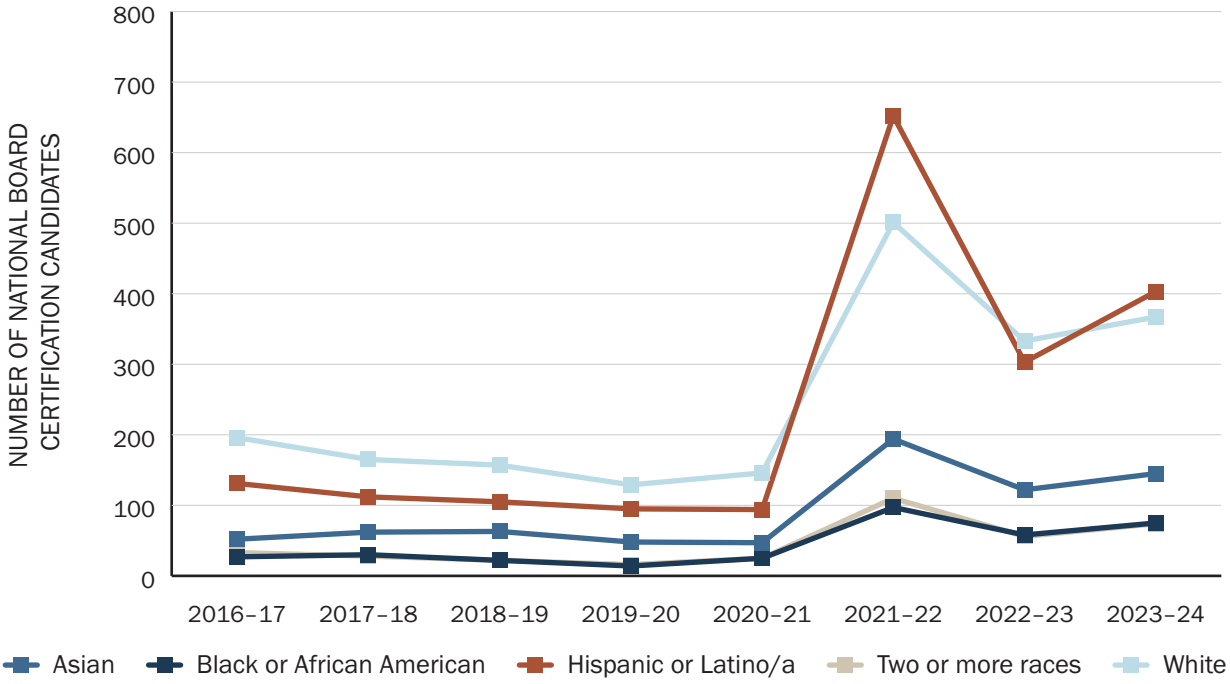
There has also been a large increase in teachers of color beginning to pursue National Board Certification (see Figure 11). In 2022, the number of candidates of color increased more than fivefold, and candidates of color made up about 70% of National Board candidates statewide.

Figure 10. Number of National Board Certification Candidates, 2016–17 to 2023–24



Source: National Board of Professional Teaching Standards data provided by special request. (2024).

Figure 11. Number of National Board Certification Candidates by Race/Ethnicity, 2016–17 to 2023–24



Source: National Board of Professional Teaching Standards data provided by special request. (2024).

Key Takeaways and Recommendations

Teacher shortages continue to be a significant challenge in California. With too few teaching candidates enrolling in and completing preservice teacher preparation, districts continue to rely on teachers with substandard credentials and permits to fill teaching positions. These teachers are disproportionately teaching in priority schools that serve more English learners, students eligible for free or reduced-price meals, and foster youth, as well as in hard-to-fill subjects such as math and science. Their high turnover rates produce large numbers of vacancies, which continue the vicious cycle of shortages.

There are some early indications of increases in teacher preparation participation that could begin to mitigate shortages. For example, enrollments in CSU teacher preparation programs have been trending upward, even though the number of completers being licensed has not yet increased. In addition, there has been a modest uptick in candidates completing traditional preparation programs. However, these increases are still too low to meet the need for fully credentialed teachers.

Fortunately, the state of California has committed substantial funding to strengthen the teacher workforce. These funds are going to good use as teaching candidates enroll in teacher preparation and begin to enter teaching in high-need schools in ways that support them in being fully prepared, being more effective, and staying longer in the classroom. The CTC has awarded nearly 300 grants to plan, implement, or expand teacher residency programs across the state between 2018 and 2024 through the Teacher Residency Grant Program. Data from the CTC completer surveys suggest that about 5,000 graduates of TPPs completed residencies between 2021 and 2024 and at least 1,400 residents were supported with TRGP funding. Data from the WestEd residency dashboard of the initially funded programs indicate that these candidates have much higher retention rates in teaching than interns and teachers on emergency-style permits, thus slowing turnover and addressing the root cause of shortages.

The Golden State Teacher Grant program is popular and quickly running out of funds. The scholarship program supports teacher candidates who will commit to teach in much-needed positions in priority schools. The program has issued more than 22,000 awards, with more than half of those awarded in 2023–24. Based on grant recipient interviews, these funds have been integral to supporting candidates who otherwise might not have been able to complete their preservice preparation programs and supporting them to teach in priority schools for several years.

The National Board Incentive Program complements the state's teacher preparation investments by providing an incentive for experienced and accomplished teachers to choose priority schools. The National Board Incentive has supported a dramatic increase in California teachers pursuing Board certification, including in priority schools. The funding has also coincided with a dramatic increase in the number of teachers of color pursuing Board certification. These teachers will be able to support student achievement in the schools where they are most needed in addition to serving as mentors in schools that are more likely to have beginning teachers.

Despite the early accomplishments of these programs, it will be some time before all of the state's investments are fully realized. Notably, the state's largest investments have only just gone into effect—137 residency programs were funded between 2022 and 2024 and more than 11,000 Golden State Grants were awarded in 2022–23. There simply are not data yet to capture how these awards may

have shifted trends in teacher preparation, district hiring, retention, or student outcomes. Comprehensive and timely data on program outcomes will be necessary to more fully evaluate the extent to which the state's investments are supporting a stronger and more diverse teacher workforce and contributing to student learning.

Meanwhile, California should consider how the state can maintain the momentum that these programs are beginning to create. This requires ongoing funding to support the successes we are beginning to see across the state. Unlike past eras, when California would launch successful programs and then let them die, the problem of teacher shortages and the need for well-prepared teachers are not likely to end without a continued plan to fund critical supports for increasing the supply of fully credentialed teachers.

Over the past few years, the state of California has made serious efforts to address the state's long-standing teacher shortages, with a concerted focus on strengthening the teacher workforce in the highest-need schools. Through investments in the Teacher Residency Grant Program, Golden State Teacher Grant, and National Board Incentive Program, the state has planted seeds that are beginning to sprout. The state will need to continue to tend to those early investments in order to reap their full potential. Consistent and reliable funding for these programs could support them to develop recognition and a positive reputation that attracts additional high-quality applicants in the years to come. Recommendation include:

- **Ensure continued funding for the Golden State Teacher Grants.** While it took some time for the GSTG program to be established and become known to universities and candidates, it is now operating at full tilt and, by all accounts, making a difference for teacher recruitment. At this point, GSTG funds are quickly being spent down and are likely to be exhausted before they expire in 2026. In addition, these funds have already been reduced from $20,000 to $10,000 scholarships to stretch the remaining dollars to as many recipients as possible. The state should act expeditiously to commit funds to the GSTG so that the program can continue to build a strong pipeline into teaching.

- **Plan for strategic sustainability for teacher residencies that have been launched and for continued expansion.** Teacher residency programs are beginning to be acknowledged as a strong form of preparation that leads to high levels of teacher retention, which could improve district workforce stability. State funding can go toward establishing additional residency programs, continuing to support residency stipends and expenses for existing residency programs, and conducting research on how to support the expansion and sustainability of residency programs.

- **Support ongoing funding, continued uptake, and impact studies of the National Board Incentive Program.** Funds for the National Board Incentive Program are supporting veteran teachers to enter classrooms where they are most needed. This program is in the early years of implementation and has the potential to reach many more teachers with continued investment and support. State funding can support ongoing funding and continued uptake of the National Board Incentive Program. In addition, the state can commission studies of the impacts the program is having in priority schools in order to leverage strong implementation.

- **Gather and report additional data on all of the state workforce programs to understand their use and impact.** Currently, data on these programs are limited and we cannot yet answer questions about where grant recipients go on to teach and how long they stay, for example. Increased data

collection and reporting for the GSTG and National Board Incentive are imperative for policymakers' ability to understand the characteristics of teachers who are participating in these programs, how successfully participants are completing these programs, the extent to which teachers are filling much-needed roles in the state, and the outcomes of these investments for stronger teaching and learning in California's high-need schools. In addition, more comprehensive and up-to-date data reporting to the CTC on the TRGP could also provide a clearer picture of the program's impact.

Technical Appendix

Data

Data for this report were compiled from the Teaching Assignment Monitoring Outcomes (TAMO), California Longitudinal Pupil Achievement Data System (CALPADS) Unduplicated Pupil Count (UPC), and federal teacher preparation data collected pursuant to Title II of the Higher Education Act. We also conducted focus groups and interviews with state and district leaders as well as grant recipients.

TAMO

The TAMO files report teacher full-time equivalent (FTE) units disaggregated by subject, school type, school grade span, teacher credential level, and teacher experience level. This is based on the teaching assignment, or classroom-based assignment, the local education agency (LEA) reports to the California Department of Education annually through CALPADS. The California Commission on Teaching Credentialing (CTC) receives this data and evaluates each teaching assignment to produce a single monitoring outcome, reported as teacher credential categories.

FTE is defined as the percentage of time spent working in a job in relation to a full-time position. This means that if staff at a school spend 100% of their time teaching (1 FTE) one self-contained position with one associated course section, the FTE would be 1.0 (1 full-time position/one section). If staff spend 100% of their time in a teaching position (1 FTE) but there are three departmental classes, with one section each, and one non-classroom assignment, the reported FTE would be 0.75 (1 FTE/4 sections = 0.25 FTE per section, with only classroom-based assignments reported). In this example, if for the three teaching assignments, one is classified as "ineffective," one is "clear," and one is "out of field," then 0.25 FTE would be reported for each of these credential categories.

The CTC uses the following definitions to describe these teaching assignments, or credentials:

- **Clear** includes (1) *preliminary credentials*, awarded to individuals who successfully complete a CTC-approved teacher preparation program and the state assessments required, and (2) *clear credentials*, awarded to preliminary credential holders upon successful completion of an induction program. Preliminary credentials are valid for 5 years and clear credentials are renewable every 5 years.
- **Out of field** refers to someone who has a credential but has not yet demonstrated subject matter competence in the subject area(s) for the student population associated with the assignment.
- **Intern** refers to someone who has a bachelor's degree, has demonstrated subject matter competency in their subject area(s), and completes coursework requirements to obtain a preliminary credential while teaching.
- **Ineffective** refers to a teaching assignment that was not authorized, or was authorized by emergency-style permits or waivers.
- **Incomplete** refers to a teaching assignment in which reported information was missing or incorrect.

- **Unknown** indicates that insufficient information about the assignment was reported to CALPADS by the LEA, often the result of LEAs not reporting an English language service associated with a course in which English learners are enrolled.
- **Not Applicable (N/A)** indicates that the assignment either required no authorization or evaluation of the authorization was not applicable given the state course code or some other attribute of the assignment.

CALPADS

The CALPADS UPC files contain an unduplicated count of students in grades TK/K–12 who are eligible for free or reduced-price meals (FRPM), are English learners, and/or are foster youth, which is used in the Local Control Funding Formula (LCFF). The percentage of unduplicated pupils is calculated by dividing the count of eligible students by the total school enrollment. Schools with 55% or more of their students eligible by the aforementioned designations are considered priority schools.

Title II Teacher Preparation Data

The U.S. Department of Education Title II data include data on state-approved teacher preparation programs for all 50 states, plus Washington, DC, and U.S. territories. The data include the number of teacher preparation candidate enrollments and completers. The enrollment data are disaggregated by state, gender (male/female), race/ethnicity, and program type (alternative, IHE-based, alternative non-IHE-based, and traditional). The analyses in this report are based on the "All States" data files for California. Enrollment series excluded completers until academic year 2017–18. Due to changes in enrollment data collection practices, which resulted in a large change in reported enrollment, data prior to 2012–13 need to be interpreted with caution.

Focus Groups and Interviews

Our research team developed a focus group protocol to highlight participant perspectives on factors related to teacher preparation, vacancies, hiring, and retention currently and in recent years. We then invited a panel of professionals from the Association of California School Administrators (ACSA) Human Resources Council Members, given their roles in state hiring processes. Four members agreed to participate in a virtual focus group in August 2024, providing insights for understanding the current state of teacher shortages in the state.

We also reached out to California State University, Sacramento; Alder Graduate School of Education; and University of California, Los Angeles to invite GSTG recipients to share their points of view. We were referred to students and graduates of those programs, as well as graduates of California State University, Bakersfield. We interviewed 11 GSTG recipients in September 2024, using a researcher-designed interview protocol to understand the impact of the grant funding. GSTG recipients each received a $25 gift card to compensate them for their time.

Analysis

TAMO data were aggregated at the school level to obtain FTEs for various credential types. Although TAMO data includes counts for fully credentialed and not fully credentialed, examining the data by credential type provided more detailed information about the distribution of teacher credentials. For this reason, our analysis included a breakdown of teacher assignments by credential type, and not simply identified as fully vs. not fully credentialed. Further data cleaning allowed for FTE counts to be determined for assignment type combined with subject area and teacher experience level. This means that detailed FTE totals were calculated for experienced math units, or inexperienced clear science counts, for example. Once all combinations of credentials, subject area, and experience level FTEs were determined, data were sorted by county-district-school (CDS) codes. The 14-digit CDS code is the official, unique identification of a school within California. It is determined by combining the two-digit county code, five-digit district identifier, and seven-digit school code.

Using the CDS, we merged TAMO and CALPADS UPC files. Combining datasets allowed for FTE values to be examined alongside the unduplicated pupil counts and total student enrollment. With this information, we calculated the percentage of designated student groups at each school to identify priority vs. non-priority schools.

Based on the percentiles calculated, we then used a cumulative distribution function to assign evenly distributed deciles. The lowest 10% (decile 1) represents the lowest 10% of the schools, whereas the highest 10% (decile 10) represents the top 10% of the schools, based on the percentage of unduplicated pupils. In other words, the lowest 10%, or lowest-need schools, identifies schools with the lowest percentage of designated students in the dataset, and vice versa.

Within the combined data, we calculated the FTE percentages for each school by dividing the specific FTE by the total FTE for all credential types. In other words, the percent clear indicates the proportion of clear FTE units of the overall total FTE. For math and science, each assignment type was divided by the total FTE for math and science respectively. This means that the percentage of clear math credentials refers to the clear FTE math count divided by the total math FTE. To better contextualize science and math FTEs, we also report the percentage of each credential by teacher experience level. Clear, inexperienced math FTE, for example, represents the percentage of inexperienced math teacher FTE units assigned as clear (inexperienced clear math FTE/total inexperienced math FTEs).

In our analysis of FTE counts, we first excluded alternative schools, given the high variability of program structure and staffing credentials with this unique group of schools. Charter schools were included. We additionally examined FTE units in the same manner but included a further breakdown of schools by priority, non-priority, alternative, and non-alternative schools.

We opted to include the most recent and relevant information that captures the current state of the California teacher workforce with publicly available data. Additional tables from our full analysis can be made available upon request.

Considering the descriptive analysis described above and detailed summaries of state investments, we included quotes in this report that encapsulate key viewpoints expressed by interviewees. Selected quotes contribute to the broader discussion of the impact of state grants on the teacher workforce from the perspective of critical stakeholders.

Endnotes

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About the Authors

Desiree Carver-Thomas is a Senior Researcher and Policy Analyst at the Learning Policy Institute, where she co-leads LPI's Educator Quality team and leads the Racial Equity Leadership Network team. Her work focuses on how educator quality, teacher diversity, and leadership development can promote equitable opportunities for teaching and learning. Before joining LPI, Carver-Thomas taught in New York City public elementary schools, where she had experience in bilingual education and special education, and as a math lead. Carver-Thomas holds an MPP from the Goldman School of Public Policy at the University of California, Berkeley; an MS in Teaching from Fordham University; and a BA in Comparative Ethnic Studies with a concentration in Anthropology from Columbia University.

Melanie Leung-Gagné is a Researcher at LPI. She is a quantitative researcher focused on school discipline and the educator workforce. Her analyses combine complex survey datasets to identify high-leverage opportunities for federal and state policy interventions that will improve education quality and equity. Her specific issue areas include discipline disparities, school climate, teacher shortages, teacher diversity, principal professional learning, and curricular access. Prior to joining LPI, she worked as an education journalist in Hong Kong and as an education researcher in India and the United Arab Emirates. She was also an English and music teacher at an elementary school for migrant workers' children in mainland China. Leung-Gagné holds an MA in International Education Policy Analysis from Stanford University and a BSc in Journalism and Communication from the Chinese University of Hong Kong.

Danielle Jeannite is a Research and Policy Intern at LPI. Her scholarship sits at the crossroads of special education, education policy, and literacy instruction and intervention. She aims to use research to improve outcomes for students with disabilities by leveraging federal, state, and local policy to enhance the knowledge and skills of special education leaders and practitioners. She is a former special education teacher and was a district curriculum and behavior specialist. Jeannite holds a BA in Special Education and an MEd in Early Childhood Education and is pursuing a PhD in Special Education at the University of Florida.

1530 Page Mill Road, Suite 250
Palo Alto, CA 94304
p: 650.332.9797

1100 17th Street, NW, Suite 200
Washington, DC 20036
p: 202.830.0079

learningpolicyinstitute.org

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