COMMENTARY

Unlocking the Potential of Transitional Kindergarten Requires Better Data on Early Education



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California is making a significant investment in early childhood education by requiring school districts to offertransitional kindergarten (TK) to all 4-year-olds by the 2025–26 school year. This investment, estimated at $3 billion per year if enrollment meets projections, aims to transform TK from a program available only for older 4-year-olds to one universally available for all 4-year-olds: Universal Transitional Kindergarten (UTK). Prior to 2022–23, only one quarter of 4-year-olds were eligible, and while all districts serving kindergarten students were required to provide TK, not all did so.

In addition to being available for all 4-year-olds, UTK is designed to improve the quality of TK programs, notably by specifying small student–educator ratios and creating a new teaching credential for PK–3 that emphasizes training in early childhood education. Additionally, the state is releasing specific guidance on what should be taught in TK by revising both the Preschool Learning Foundations to include TK (release anticipated in 2024) and theDesired Results Developmental Profile (DRDP) for TK. Even with the new guidance, many key decisions about the structure of TK programs are left to districts, including (a) whether TK is half day or full day; (b) if TK students and kindergarten students are taught in a blended TK/kindergarten classroom; (c) how the classroom supports multilingual learners (e.g., what languages are used in instruction by teachers or assistants); and (d) if students have the opportunity to enroll in an extended day program. In this way, districts have flexibility in what they offer—which may provide parents with more options—but the amount of district discretion will also create variability in the quality of TK offerings.

WHAT RESEARCH ABOUT EARLY CHILDHOOD PROGRAMS TELLS US WE SHOULD MEASURE TO UNDERSTAND THE EFFECTIVENESS OF TK

UTK for 4-year-olds is considered to have great potential for California students and families. The optimism surrounding UTK is grounded in research highlighting the positive impacts of high-quality early education on student outcomes, including early literacy, mathematics, and social-emotional learning (SEL) as well as higher long-term educational attainment and earnings—even lower incarceration rates. But research also shows that these outcomes are far from guaranteed and depend a great deal on program design.

The variation in outcomes of early childhood education means that it is critical for us to have good data so that we can understand the effects and effectiveness of TK at both the state and district level. Good data on program characteristics and participation as well as on the trajectory of student outcomes post-TK would enable us to understand how TK programs can have the greatest impact on participating students. Specifically, we need data on the following:

- **Early childhood program characteristics.** Studies suggest the superiority of high-quality, full-day preschool over half-day programs, especially for multilingual learners. High-quality programs provide playful and experiential learning opportunities designed specifically to develop SEL as well as early mathematics and literacy skills; the curriculum and instruction build on students' existing knowledge and skills. Absent data on program features, it is impossible to know if some types of TK programs are more effective than others.
- **Students' learning trajectories from kindergarten until third grade.** Alignment between early childhood education and subsequent educational experiences is important to optimize student learning. Systems should be designed so that subsequent teaching is targeted on students' learning needs and does not focus substantially on skills that students have previously mastered. Incoherent PK–3 systems result in kindergarten, first-, and second-grade teachers duplicating prior learning, which can result in the fade-out of benefits students gain from additional years of schooling. Absent longitudinal measures of students' knowledge and skills, it is impossible to understand the effectiveness of TK and whether what follows builds on early gains.
- **Early childhood program participation—for all students.** Most studies estimating the impact of a particular early childhood program compare outcomes for students participating in that program to outcomes for nonparticipating students. For this reason, it is important to have information about the types of programs in which students in each comparison group are enrolled.

Unfortunately, California lacks data on the characteristics of TK and other early childhood programs; the state does not collect any data on student outcomes from TK to kindergarten entry through second grade; and the state does not have a unified data system to track student enrollment in publicly funded programs.

BETTER DATA WOULD BOTH LEAD TO BETTER RESEARCH AND FACILITATE PROGRAM IMPROVEMENT

Examining two high-quality studies of TK conducted before the UTK expansion and new guidelines that took effect in 2022–23 helps illustrate the capabilities of the current data system as well as how the data system should be expanded to make it more useful for understanding TK program quality. One study was based on substantial original data collection; the other relied solely on administrative data. Both used a regression discontinuity design—a research design that offers the strongest nonexperimental methodology for estimating program effectiveness.

The first study (Manship et al., 2017)examined students enrolled in TK during the 2013–14 and 2014–15 school years who turned five between October 2 and December 2. The study collected data on the features of TK classes (full day versus half day, as well as TK/kindergarten blends or solely TK) and instructional quality; the authors also collected original data on the prior educational experiences of students in the comparison group who had not attended TK. The research team followed students into kindergarten, administering assessments in literacy, mathematics, and SEL skills at the beginning and end of kindergarten to both former TK students and their peers who did not attend TK (the comparison group). The results showed the initial benefits of TK, but uncovered that students who had not attended TK caught up with the TK students on most measures. The authors suggest that the fade-out of the TK effect may be explained by a finding in other studies: teachers prioritize students who enter kindergarten behind their peers and, in the process, do not provide the types of vertically aligned experiences that research suggests are critical for promoting student learning. In short, these findings are provocative for thinking about how to structure TK programs and—crucially—to improve the alignment of TK with K–12 so that students sustain the benefits of the TK experience.

While the 2017 study did not include any longer-term measures, a more recent study did: Lafortune and Hill (2023) followed the same TK cohorts from TK through Grade 5 in five of the state's largest districts, with a focus on the trajectories of dual language learners and students with disabilities. This study found some benefits resulting from TK: earlier identification of special education needs and of English learner status. There was also some evidence of improved SEL for TK participants, though not among multilingual learners. However, the study did not find significant positive impact of TK on third and fourth grade test scores in English or math—at least not relative to the study districts' alternative preschool programs, which included California State Preschool Program (CSPP) and Head Start. These findings are consistent with prior research on PK programs, which often showed additional academic improvement fading in elementary school—even for programs that saw notable long-term improvements for their students in high school and beyond.

These studies were well designed and executed but both have limitations. Manship et al. (2017) provided more context on the TK setting and available alternatives (through original data collection) but told us little about whether impacts continued later in school—that is, beyond kindergarten. Conversely, Lafortune and Hill (2023) provided some longer-term context (through Grade 5) but lacked data on key features of implementation that drive TK quality, including class sizes, educator qualifications, full-day versus half-day schedules, and language modalities. Critically, the 2023 study had no way to assess students' trajectories between the time they left TK and the end of their third grade year, so it is impossible to draw conclusions about the extent to which the lack of significant differences in third and fourth grade achievement between TK and non-TK students was due to (a) strong CSPP and Head Start programs in which comparison students were enrolled; (b) poor coherence in K–3 learning, such that initial gains from TK had faded by third grade; or (c) implementation of TK programs in ways that led to few long-term positive outcomes.

Both studies, moreover, were of cohorts prior to expansion and so provide no evidence about the efficacy of UTK, which includes policy changes designed to improve quality and consistency. As UTK expansion continues, policymakers and practitioners have little research to answer questions about how well current TK programs are serving student needs or what program features best promote kindergarten readiness—and longer-term academic and SEL improvements.

Additional research will need to be conducted to see if UTK is meeting its potential to improve students' long-term outcomes. But for this research to uncover relevant and actionable policy insights, better and more comprehensive data will be necessary as well. The state should also require districts to track the data they need to improve the quality of their own TK programs and these programs' coherence with K–3. Specifically, the state should do the following:

- Collect the basic features of each early childhood program—at a minimum, the state-funded TK and CSPP—including length of school day, class size, teacher credentials, staffing ratio, and program model (e.g., TK only, TK/K blended). Understanding the language learning environment experienced by the youngest dual language learners is also important, given that approximately 25 percent of TK students are English language learners. For students who did not participate in state-funded programs, the state should require districts to collect and report basic information about students' experiences before they enter kindergarten (e.g., Head Start, family/friend/neighbor care), which could be gathered as part of kindergarten enrollment.
- Require districts to administer and report a developmentally appropriate measure—such as the DRDP—to assess students' academic and social-emotional skills as they enter kindergarten. While the issue of assessing younger learners is complicated, multiple developmentally appropriate measures exist that could provide a baseline measure of students' skills when they enter the K–12 system. Having a universally required assessment at the beginning of kindergarten would support evaluation of the range of early childhood programs and, crucially, would provide districts with the type of data they should be using to support provision of vertically aligned learning opportunities for students.
- Recommend that districts locally select and administer assessments from kindergarten through second grade. Districts could use such assessments to examine whether their systems are sufficiently coherent from TK–3 to leverage the benefits of TK and make improvements in alignment if districts find that the initial benefits of high-quality early learning fade over time.

Collecting these data would allow districts and the state to identify effective TK program features and assess the coherence of learning opportunities provided from kindergarten into the primary grades. This data-driven approach is essential for both accountability and improvement, ensuring that the investment in UTK yields positive and lasting outcomes for students.

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