### How Teacher Preparation Programs Can Support Transitional Kindergarten Expansion in California



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#### Introduction

As part of California's Universal Prekindergarten efforts, the state has expanded the eligibility of Transitional Kindergarten (TK) programs to serve all 4-year-old children by 2025–26. TK was first established in 2010, and since its full implementation in the 2014–15 school year, students who turned 5 years of age within 3 months after the kindergarten deadline (i.e., between September 2 and December 2) have been eligible to enroll in TK, with some districts choosing to offer TK to younger 4-year-olds as well. With statewide expansion, TK enrollment has been predicted to increase by a factor of four by 2026 (Melnick et al., 2022). Based on enrollment estimates as well as lowering of the required child–adult ratio in these TK classrooms, an additional 11,900 to 15,600 new teachers will be needed to staff these classrooms between 2022 and 2026, with a projected estimated increase of between 2,200 and 4,300 teachers per year (Melnick et al., 2022).

Compared to other prekindergarten programs in California that often do not require teachers to hold a bachelor's degree, TK is part of the K–12 public school system; as such, teachers must have completed a bachelor's degree and must hold a Multiple Subject Credential from the Commission on Teacher Credentialing (CTC), consistent with other elementary grades. Although CTC will offer a PK–3 Early Childhood Education (ECE) Specialist Instruction Credential focused on developmentally appropriate practices for preschool and lower elementary grade teachers, effective April 1, 2024, this credential was only recently formally approved into law. In addition to the credential requirements, TK teachers will also need to have completed 24 units in ECE or child development (or comparable professional experience, as determined by the local education agency) or a have obtained Child Development Teacher Permit by August of 2025.

Teacher preparation programs are well positioned for building the TK workforce, particularly for preservice teachers or ECE professionals who have already obtained a bachelor's degree but need a Multiple Subject Credential to enter the public school system workforce. However, whether existing teacher preparation programs are prepared to meet these demands remains unknown, in terms of supporting enough candidates to meet the demand of the expanding program and providing high-quality training experiences for future TK teachers. If current teacher preparation programs cannot

meet these demands, it is critical to understand how they plan to expand their programing and the resources needed to do so successfully. Additionally, teacher preparation programs can help diversify the TK workforce as it expands by training and supporting current ECE professionals who, on average, better reflect the racial/ethnic and linguistic backgrounds of their students. Ensuring that teacher preparation programs are equipped to support a linguistically and culturally diverse workforce and to prepare all candidates to serve diverse and multilingual learners is a crucial component to building a large, culturally competent TK workforce.

In this brief, we describe the findings from a survey of institutions offering Multiple Subject Credential teacher preparation programs to provide a unique perspective on TK teacher staffing challenges. Specifically, we aimed to understand

- the capacity of existing programs to meet workforce demands;
- their plans for expansion during the coming years;
- approaches to recruiting and training a diverse and representative teacher workforce; and
- ways that programs prepared their candidates to teach in diverse, multilingual classrooms.

#### **KEY FINDINGS**

- Existing Multiple Subject Credential teacher preparation programs estimated small increases in their capacity between the 2021–22 school year and the 2023–24 school year. Comparing these projections and previous estimates of new TK teachers needed, we find that the number of new TK teachers needed each year represents between one quarter and one half of *all* new candidates graduating from Multiple Subject Credential programs.
- Only one third of these programs offered candidates sufficient coursework to meet the TK requirements; many respondents noted that they did not have enough faculty and staff with experience in early childhood to teach the required ECE-focused courses or build a PK-3 credential.
- Although programs reported numerous efforts to engage diverse candidates, including those with ECE teaching backgrounds, many respondents expressed concerns about the accessibility of existing programs for ECE teachers who are currently in the workforce.

#### Approach

Our population of interest in this study included the 94 CTC-accredited programs offering elementary teacher preparation programs. These institutions include California State University campuses (n = 23), schools within the University of California system (n = 9), private or independent institutions (n = 47), and local education agencies (n = 15). All but two of these institutions are located within California. Program directors, administrators, or other staff in leadership positions in these teacher preparation programs were invited to complete an online survey between June and November of 2023. The full

online survey included three sections addressing the program structure and capacity, plans for expansion, strategies for recruiting and retaining underrepresented candidates, and supports to prepare candidates to teach in diverse and multilingual classrooms. Additionally, the survey included many open-ended questions for program representatives to share more information, which we analyzed qualitatively. After initial low survey response rates, we also developed an abbreviated survey for program respondents to share information about their institution, including their program enrollment during the 2022–23 and 2023–24 academic years, their plans to offer the PK–3 credential, and key supports available to prepare candidates to teach diverse and multilingual classrooms.

In total, responses were submitted for 47 of the 94 accredited programs contacted (for a response rate of 50%), including 39 full surveys and 8 abbreviated surveys, from 12 California State University campuses 5 University of California schools, 22 private or independent institutions, and 8 local education agencies.

# What is the capacity of existing teacher preparation programs to meet the demands of the growing TK workforce?

Existing teacher preparation programs face several challenges, including increasing the overall number of elementary teachers entering the workforce each year while ensuring that future TK teachers have access to the coursework and experiences needed to prepare them for TK classrooms.

# Planned growth in current Multiple Subject Credential programs was estimated to be relatively small and unlikely to meet the needs of TK classrooms alone.

Because future TK teachers are currently trained in Multiple Subject Credential programs alongside other future elementary school teachers, it is difficult to estimate exactly how many graduates from teacher preparation programs will go on to teach TK. Therefore, we estimated the total number of new elementary school teachers graduating from teacher preparation programs each year and compared this projection to the estimated need for TK teachers to understand whether the pool of incoming elementary teachers can meet the needs of TK expansion.

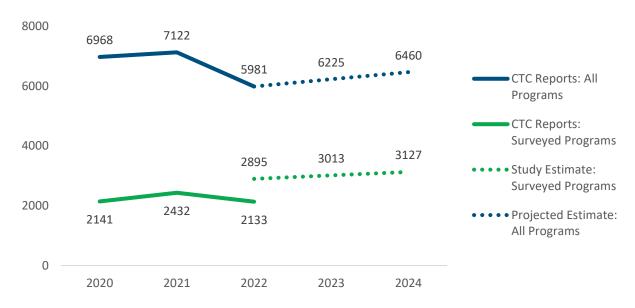
To estimate how many new elementary school teachers will graduate from all CTC-accredited programs in the coming years, we compared graduation rates from our survey respondents to CTC reports of graduates each year, according to Title II Annual Report Cards.<sup>1</sup> Across all multiple subject teacher preparation programs, CTC reported 5,981 teachers were prepared in elementary education programs in 2021–22<sup>2</sup> (see Exhibit 1 for additional years of data).

<sup>&</sup>lt;sup>1</sup> Available online at <u>https://www.ctc.ca.gov/educator-prep/title2</u>

<sup>&</sup>lt;sup>2</sup> Here and throughout this report, we reference program completers, but we note that these individuals must also then acquire a credential from CTC directly, so the actual number of newly credentialled teachers may deviate from the number of program graduates. In 2021–21, for example, CTC reported 5,083 new Multiple Subject teaching credentials issued.

In our study, 39 of these programs provided detailed enrollment and graduation numbers. Our respondents reported 2,895 graduates in the 2021–22 school year, compared to CTC estimates of 2,133 graduates from these same 39 programs (perhaps reflecting overestimation of capacity among survey respondents). Based on these estimates, we determined that our sample of programs in this study reflected between 36% and 48% of the total pool of multiple subject candidates, depending on whether we based the number of completers on the subset of programs on CTC reports or survey estimates.

Although program completion rates more recent than 2021–22 are not currently available from CTC, our survey respondents reported the number of graduates they had or expected in the 2022–23 and 2023–24 school years, totaling 3,013 graduates in 2023 and 3,127 graduates in 2024. This estimated growth in program capacity equated to roughly a 4% increase each year through 2024 among the 39 programs represented in our sample. Assuming that this growth rate is a reasonable estimate of program growth across all 94 CTC-accredited programs offering multiple subject preparation programs, we would expect a total of 6,225 potential new elementary teachers entering the workforce in 2023 and another 6,460 new teachers in 2024.



#### Exhibit 1. Projected Program Graduates Among All Multiple Subject Programs

Many of these graduates will help build the TK workforce, either directly by accepting positions teaching TK or indirectly by filling a position left by current teachers who moved to TK. However, it is clear that this projected pool of multiple subject graduates would be substantially impacted by the needs of TK expansion. Even when considering the most conservative estimates calculated by Melnick and her colleagues (2022), between one quarter to one half of all new elementary teachers would be needed to staff TK classrooms each year, leaving a considerably smaller pool of teachers to fill classrooms in other elementary grades (see Exhibit 2).

School year	Estimated number of TK teachers needed (from Melnick et al., 2022)	Estimated number of new elementary teachers graduating in the previous spring	Percentage of all new elementary teachers needed to staff TK classrooms
2022–23	1,300	5,981	22%
2023–24	3,400	6,225	55%
2024–25	2,400	6,460	37%

#### Exhibit 2. Estimated Number of TK Teachers Compared to All Multiple Subject Program Graduates

Although these estimates are concerning, there are several important factors to be considered when interpreting these findings. First, TK enrollment across the state has been lower than expected, with 52% of eligible students served compared to the lower bound estimate in Melnick and colleagues' (2022) analysis of 60–65% uptake (Gold & Sequeira, 2023); if uptake remains low and enrollment numbers increase more gradually than originally anticipated, the immediate need for new TK teachers may be slightly lessened. Additionally, these estimates do not include new programs that may be established, including potential new PK–3 credential programs, that may help to supplement this pipeline and direct those candidates with an interest in early childhood into credential programs.

## Interest among candidates in teaching TK is high, but most programs did not offer sufficient ECE coursework to prepare these teachers.

To understand how many teachers will be able to staff TK classrooms, we also must understand how many of these new teachers have an interest in TK and have access to the training required to effectively teach TK. Our survey results indicate that interest in teaching TK is somewhat high, with program representatives estimating that 17% of candidates were interested in teaching TK.<sup>3</sup> However, only 33% of students represented in this survey were attending programs that currently had sufficient ECE coursework for candidates to complete the 24 credit hours required to teach TK, either through their institution or through partnerships with other institutions.

In their open-ended responses, representatives from many of the programs that do offer ECE coursework noted the importance of existing connections with other programs or departments to help prepare TK teachers. Several respondents noted other programs within their institution that could be leveraged to build out the TK curriculum and support candidates, including early childhood special education credential programs; masters' programs in early education; and bachelors' programs in

<sup>&</sup>lt;sup>3</sup> Throughout this report, estimates of candidates are calculated as the weighted total number of candidates across programs. When displaying subgroups or proportions of candidates in certain categories, we used the total number of candidates in each program to estimate the number in each subgroup per program and summed these estimates across all programs. As an example, respondents reported the percentage of candidates interested in teaching TK, which we multiplied by the total number of program completers in 2022–23 to obtain an estimated number of candidates interested in teaching TK for each program. To calculate the percentage of candidates interested in teaching the sum of all candidates in those programs (excluding programs where respondents did not provide an estimate of how many teachers were interested in teaching TK).

human development, child development, or other related fields. One program representative noted, "We have a strong Child Development Department, also housed in our college, and we are collaborating with them to create a certificate pathway for the additional 24 units." Other respondents described external partnerships, such as a partnership with a local community college with a strong ECE program to develop courses and identify instructors and teacher supervisors and a partnership with the local county's early childhood department to share resources with candidates. Many programs also provided other formal supports for their future TK teachers, including teaching placements in TK classrooms (65% of programs) and faculty or teaching mentors with experience teaching TK (64% of programs).

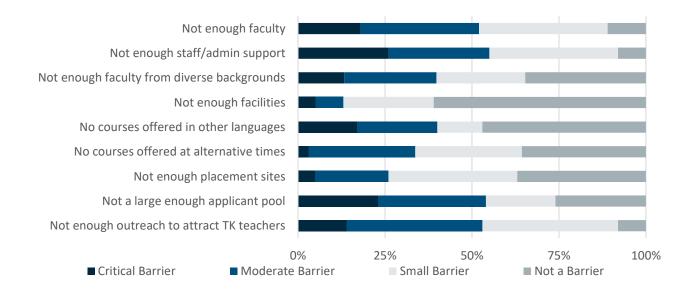
### In what ways are teacher preparation programs expanding to meet the increasing need for TK teachers?

In addition to asking for the expected numbers of candidates each year, we asked program representatives about their plans for expanding their program capacity more generally, either through training additional candidates in their current Multiple Subject Credential program or offering the PK–3 ECE Specialist Instruction Credential.

## Staffing constraints and small pools of applicants were commonly reported barriers to program expansion.

The majority of responding programs (68%) did report that they planned to expand the capacity of their current Multiple Subject Credential program. However, respondents reported several barriers to expansion (Exhibit 3).

#### **Exhibit 3. Reported Barriers to Program Expansion**



The two categories of barriers most frequently reported by program representatives were personnel and outreach. More than half of all programs surveyed noted that not having enough faculty or not having enough staff to provide administrative support were at least a moderate barrier to expanding their programs, with several respondents describing that their program did not have enough funding to hire more staff or advisors, especially if they added a PK–3 ECE Specialist Instruction Credential program. As noted previously, many programs also reported that finding faculty with a background in ECE was a challenge. Furthermore, more than half of programs also reported that they did not have enough outreach to attract TK teacher candidates or a large enough pool of students interested in teaching TK. One program representative described unique challenges in their community, including a low percentage of people in the area with bachelor's degrees, whereas other representatives more generally noted that they had seen a decrease in applicants. Finally, several representatives also mentioned the burden of other standards and considerations that their programs had to balance, such as the range of academic subjects already covered in these programs in addition to early childhood development or responding to state requirements related to changing standards and guidelines more generally.

# Most programs were not planning to offer a PK–3 Early Childhood Education Specialist Instruction program, often due to concerns about resources and marketability.

Although the PK–3 ECE Specialist Instruction Credential had not been formally approved by the state legislature at the time of our survey, many institutions offering multiple subject credential programs expressed interest and were expected to apply. Of the programs included in this sample, just over a third (36%) reported that they were planning to offer this new credential option, with two programs reporting that they have submitted Intent to Submit forms or a program proposal.

Among those programs that were not actively planning to apply to offer a PK–3 ECE Specialist Instruction program, respondents described several common reasons for this decision. First, several small programs noted that they were unable to offer the courses required for this credential, adding that they felt their "candidates who want to teach TK or K are well served by the current [multiple subject program]." Similarly, many respondents described internal constraints, including insufficient staff to design a program or not having "the internal bandwidth to pull together an application at this time." Another respondent explained how "[with] everything else that we must implement in our existing credential programs in the next couple of years per state requirements, we don't have the capacity to write and offer the PK–3 credential, even though we would like to." Several respondents also raised concerns about their faculty members' backgrounds and expertise, noting, "We don't have the faculty with the expertise to prepare PK–3 teachers" or citing their limited number of faculty with ECE experience as a "primary barrier," which hinders their ability to support more TK teachers.

More generally, program respondents described concerns about the marketability and need for the PK–3 ECE Specialist Instruction Credential over their existing multiple subject programs, such as whether potential PK–3 candidates may have more limited job opportunities or be less attractive hires

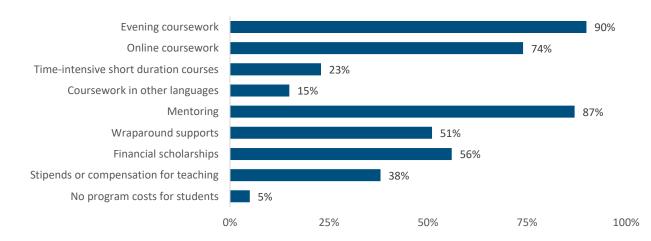
to districts compared to candidates with a more flexible Multiple Subject Credential. As one example, one program noted that their partnering districts had not expressed an interest in adding a new credential, so, given the number of students who would need to be enrolled to make such a program feasible and the timeline for getting university approval for the required courses, there was little urgency in offering a PK–3 ECE Specialist Instruction program.

# To what extent are teacher preparation programs equipped to prepare a linguistically and culturally diverse workforce?

Program representatives were also asked about their strategies to promote access to and successful completion of the program, including course offerings, advising, and financial supports. We were particularly interested in how teacher preparation programs could support candidates from diverse language and cultural backgrounds.

### Many programs made intentional efforts to recruit and support students from underrepresented backgrounds.

Most programs offered coursework in the evenings and online, whereas fewer programs offered alternatives such as time-intensive, shorter duration courses or coursework in other languages, primarily Spanish. Many programs also offered mentoring to their students, including wraparound support, such as a designated student success coordinator. Although most programs did report that they had financial scholarships to cover program costs based on candidates' needs, only 38% of the programs included stipends or other compensation for teaching, and only two programs (5%) reported that they had no program costs for students (Exhibit 4).



#### Exhibit 4. Availability of Supports and Resources Across Teacher Preparation Programs

Many respondents described other unique supports offered by their programs. For many programs, internship and resident program options were described as an alternative pathway to increase accessibility for candidates. Other respondents described intentional recruiting of candidates of color,

for example, one program leveraged opportunities as a Hispanic-Serving Institution; other programs worked with other student services within their institution, such as undergraduate admissions or a dedicated educational equity office; and several programs acquired grant funding to support recruitment or offer financial support to students from underrepresented backgrounds.

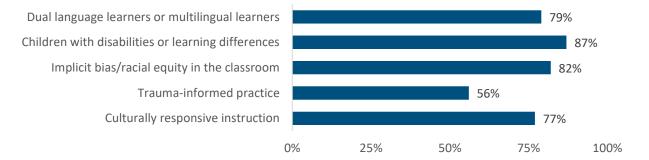
# How are teacher preparation programs supporting their candidates to serve multilingual and diverse learners?

Finally, we asked program representatives about their approaches to preparing the future TK workforce to be culturally competent instructors of diverse classrooms, with a particular focus on preparing teachers to work with dual language learners (DLLs). Just under half of programs in this study (47%) offered Bilingual Authorization programs, most often in Spanish. In these programs, candidates had dedicated coursework, as well as additional supports such as a designated bilingual coordinator, placements in dual language classrooms, and experienced bilingual mentor teachers. Although the Bilingual Authorization was the most direct way that programs prepared their candidates to teach multilingual students, representatives from other programs described broader supports and opportunities available to their candidates.

## Many programs offered coursework addressing diversity, equity, and inclusion, and built their faculty to reflect their community.

Program respondents prepared their candidates to serve a diverse and multilingual population of elementary school students through their coursework, placements, and faculty. Most programs offered individual courses explicitly addressing topics such as DLLs and implicit bias, as shown in Exhibit 5. Many respondents also noted that the principles of diversity, equity, and inclusion were intentionally woven through all their coursework.

#### Exhibit 5. Prevalence of Coursework Offered Across Teacher Preparation Programs



Most representatives (81%) reported that their programs included faculty members who spoke a language other than English, with 64% including faculty members with experience teaching in a language other than English. However, several respondents noted that representation at the faculty

level remained a challenge; one director explained, "We need more faculty of color who better reflect [the] Spanish-speaking student population," and another respondent noted that "recruiting bilingual faculty and faculty of color with classroom teaching experience" was a challenge.

In addition to describing these specific resources that were present, many program representatives described a more general approach to teaching candidates with diversity, equity, and inclusion as central tenets of the program. Often, this focus was an intentional choice, as one representative wrote:

Our program faculty have worked for years on enacting a vision/mission of preparing teachers to be antiracist and social justice advocates. Many students who exit our program report that as a strong component of their development as teachers in our program.

## Many programs offered placement sites in multilingual classrooms, but some representatives noted struggles identifying these placement opportunities.

The majority of programs reported that they had placements in classrooms where some instruction was provided in a language other than English (78%). In addition, many programs also reported that their candidates had other opportunities to practice DLL-specific teaching strategies in a classroom, such as through coaching or reflective supervision (69%). However, this opportunity was not available in all programs; there were several challenges raised in identifying and offering these placements. One respondent explained, "We continue to struggle with locating quality dual language programs to place our students in for clinical practice." Another program representative noted that exposure to explicit support for multilingual learners was limited in settings that were not designated dual language classrooms, underscoring the importance of identifying and partnering with schools with bilingual classrooms.

Other challenges with student teaching placements included location and program structure. Several program representatives noted how their geographic location limited options for placements, explaining how "some of our partner schools and community partners do not have multilingual students, so our candidates do not always get to work with diverse and multilingual learners in their long-term student teaching placements." Another program representative explained, "Our teacher candidates have to drive longer distances to schools that serve a more ethnically and economically diverse student population." Another challenge that was raised was the limitations of residency and internship programs for providing experiences in multiple types of placements by the nature of the program structure. One director of a teacher residency program model explained that the 1-year apprenticeship approach "does limit the depth of experiences in other placements, including in other language placements such as dual language immersion." To address this concern, the director noted that teacher residents participated in exchange days to experience other types of placements, but residents were not able to have extended time in a variety of classrooms.

#### Conclusions

## TK expansion will put considerable strain on current elementary teacher preparation programs, based on programs' estimated capacity expansion.

In all, TK expansion presents a pressing challenge to the TK teacher pipeline, and, although many directors and staff in multiple subject programs share these concerns, our survey results indicate that current plans for increasing capacity will not meet this need. With programs reporting about 4% growth from 2022 to 2023 and from 2023 to 2024, between one quarter and one half of all new graduates from these programs would need to fill TK teaching positions in order to staff new TK classrooms, leaving other elementary grades with a shrinking pool of new teachers.

## Teacher preparation programs need additional information to understand how the PK–3 ECE Specialist Credential can serve programs and candidates.

The PK–3 ECE Specialist Credential offers one alternative for building this workforce, but teacher preparation program leaders need more guidance on how to differentiate this new credential from existing options, as well as additional resources, to develop new programs. It is notable that many program representatives expressed concerns that their candidates may be at a disadvantage if they opted for a PK–3 credential instead of the traditional Multiple Subject Credential. Several program representatives explained that they thought PK–3 credential holders may be less attractive hires or have access to fewer opportunities. One respondent asked, "If the [Multiple Subject] credential and Educational Specialist Credential are honored by hiring districts, why would or should we consider adding the courses for PK–3 credential?". Similarly, multiple respondents expressed a need for more guidance about the need this program would serve and how programs might start building a credential program.

### Teacher preparation programs are concerned about how they can engage current ECE professionals.

More generally, existing programs as they are currently structured may not be well suited to bringing the current ECE workforce into traditional teacher preparation programs. TK expansion has the potential to provide higher paying employment options to current family childcare or center-based preschool providers (Powell et al., 2022). Many of these teachers have extensive experience and training in early childhood (Williams et al., 2021) but lack the credential needed to realize these financial benefits. Of the programs surveyed here, 38% reported that they conducted targeted recruitment of current ECE teachers to credential programs, and respondents noted that about 12% of their candidates were former ECE teachers. However, several survey respondents expressed concerns about how current ECE teachers may transition into TK through Multiple Subject Credential programs or future PK–3 ECE Specialist Instruction programs. Specifically, respondents expressed concerns

regarding the lack of accessibility and potential disruption of obtaining a new credential for those individuals currently in full-time positions. One respondent explained,

There is a danger that the people who have been providing this vital service of early childhood education may get shut out of the work due to being under-credentialed under the new system . . . ECE teachers are a vulnerable population of educators. We need to do everything possible to help them get the appropriate licensure without undue disruption to their personal and professional lives.

Another respondent described how the current structure for credential programs at their institution was not suitable for many ECE professionals, noting, "There's a pool of veteran preschool teachers that will need a different path to the PK–3 credential than we're considering right now" and suggesting the need for "an alternative prep program that all California preschool teachers can engage in (online) so they can get the credential while also keeping their existing jobs."

#### **Recommendations for Next Steps**

Based on the results presented in this brief report, we offer a few recommendations for policy and practice for consideration.

- Invest in programs that allow current ECE teachers to work while getting their credential. One potential pathway that may meet the needs of current ECE teachers is residency or internship programs; in our sample of programs, the number of graduates from these program models increased from 499 graduates in 2021–22 to 612 in 2022–23 and 683 in 2023–24, a growth rate of 37% during this 2-year period. The growth is promising, paired with research suggesting that teacher residents in particular are effective teachers and often more racially diverse than graduates from traditional program models (Patrick et al., 2023). However, understanding ECE teachers' experiences navigating these programs is critical, particularly given concerns about the limited financial support offered by residency programs (Hirschboeck et al., 2022; Lambert, 2023).
- Establish pipelines for those individuals with ECE experience to obtain a bachelor's degree and credential. Although our focus in this study was how teacher preparation programs could support the increased need for credentialed teachers, understanding how teacher preparation programs can provide pathways to bachelor's degrees for future TK teachers who are currently in the ECE workforce remains a critical question.
- **Consider ways to connect multiple subject programs to existing child development experts**. Many programs reported that they cannot offer sufficient coursework to train TK teachers or to offer the PK–3 credential due to limitations in their faculty. Partnerships with other programs and institutions, such as community colleges, may help to fill this gap and provide candidates with the ECE training that they need to become qualified TK teachers.

#### References

- Gold, J., & Sequeira, K. (2023, May 10). Schools struggle for bodies and potties one year into California's big preschool expansion. Los Angeles Times. <u>https://www.latimes.com/california/story/2023-</u>05-10/california-transitional-kindergarten-expanding-progress-slow
- Hirschboeck, K., Eiler White, M., Brannegan, A., & Reade, F. (2022). *Teacher residency programs in California: Financial sustainability challenges and opportunities*. WestEd.
- Lambert, D. (2023, February 24). *California sinks millions into teacher residency programs, but many can't afford to enroll.* EdSource. <u>https://edsource.org/2023/california-sunk-millions-into-</u> <u>teacher-residency-program-but-many-cant-afford-to-enroll/685984</u>
- Melnick, H., García, E., & Leung-Gagné, M. (2022). Building a well-qualified transitional kindergarten workforce in California: Needs and opportunities. Learning Policy Institute. <u>https://doi.org/10.54300/826.674</u>
- Patrick, S. K., Darling-Hammond, L., & Kini, T. (2023). *Educating teachers in California: What matters for teacher preparedness?* Learning Policy Institute. <u>https://doi.org/10.54300/956.678</u>
- Powell, A., Montoya, E., Austin, L. J. E., & Kim, Y., (2022, June 1). Double or nothing? Potential TK wages for California's early educators. Center for the Study of Child Care Employment, University of California, Berkeley. <u>https://cscce.berkeley.edu/publications/data-snapshot/double-or-nothingpotential-tk-wages-for-californias-early-educators/</u>
- Williams, A., Montoya, E., Kim, Y., & Austin, L. J. E. (2021, August 18). New data shows early educators equipped to teach TK. Center for the Study of Child Care Employment, University of California, Berkeley. <u>https://cscce.berkeley.edu/early-educators-equipped-to-teach-tk/</u>

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