California Department of Education

Report to the Governor, Legislature, and the Legislative Analyst's Office: Kindergarten in California: Implementation Evaluation of Transitional Kindergarten and Kindergarten Public School Programs in California



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Description: This report contains an evaluation of kindergarten program implementation in the state (including part-day and full-day programs), recommended best practices for providing full-day kindergarten programs, an estimate of the average costs (including fixed and marginal costs) associated with full-day and part-day kindergarten programs, and options for incentivizing full-day kindergarten.

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Kindergarten in California: Implementation Evaluation of Transitional Kindergarten and Kindergarten Public School Programs in California

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Executive Summary

The California Department of Education (CDE) contracted with the University of California, Los Angeles (UCLA) to conduct an implementation evaluation of part-day and full-day (extended) transitional kindergarten (TK) and the more traditional second year of kindergarten (hereinafter referred to as kindergarten) throughout the state. The evaluation, mandated by California *Education Code* (*EC*) Section 46116, was designed to better understand what these programs look like across the state and potential differences between part-day and full-day kindergarten programs, along with learning more about positive implementation practices of both types of TK and kindergarten programs. When analyzing costs for TK, the costs were associated with 26 classrooms serving 658 students in part-day programs and 283 classrooms and 9,471 students in full-day programs. For kindergarten the costs were associated with 143 classrooms serving 4,451 students in part-day programs and 1,457 classrooms and 42,502 students in full-day programs.

Key Findings

TK delivery is age and developmentally appropriate. Most TK classroom environments were appropriate per the guidelines specified in the *Transitional Kindergarten Implementation Guide* [Governor's State Advisory Council on Early Learning and Care (SAC), 2013] and/or the *California Code of Regulations*, Title 5 (5 *CCR*). Additionally, the results of the evaluation suggest that most TK teachers are using a developmentally appropriate curriculum in core instructional content areas. While there is currently no California adoption list for TK curricula, teachers and districts tend to either use established curricula or modify to meet their students' developmental needs or develop their own.

However, some local educational agencies (LEAs) need more support in aligning the *California Preschool Learning Foundations* (PLF) and the Common Core State Standards (CCSS). Even though the evaluation found that many teachers and the LEAs are developing or modifying curricula to meet the developmental needs of their students, more support is needed for some regarding how to align with the PLF and/or the CCSS. Pursuant to *EC* Section 48000(f) it is the intent of the state Legislature that the TK curriculum be aligned to the PLF.

Most LEAs in California provide full-day TK and kindergarten programs. A full-day is defined as one that is four hours or longer. The determination of whether TK is a full-day typically depends upon the kindergarten day length because the LEAs are required to provide the same level of service for TK as they provide for kindergarten. Fifty-nine percent of the LEAs currently offer only full-day kindergarten programs. Most part-day LEAs are interested in offering full-day kindergarten programs but less interested in offering full-day TK.

A lack of classroom space and/or resources is the biggest barrier for those who would like to switch to the extended kindergarten day. The requirement that TK programs must offer the same day length as kindergarten programs has been another potential hindrance. However, an amendment to *EC* Section 37202(b) effective June 27, 2017, allows districts that implement an early primary program to maintain kindergarten or TK programs for different lengths of time during the school day.

Part-day delivery is not notably different from full-day delivery. Other than the amount of time spent on core instructional content, there were few practical differences found between full-day and part-day implementation in both TK and kindergarten in the areas of classroom environment, curriculum, instruction, and interaction. However, part-day TK teachers find it more challenging to serve all their young students in the shorter day. Having another teacher or full-time aide would benefit part-day TK instruction, as many of these teachers were concerned about their current student–teacher ratios.

Teaching social-emotional skills and curriculum contributes to kindergarten students' first grade readiness behaviors. Supporting students for successful transitions to first grade is an important part of kindergarten implementation. The evaluation found that kindergarten teachers who taught a developmentally appropriate social-emotional curriculum and spent more days teaching social-emotional skills had more students who demonstrated appropriate first grade readiness behaviors.

Recommendations

Based on the key findings, the following are CDE's recommendations to the Governor, Legislature and Legislative Analyst's Office that provide best practices and could further strengthen the implemenation of kindergarten and TK programs statewide:

Recommendation 1: The state should consider incentivizing interested part-day LEAs to shift to a full-day kindergarten program by supporting them with funding for more classroom space. Most part-day LEAs were interested in providing a full-day kindergarten program but did not have the space and/or resources. Further, the state should consider differentiated funding as part of their Local Control Funding Formula (LCFF) whereby districts with full-day kindergarten programs receive an additional percent of the base grant per student, similar to the K-3 add-on incentive. (See Key Findings and Recommendations in the full report for estimate of LCFF percentage.) The state could also consider providing additional grants for district facility as another funding incentive.

Recommendation 2: The state should also consider reducing the TK part-day student-teacher/aide ratio by encouraging part-day TK programs, either through funding or changes to current requirements, to add a full-time teachers' aide. Many part-day TK teachers said it was challenging to provide effective instruction even with typical class sizes (18–25 students), which is likely a reflection of the difficulty of meeting all their students' instructional needs within a shorter school day. Full-day TK teachers were not as concerned about typical class sizes, but most TK part-day teachers were not

interested in extending the length of time for their young students. For part-day TK teachers, the most common recommendation for improving implementation was having a smaller class or better student—teacher ratio. Their second most common suggestion for improvement was having an educated and effective full-time aide in the classroom.

Recommendation 3: The state should provide the CDE with additional resouces to support more guidance and assistance to kindergarten teachers around supporting students' social-emotional development, potentially in the form of developmentally appropriate curricula and professional learning. Most kindergarten teachers reported wanting support in the area of students' social-emotional development, and many found it challenging to support each child's social-emotional and academic development. Those teachers who did teach a developmentally appropriate social-emotional curriculum and spent more days teaching social-emotional skills tended to have more students who demonstrated first grade readiness behaviors.

Recommendation 4: The state should support the CDE to provide wider distribution of the PLF and more professional learning and for TK teachers and the LEAs since this document is a necessary tool for meeting the developmental needs of TK students. Even though the majority of teachers reported using the PLF to plan for instruction, notably about a third of the LEA leads and teachers indicated that they were not using the PLF to plan for instruction.

Recommendation 5: The state should explore the development of a TK curriculum adoption list and provide more professional learning to help the LEAs align and use the PLF and kindergarten CCSS together. State guidance on adopting a program that aligns both could be helpful to the LEAs in bridging the two sets of standards. Even though there is an established alignment the, CDE document, *The Alignment of the California Preschool Learning Foundations with Key Early Education Resources* (CDE, 2012), more than a third of the LEA leads indicated that they were not using it, and more than half of the teachers noted that they were not provided it as resource from their district.

You can find this report at the CDE [Name of Web page] at http://www.cde.ca.gov/xx/xx/xx/documents/filename.doc (DOC; XXKB; XXpp.). If you need a copy of this report, please contact Carissa Richards, Education Programs Consultant, Teaching and Learning Support Branch, Early Education and Support Division, Policy Office, by phone at 916-323-1342 or by e-mail at crichards@cde.ca.gov.

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Evaluation Purpose, Design, and Methodology

The California Department of Education (CDE) contracted with the University of California, Los Angeles (UCLA) to conduct an implementation evaluation of part-day and full-day (extended) transitional kindergarten (TK) and the more traditional second year of kindergarten. The evaluation, mandated by *EC* Section 46116, was designed to better understand what classrooms look like across the state and potential differences between part-day and full-day kindergarten programs, along with learning more about positive implementation practices for both types of TK and kindergarten programs.

Program Background

Per California's Kindergarten Readiness Act of 2010 [Senate Bill (SB) 1381], kindergarten is a program that includes transitional kindergarten offered to children who turn five years old between September 2 and December 2. Each LEA can choose whether to offer part-day or full-day TK and kindergarten programs to its students. A full-day program is defined as one that is four hours or more. By statute (*EC* Section 46110), the maximum length of the kindergarten school day is four hours, but the LEAs can seek an exception and exceed four hours with an early primary program (*EC* 8973; CDE, 2017a). Prior to July 1, 2017, LEAs were required to offer a TK program with school days that were the same length as their kindergarten program school days unless they received an approved State Board of Education (SBE) waiver (CDE, 2017a). With the amendment of *EC* Section 37202(b), a school district that is implementing an early primary program may maintain kindergarten or TK for different lengths of time during the school day, either at the same or at a different school site.

Transitional Kindergarten

Beginning in the 2012–13 school year, California schools started implementing the TK program. The program was phased in over three years: In Year 1 those who turned five years old between November 2 and December 2 were offered TK; in Year 2, those who turned five between October 2 and December 2 were offered TK. Beginning in Year 3 (and currently), the LEAs must offer TK to children who turn five on or between September 2 and December 2. Pursuant to *EC* Section 48000(c), LEAs shall offer TK to all age-eligible students (if they offer traditional kindergarten).

Beginning in 2015–16 with Assembly Bill (AB) 104 (*EC* 48000(c)(3)(B)(i)), LEAs also currently have the option of offering TK to students who turn five years old after December 2 and before the end of the school year (June 30). This program is known as early admission TK. These children can enter TK with the approval of the school board or other governing body of a charter school and their parent(s); however, the LEA can

only claim average daily attendance (ADA) funding once the student turns five years old (CDE, 2017b).

The purpose of TK is to teach a "modified kindergarten curriculum that is age and developmentally appropriate" (CDE, 2017b). Pursuant to *EC* 48000(f) it is the intent of the state Legislature that the TK curriculum be aligned to the PLF developed by the CDE. The governor's SAC also released the *Transitional Kindergarten Implementation Guide* (2013) to support the implementation of TK.

Unlike in preschool or early education programs, TK teachers must meet the same requirements as kindergarten teachers to teach. They are required to hold a teaching credential issued by the Commission on Teacher Credentialing. Additionally, on September 27, 2014, EC Section 48000(g) (SB 876, Statute 2014, Chapter 687, Section 5), was amended. TK teachers now must obtain one of the following by August 2020: (1) 24 units in early childhood education or childhood development, (2) equivalent professional experience in a preschool age classroom, or (3) a child development teacher permit. However, credentialed teachers who taught TK on or before July 1, 2015, were grandfathered in and are not required to obtain one of these early education options (CDE, 2017c).

Kindergarten

In California since school is mandatory for six year old students, parents and guardians of six year olds must enroll their children in school (*EC* Section 48200), and California LEAs must provide kindergarten to all age-eligible children who turn five years old on or before September 1 (CDE, 2017a).

Kindergarten students are taught the foundational content that will prepare them for future grade levels. The content is directed by state standards (CDE, 2011), which outline what students should learn in kindergarten. English language arts and math follow the CCSS. Kindergarten teachers also teach other subject areas, including but not limited to science, history-social science, and visual and performing arts. The state provides standards in these areas as well (CDE, 2011).

Evaluation Questions

The evaluation includes three sections: (1) kindergarten implementation; (2) TK implementation; and (3) a cost analysis of kindergarten and TK programs. The UCLA and the CDE collaborated to develop evaluation questions for all three parts. These questions are shown below.

Section 1 Evaluation Questions: Kindergarten Implementation

- How are full-day and part-day kindergarten being implemented throughout California?
- Why do the LEAs provide part-day, full-day, or both types of kindergarten? What are the differences?

- What common assessment instruments are used? How are the data collected and used?
- What are the best practices of full-day and part-day kindergarten implementation throughout the state?
- What implementation factors contribute to first grade readiness?
- What is the impact of multi-grade-level (combination) classes on best practices for differentiated instruction?

Section 2 Evaluation Questions: Transitional Kindergarten Implementation

- Describe TK enrollment, including how many are enrolled and demographic breakdown. What percentage of eligible children are enrolled?
- How is TK being implemented throughout California? If notable, what the LEA or regional differences exist? Why are there differences?
- How has early admission TK changed the programs locally?
- What common assessment instruments are used? How are the data collected and used?
- What are the best implementation practices for full-day and part-day TK programs throughout the state?
- What is the impact of multi-grade-level (combination) classes on best practices for differentiated instruction?

Section 3 Evaluation Questions: Cost Analysis of Kindergarten and Transitional Kindergarten.

- What are the LEA costs associated with implementing part-day and full-day kindergarten?
- What are the LEA costs associated with implementing part-day and full-day TK?
- In what ways can CDE incentivize the LEAs to implement full-day kindergarten and TK?

Evaluation Design and Methodology

The evaluation team used a mixed-methods approach to answer the evaluation questions, drawing from the LEA and teacher surveys, classroom observations, the LEA and teacher interviews, and secondary data (Creswell & Plano Clark, 2011).

The survey, observation, and interview data were collected concurrently and triangulated in the analysis. The evaluation utilized two samples to answer the evaluation questions—one for the surveys and a sub-sample for the other data collection procedures.

Sample Selection

To get a broad representative picture of how implementation occurs across the state, the UCLA randomly sampled the LEAs using a stratified two-stage cluster design that sampled at the LEA level and then the classroom level, with the school level omitted in an effort to gain more variation in the data. The survey population included the LEAs that had both kindergarten and TK programs and at least 10 students enrolled in TK. The sampling frame was stratified by the LEAs with part-day, full-day, and both part-and full-day programs. Of the 469 eligible LEAs, 185 were contacted and asked to participate. The final recruited LEA sample size was 62, resulting in a 34 percent LEA response rate. Table 1 shows the LEA sample compared to the overall population.

Table 1: Final Recruited LEA Sample Compared to the Survey Population

	Survey Population		Recruited Sample (unweighted)	
	Number	Percentage	Number	Percentage
State Region				
North	267	57%	34	55%
South	202	43%	28	45%
Total	469	100%	62	100%
Size of LEA				
Large	77	16%	18	29%
Medium-Large	100	21%	23	37%
Small	289	62%	21	34%
No Data	3	<1%	0	0%
Total	469	100%	62	100%
Population Density				
Rural	10	2%	0	0%
Semi-Rural	223	48%	22	36%
Urban	236	50%	40	64%
Total	469	100%	62	100%

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¹ The LEA sampling frame was computed by aggregating school-level information about kindergarten program type from the California Basic Educational Data System (CBEDS) 2015–16 data file. LEAs that had schools offering part-day and full-day programs were defined as LEAs that offered both types.

Survey Sample

Within the 62 recruited LEAs, teachers were randomly sampled to participate in the survey, which gathered data regarding program implementation. The survey aimed to collect data from at least six kindergarten teachers and six TK teachers in each participating LEA. However, there were fewer than six TK teachers available in many cases, resulting in 200 completed surveys for TK only, 52 for TK/kindergarten combination, 385 for kindergarten only, and five for kindergarten/first grade combination—642 teachers total, unweighted. Teacher data were weighted by the LEA size and kindergarten day type (i.e., part-day, full-day, both) to adjust for disproportionate stratified sampling and response rates.

One lead per LEA was purposively sampled to provide district-level information. These individuals were typically directors or assistant superintendents who oversaw TK and kindergarten. They were selected because they knew the most about the TK and/or kindergarten program(s). Fifty-four leads completed the survey. Data were weighted by the LEA size and kindergarten day type (i.e., part-day, full-day, both) to adjust for disproportionate stratified sampling.

Classroom Observation, Teacher and Lead Interview, and Cost Sample

To gather more in-depth information regarding how and why the LEAs decided to implement part-day or full-day programs, the UCLA purposively sampled 10 LEAs from the 62 to participate in interviews and classroom observations. Both the leads and teachers participated. The teachers were first randomly selected to participate in the teacher survey. These teachers were then asked to participate in observations and interviews. Typically, one TK and one kindergarten teacher (at least two teachers total per LEA) were observed and interviewed. There were a few cases where more than two per LEA participated in an effort to gather more data regarding either TK/kindergarten combination classes or other pertinent information.

These 10 LEAs were also sampled to provide cost data regarding the implementation of their TK and kindergarten programs. Eight of the ten provided the data. The LEAs were spread across the state, both urban and rural, and ranged from small to large in size.

Data Collection Methods

Surveys

This evaluation included two surveys: (1) a survey of teachers to gather classroom implementation data from the teacher perspective, and (2) a survey of the LEA leads to collect information regarding district-wide policies and their rationale. The survey instruments can be found in Appendix A.

The surveys were conducted online using e-mail addresses. The LEAs were offered a paper or phone option if they preferred, but all chose the online option. Both surveys were conducted between April and June of 2017. Respondents were given a small gift card for participating.

Classroom Observations

Within the 10 purposively selected districts, teachers were observed to gain a deeper understanding of implementation and best practices as well as how any potential implementation differences might be connected to first grade readiness. Trained observers collected data using a semi-structured protocol. The protocol was piloted and revised as necessary. The classroom observations were conducted during March, April, and May of 2017. Respondents were given a gift card for participating.

Teacher and LEA Lead Interviews

Teachers were interviewed to gain a more in-depth perspective of how they teach and structure their classrooms and why. Trained interviewers conducted the interviews in April and May of 2017, either in person or by phone, using a semi-structured protocol. Respondents were given a gift card for participating. The protocol can be found in Appendix B.

The LEA leads were interviewed to better understand how and why they implemented TK and kindergarten as they did. Trained interviewers conducted the interviews by phone in April and May of 2017 using a semi-structured interview protocol. The interview and observation protocols can be found in Appendix B.

Cost Related Data

The "ingredients" method was used to collect cost data associated with implementing kindergarten programs. Levin and McEwan (2001) state, "The ingredients method represents a straightforward approach to estimating costs... The idea behind this approach is that every intervention uses ingredients that have value or cost. If the ingredients can be identified and their costs can be ascertained, then we can estimate the total costs of an intervention." Identification of ingredients can be facilitated by separating them into four different categories: personnel, facilities, materials, and other program inputs. These four categories were used to help districts identify the various ingredients used in TK and kindergarten programs.

Each of the 10 selected LEAs was sent a form to collect cost data relating to personnel, supplies and materials, facilities, and any other expenditures related to kindergarten and TK programs. Eight of the ten LEAs completed and returned the form. The form was typically completed by the LEA's finance person. Additional information was collected on the teacher survey to estimate the number of hours TK and kindergarten teachers work over their contracted hours as well as their out-of-pocket costs.

Where data were unavailable, costs were estimated from The Center for Benefit-Cost Studies of Education (CBCSE) at Teacher's College CostOut tool.² It is a free online tool that provides national (and when available - local prices) for an extensive list of personnel, materials, facilities, and miscellaneous education related items. The CostOut tool automatically makes adjustments for inflation and geographical location when necessary. The CostOut tool was used to look up classroom prices. The national

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² http://cbcse.org/cost-resources/

median cost (the local cost was unavailable) for an elementary school classroom was \$314,232.21 per unit/classroom. This cost assumed a 900 square foot classroom and the price data source came from *School Planning and Management* magazine.

Surveys, Observations, and Interviews Analysis Methods

The survey data were analyzed using descriptive methods. Raw data were downloaded from the online platform, imported into IBM SPSS Statistics analysis software, and then cleaned and prepared for analysis. The observation and interview data were reviewed, manually coded, and then interpreted, looking at the themes and patterns that emerged.

The evaluation team assessed patterns and themes from all datasets (i.e., surveys, interviews, and observations), searching for commonalities and dissimilarities. These findings were used to answer the evaluation questions and to form conclusions.

Cost Analysis Methods and Description

Calculations

Although the LEAs provided most of the costs used to estimate part-day and full-day kindergarten programs, additional calculations were made to estimate hidden costs that are not reflected in budgets, as well as facilities costs not provided by the LEAs. Estimated hidden costs included teacher out-of-pocket expenses and the cost of hours worked beyond contracted hours. Facilities costs were estimated for two reasons: (1) three out of the eight LEAs did not provide any facilities cost data and (2) for the LEAs that did provide facility cost data, it was assumed that they provided utility/maintenance costs and not costs associated with using the classroom space based on conversations with LEA research and finance contacts. For these LEAs, the cost of using classroom space was estimated and added to the facilities costs that were already provided. Out-of-pocket expenses were estimated and added to the materials/supply costs provided by the LEAs. The cost of hours worked beyond contracted hours were estimated and added to the personnel costs provided by the LEAs.

Cost Estimation for Hours Worked Beyond Contracted Hours

Based on survey data, the average number of contracted hours for teachers was 33.58 hours per week, however the average number of hours teachers actually work per week was 45. Teachers reported working an additional 11.5 hours per week. A hypothetical example is provided below to illustrate how an estimated cost of the additional 11.5 hours worked per week were calculated.

Step 1: Estimate an hourly rate for teachers

Hypothetical example of hourly rate calculation

LEA	Number	Average of	Weeks	Total hours	Total hours	Salaries	Hourly
	of	contracted	in a	worked per	worked for	for all 10	rate
	teachers	hours	school	teacher for	all 10	teachers	
			year	the school	teachers		
				year			
TK	10	33.58*	36	1,208.88	12,088.88	\$700,000	\$57.90**
only							

^{*} CA average

- Average contracted hours x weeks in a school year = total hours worked per teacher for the school year.
- Total hours worked per teacher for the school year x number of teachers = total hours worked for all 10 teachers.
- Salaries for all 10 teachers/total hours worked for all 10 teachers = hourly rate.

Step 2: Use hourly rate to estimate the cost of additional 11.5 hours of work for the school year. Hypothetical example of additional personnel cost calculation

LEA	Hours	Estimated	Additional	Weeks in	Additional	Number of	Total
	worked	hourly rate	cost per	a school	cost per	Teachers	cost for
	beyond		week	year	teacher for		all
	contract				the year		teachers
							for the
							year
TK	11.5	\$57.90	\$665.85	36	\$23,970.6	10	\$239,706
only							

- Hours worked beyond contract x estimated hourly rate = additional cost per week.
- Additional cost per week x weeks in a school year = additional cost per teacher for the year.
- Additional cost per teacher for the year x number of teachers = total cost for all teachers for the year.
- \$239,706 added to personnel costs for each LEA.

^{**} Hourly rates were calculated separately for kindergarten teachers and TK teachers.

Cost Estimation for Out-of-Pocket Expenses

Survey data was used to estimate how much teachers spent on out-of-pocket expenses for the year. Teachers were asked how much they typically spent per week on school supplies in which they paid for out-of-pocket. On average, teachers reported spending \$30.36 per week on school supplies. A hypothetical example is provided below to illustrate how annual out-of-pocket expenses were calculated.

Hypothetical illustration of out-of-pocket expense calculation

LEA	Number of	Weekly out-of-	Weeks in a	Out-of-Pocket	Total out of pocket
	teachers	pocket	school year	expenses per	expenses for all
		expenses		teacher for	10 teachers for the
				the year	year
TK	10	\$30.36*	36	\$1,092.96	\$10,929.60
only					

^{*} CA average

- Weekly out-of-pocket expenses x weeks in school year = out-of-pocket expenses per teacher for the year.
- Out-of-pocket expenses per teacher for the year x number of teachers = total out-of-pocket expenses for all 10 teachers for the year.
- \$10,929.60 was added to materials/supplies costs for each LEA.

Cost Estimation for Facilities

The CostOut tool was applied to estimate facilities cost using new construction prices. The tool used available costs for new construction of educational buildings and uprated them by 33 percent to account for the cost of land, furnishing, and equipment. Furnishing in this case included things like windows and lighting and not furniture. The CostOut tool spread the total costs across the expected lifetime of the building.

To estimate the facilities cost for TK and Kindergarten classes, the median cost of \$314,232.21 was spread out across 30 years (the general expected lifetime of a classroom) to get an annual classroom cost. Interest was also factored in the estimate (3.5%). These parameters returned an annual classroom cost of \$17,594.08. Additional contact was made with LEAs to obtain the number of TK and kindergarten classrooms. To get an estimate of facilities cost, the number of TK and kindergarten classrooms in the sample were multiplied the estimated annual classroom cost of \$17,594.08.

Evaluation Limitations

While a preferred evaluation design included the collection of student outcome data using a pre- and post-assessment, the project timeline did not allow for it. Therefore, questions related to best practices and first grade readiness are informed by observations of practice and teacher perspectives.

Cost Analysis Limitations

- The cost estimates provided above come from a small sample of eight LEAs, one of which accounted for a majority of the TK programs and students in the sample. The cost estimates are representative of the eight LEAs but perhaps not representative of all California LEAs.
- Estimated facilities costs were based on a national median (a local cost was unavailable) for a 900-square-foot classroom. If the actual square footage of the classrooms in the LEAs is significantly different than 900 square feet, then facilities costs have been under or over estimated. Additionally, it is possible that a California median cost is significantly different than the national median price. Given these issues, facilities costs should be seen as rough estimates.
- Estimated facilities costs for the three LEAs that were missing facilities cost data include only the use of the space.
- Some ingredients were not estimated, such as classroom furniture. Assuming
 that quantity and type of classroom furniture varies from TK to TK, it is not
 surprising that the LEAs could not provide this type of cost data.
- A majority of the LEAs in the sample did not provide miscellaneous/other costs. It is possible that these LEAs did not actually have any other costs or they were just not provided as was the case with facilities costs.
- The UCLA estimated the LCFF differentiated funding percentage of 11.3
 percent by calculating the percentage difference between the average cost
 per full-time student and the 2016–17 target base grant amount for
 kindergarten ADA of \$7,083 (CDE, 2017e). This is one way to calculate the
 percentage. It is possible this percentage could be estimated using another
 base grant rate or method. Before using, consideration should be given
 whether this method and base grant rate are appropriate.
- Lastly, the UCLA has not conducted legal, fiscal, or any other relevant analysis to anticipate any unforeseen or unintended consequences resulting from the use of the estimated differentiated full-time kindergarten funding incentive percentage of 11.3 percent. The CDE should deliberate whether 11.3 percent is appropriate given these and other considerations.

Key Findings and Recommendations

This section summarizes the key findings of the implementation evaluation for both TK and traditional kindergarten (hereinafter referred to as kindergarten). The key findings expand upon those described in the Executive Summary and are broken down into several sections: Transitional Kindergarten Planning and Delivery, Transitional Kindergarten and Kindergarten Part-day and Full-day Programs, and Best Practices in Part-Day and Full-day Transitional Kindergarten and Kindergarten Programs. Recommendations based on the evaluation findings are also included at the end of this section.

For the more interested reader, the next section Detailed Evaluation Findings provides more detail regarding the evaluation results and findings.

Transitional Kindergarten Planning and Delivery

Transitional Kindergarten Enrollment Reflects Eligible Population

According to the CDE TK enrollment data, there were 89,937 students enrolled in TK in California during the 2015–16 school year.³ Enrollment increased by 50 percent between 2013–14 and 2015–16 while the population of five-year olds decreased slightly (-4 percent) during that same time. As shown in Figure 1, the majority (57 percent) of these students were Hispanic or Latino. The next largest groups were Whites (22 percent) and Asians (10 percent). More than half of the state's TK students (57 percent) were categorized as socioeconomically disadvantaged; little more than one-third (36 percent) were English learners; and less than 1 percent (0.8 percent) were considered migrant students (not shown).

Approximately 69 percent of California's five-year olds with birthdays between September 2 and December 2—and who were thus eligible for TK—were enrolled in TK.⁴ Figure 1 also shows the race/ethnicity distribution of the eligible population and of the students who were enrolled. The distributions match rather closely, with only a slight overrepresentation of enrolled Hispanics and Latinos and a slight underrepresentation of Whites. The enrollment of the eligible population was not evenly distributed throughout the state, however.

³ 2016–17 enrollment data were not available at the time of this report.

⁴ The eligible population was calculated using the CA Department of Health Vital Statistics Live Births by Month of Birth data for 2010, the CDE 2015–16 TK data file, and the CA Department of Finance P-2: Total Estimated and Projected Population for CA Counties.

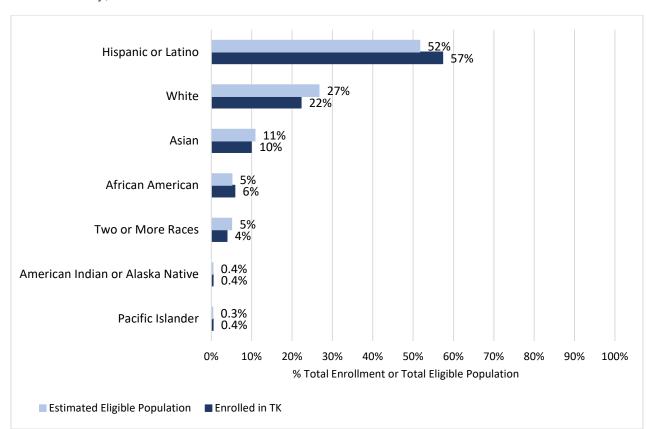


Figure 1: TK Enrollment in California Compared to Estimated Population Eligibility by Race/Ethnicity, 2015–16

Source: CDE 2015–16 TK Data File. CA Department of Finance P-3: State and County Total Population Projections by Race/Ethnicity and Detailed Age, 2010–2060. Note: The Filipino category in the CDE file was combined with Asians to match the U.S. Census Bureau designations of race and ethnicity. Enrollment: n = 89,937.

TK Delivery is Age and Developmentally Appropriate

The purpose of TK is to teach a "modified kindergarten curriculum that is age and developmentally appropriate" (CDE, 2017b). To determine whether TK programs across the state were providing age and developmentally appropriate programs, the evaluation considered two components of program implementation: classroom environment, and curriculum and instruction. The 5 *CCR* and the *Transitional Kindergarten Implementation Guide* (SAC, 2013) provided guidelines for how TK should be implemented in both areas.

TK classroom environments across the state are appropriate for TK students. A majority (62 percent) of overall TK teachers indicated that all the student furniture in their classrooms is child-sized with another 34 percent stated that most is child-sized (Figure 2). More than three out of four TK teachers overall had a dedicated bathroom (77 percent) and dedicated outside play area (86 percent) for their students (not shown).

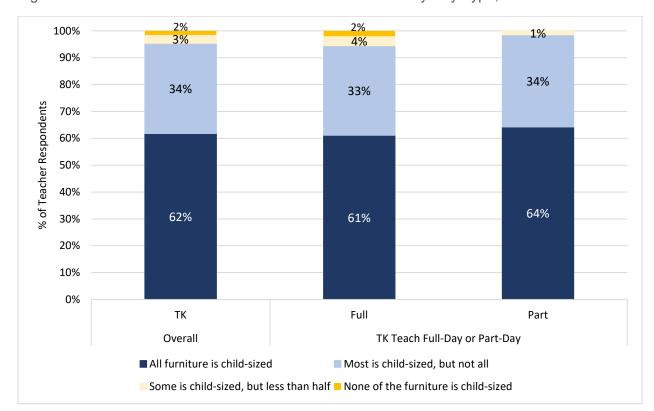


Figure 2: Amount of Child-Sized Furniture in TK Classrooms by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212

Currently, there is no California adoption list for TK curricula; teachers and administrators are tasked with the challenge of developing or choosing a curriculum that is developmentally appropriate and also provides exposure to the kindergarten CCSS. The *Traditional Kindergarten Implementation Guide* (SAC, 2013) suggests teachers be thoughtful in their selection and be able to modify the curriculum to match the needs of their young students. To achieve this, TK teachers may use the PLF to help map and monitor students' development over time and to plan accordingly (SAC, 2013). Currently, the most widely used established curriculum by TK teachers, as revealed in the survey, do not *officially* align its content with the PLF; however, in interviews, many teachers said that they modify and supplement their curriculum to align it to the developmental needs of their students and to the PLF. In many other cases, the teacher or district created their own curricula to meet the needs of their TK students.

The results of the evaluation suggest that most TK teachers are using a developmentally appropriate curriculum in core instructional content areas. Teachers were asked whether they thought the curricula they use was developmentally appropriate for TK students. As shown in Figure 3, the vast majority across subjects felt they were either "very" or "somewhat" appropriate. Furthermore, classroom observations supported this finding.

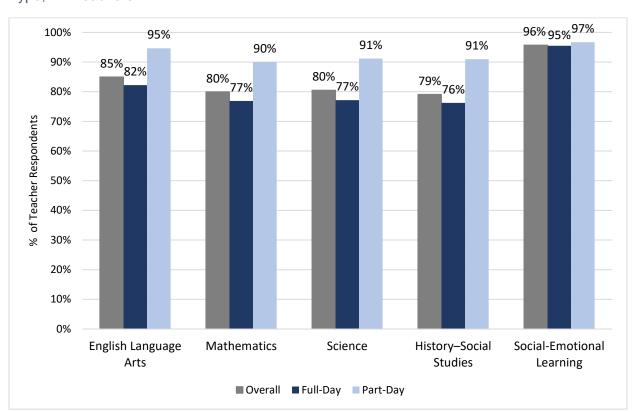


Figure 3: "Very" or "Somewhat" Developmentally Appropriate Curriculum by Subject by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 180 - 210.

Note: Teachers were asked to indicate appropriateness by choosing "very appropriate," "somewhat appropriate," "slightly appropriate," or "not at all appropriate." Figure shows those who selected "very appropriate" or "somewhat appropriate."

In addition to attending to the developmental needs of their young students, TK teachers were also aware of the importance of helping students to be ready for the rigors of kindergarten. Teachers felt that their curriculum was aligned well to the kindergarten curriculum. Figure 4 shows that 86 percent of teachers overall think that their TK curriculum is well-aligned (43 percent) or at least somewhat aligned (43 percent).

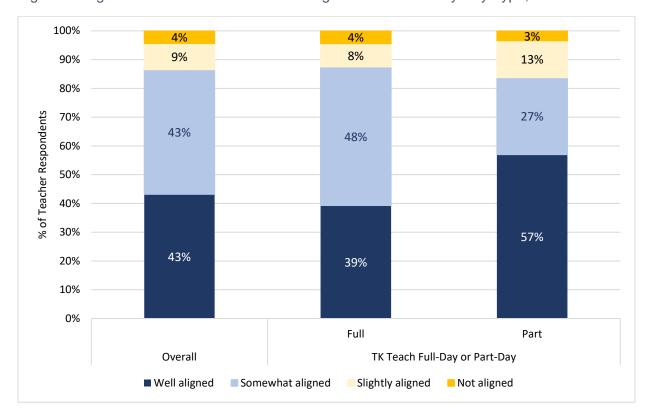


Figure 4: Alignment of TK Curriculum to Kindergarten Curriculum by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 209.

Finally, the *Transitional Kindergarten Implementation Guide* (SAC, 2013) notes the importance of integrating the curriculum, meaning that teachers teach several content areas within one lesson. For example, a science exploration that also touches on measurement and writing. Many of the observed TK teachers included some kind of integrated instruction in their day. One teacher taught her TK students a song about a plant growing, which included music, movement, and content vocabulary relating to their unit on plants. Likewise, in an interview, a teacher noted that she was able to teach social-emotional development lessons through her English language arts curriculum, which included stories dealing with themes that touched on age-appropriate social topics such as making friends.

LEAs Need More Support Aligning California Preschool Learning Foundations and CCSS

Even though, the evaluation found that many teachers and the LEAs are developing or modifying curricula to meet the developmental needs of their students, more support is needed for some regarding how to align with the PLF and/or the CCSS. Aligning with the two sets of standards is important and pursuant to the *EC* Section 48000(f), it is the intent of the state Legislature that the TK curriculum be aligned to the PLF.

The LEA leads and teachers tend to use the CCSS for TK planning more than the PLF. While both are important, the results suggest that LEAs may be less familiar with the PLF. The kindergarten CCSS was the most common resource provided to teachers,

with 86 percent of teachers stating it was provided to them (not shown). Comparatively, about two-thirds of teachers (68 percent) reported being provided the PLF; thus, approximately one-third were not provided it. Likewise, teachers were asked about the resources they actually use, in addition to what is provided to them (Figure 5). Again, the kindergarten CCSS ranked as the most common resource, with 54 percent utilizing "a lot" and 30 percent using it "somewhat." A little more than one-third (37 percent) said they used the PLF "a lot," with another 30 percent using it "somewhat." Again, this suggests that about one-third (34 percent) of TK teachers are utilizing the PLF either a little or not at all.

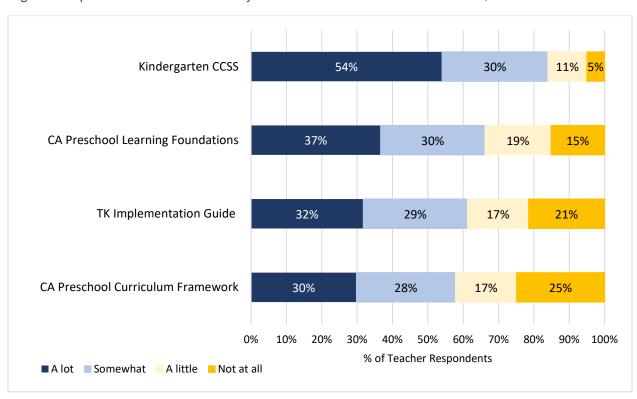


Figure 5: Specific Resources Used by Teachers to Plan for TK Instruction, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 194 - 209.

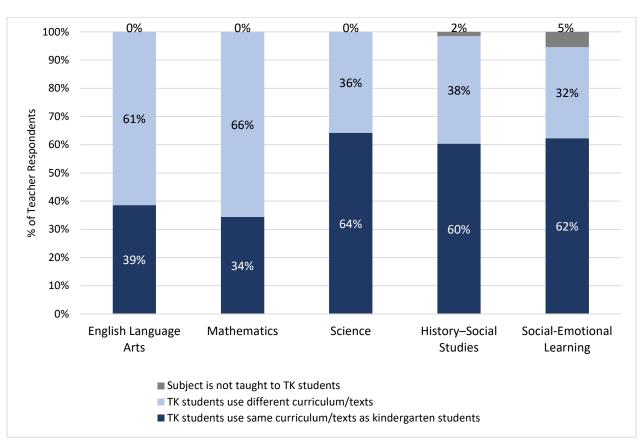
Additionally, the vast majority of the LEA leads (80 percent) said they would benefit from additional support or guidance in planning or preparing their TK programs (not shown). Lead respondents wrote in their surveys the supports they needed, and the most common responses pertained to support with curriculum and/or standards, including clear guidelines (48 percent), more professional learning (26 percent), and more guidance on how or why TK and kindergarten are distinct but aligned (18 percent) (not shown). These supports correspond to the biggest challenges described by leads in implementing TK, which are identifying or developing appropriate curriculum for TK students (51 percent felt it was a big or moderate challenge) and identifying and providing professional learning for TK teachers (40 percent) (not shown).

TK/Kindergarten Combination Classes Place an Extra Burden on Teachers

The *Transitional Kindergarten Implementation Guide* recommends that TK programs are self-contained, meaning that they do not mix grade levels (SAC, 2013). If enrollment is too low, the guide suggests clustering TK programs regionally; one school may draw from several neighborhood schools to create the self-contained TK. When combination classes must be created, it is advised that districts carefully consider the composition of the class to ensure that the TK students get exposure to a modified kindergarten curriculum that is both developmentally and age-appropriate.

Because combination teachers have both TK and kindergarten students, it places an extra burden on them. The results suggest that many teachers are responsible for teaching two curricula, particularly in English language arts and math (Figure 6). Additionally, teachers need to differentiate instruction between *and* within their programs, which was identified by combination teachers as their biggest challenge.

Figure 6: Same TK and Kindergarten Curricula in Combination Classes by Subject Area, TK/K Combination Teachers



Source: TK and Kindergarten Teacher Survey. n = 41.

Transitional Kindergarten and Kindergarten Part-Day and Full-Day Programs

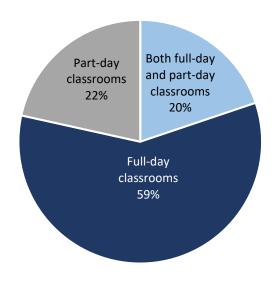
Most TK and Kindergarten Programs are Full-Day

Most LEAs in California provide full-day TK and kindergarten programs. A full-day is defined as one that is four hours or longer. Because LEAs are required to provide the same level of service for TK as they provide for kindergarten, the determination of whether TK is full-day typically depends upon the kindergarten day length. According to the California Basic Educational Data System (CBEDS), most LEAs in California offer full-day kindergarten. As shown in

Figure 7, 59 percent of LEAs offered only full-day kindergarten, 22 percent offered only part-day, and 20 percent offered both part-day and full-day programs.⁵

In line with these findings, most TK (59 percent) and kindergarten (64 percent) students attended full-day programs in 2015–16 (not shown).⁶ On average, the full-day TK and kindergarten sessions were 5.6 hours each, and the TK and kindergarten part-day sessions were 3.5 hours each (not shown).

Figure 7: California LEAs by Structure of Kindergarten Classroom, 2015–16.



Source: CBEDS 2015–16 data file. N = 938 LEAs.

⁵ LEA estimates were computed by aggregating school-level information about kindergarten program structure type from the CBEDS 2015–16 data file. LEAs with schools that offered part-day and full-day programs were defined as LEAs that offered both types. Figure represents the full population of LEAs

reporting a kindergarten day type.

⁶ Student estimates were calculated by joining CBEDS data to TK participation enrollment data from the TK Data File, which breaks out TK participation from traditional kindergarten enrollment. The 2016–17 TK Data File was not available at the time of this report.

Most LEAs are Interested in Full-Day Kindergarten, But Not as Interested in Full-Day TK

Part-day LEA leads were asked whether they would be interested in offering full-day kindergarten in the future; approximately three out of four (74 percent) were "very" or "somewhat" interested (not shown). Because at the time, the LEAs had to offer TK for the same length of time as kindergarten, many leads said they offer part-day to be consistent with their kindergarten programs. They did not mention, and may have been potentially unaware, that they could secure a SBE waiver to offer different lengths of time. Of those who offer part-day, 48 percent were "very" or "somewhat" interested in offering full-day TK (not shown). However, not all TK teachers felt that a longer school day would benefit their students. Almost three out of four (72 percent) of the surveyed part-day TK teachers felt that their students would not benefit from a full-day session due to the TK students being too young for a full day in school (not shown).

Lack of Classroom Space and/or Resources are Main Barriers to More Full-Day Programs

Among those who were interested in switching to a full-day, the main reason given in both surveys and interviews for not currently offering full-day was a lack of classroom space, capacity, and/or funding. A few LEA leads also indicated that contractual or collective bargaining issues prevented them from moving to a full-day model. To incentivize the implementation of more full-day programs in California, the state would need to assist the LEAs with obtaining more classroom space and resources.

Based on the sample of eight districts included in the cost analysis, full-day kindergarten programs cost more than part-day programs. On average, the cost of full-day programs was \$229,913 compared to part-day programs at, \$133,117 or \$7,882 per full-day student compared to \$4,277 per part-day student. Based on the differences between the full-day average cost per student and the 2016–17 LCFF target base grant amount of \$7,083 per kindergarten ADA (CDE, 2017e), the state could consider a differentiated funding rate as part of the LCFF whereby districts that implement full-day kindergarten could receive an incentive of 11.3 percent of the base grant. This would be similar to the current LCFF class size reduction incentive of 10.2 percent of the base grant. The state could also consider another funding option in which districts transitioning from part-day to full-day kindergarten receive grants to pay for facilities as an incentive.

⁷ An amendment to *EC* Section 37202(b) effective June 27, 2017, now allows districts that implement an early primary program to maintain kindergarten or TK for different lengths of time during the school day without a SBE waiver.

⁸ The differentiated funding incentive percentage of 11.3 percent was estimated using the following formula: (\$7,882 - \$7,083)/\$7,083. The UCLA used the 2016–17 kindergarten base grant per ADA because it matched the year in which cost data were collected. Please note that using a different base grant amount will result in a different percentage. Before applying this percentage, more consideration should be given for which base grant amount is most appropriate because it is updated each year. Also, please note that the average cost per full-day student (\$7,882) was based on a small sample of LEAs.

Other Than Time, Part-Day Delivery is Not Notably Different from Full-Day Delivery

There were few practical differences found between full-day and part-day implementation in both TK and kindergarten. Not surprisingly, the most notable difference was the amount of time spent on instruction and core subjects.

In both TK and kindergarten, full-day respondents spend more time each week on core instructional content (Figure 8). This is expected when considering that full-day respondents have more time because of their longer day. However, they tend to divide their day similarly by instructional activities (Figure 9). In both part-day and full-day TK classes, teachers spend the largest portion of their day conducting teacher-directed whole class activities. After that, they tend to spend their day in teacher-directed small group activities or child-selected individual activities. Similarly, both part-day and full-day kindergarten teachers spend the largest portion of their day conducting teacher-directed whole class activities; then they tend to spend their day in teacher-directed small group activities followed by teacher-directed individual activities.

For more part-day and full-day implementation detail regarding classroom environment, and curriculum, instruction, and interaction, please see the Detailed Evaluation Findings section.

30.0 25.0 0.5 0.4 1.4 0.4 0.4 Average Hours per Week 1.3 1.3 1.3 20.0 2.0 1.8 0.2 0.3 2.3 2.1 1.7 15.0 1.7 4.4 4.0 5.1 1.6 2.7 10.0 4.4 4.2 3.8 3.6 5.0 9.7 9.2 7.3 6.9 6.3 5.5 0.0 ΤK Κ Part Overall TK Teach Full-Day or Part-Day K Teach Full-Day or Part-Day ■ Reading and Language Arts Social-Emotional Skills Math Music and/or Dance ■ Science Art ■ History–Social Studies ■ Other subjects

Figure 8: Average Hours Spent on Specific Subjects per Week by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 210 - 212. Kindergarten: n = 443 - 459.

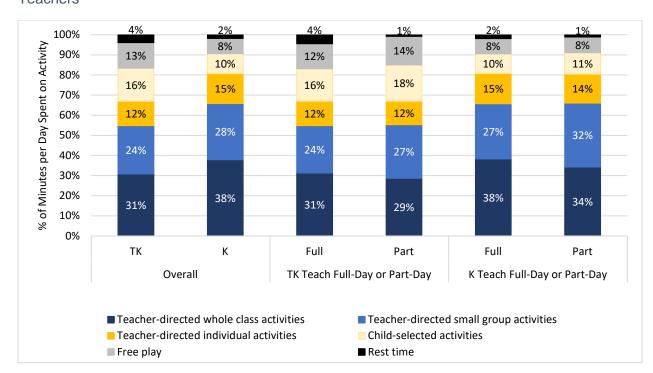


Figure 9: Percentage of Time Spent on Specific Activities by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 194 - 208. Kindergarten: n = 439 - 457.

Part-Day Transitional Kindergarten Teachers Find Typical Class Sizes More Challenging

On average, part-day TK classes tend to be slightly smaller than full-day classes. Yet, even with the smaller average class size (20 students compared to 22 students for full-day), a much higher percentage of surveyed TK part-day teachers reported that class sizes and their student—teacher ratio were challenging (48 percent) compared to full-day respondents (19 percent) (Figure 10). For those part-day teachers, their class sizes ranged from 12 to 27 students, with 80 percent of those falling between 18 and 25 students (not shown). By contrast, full-day respondents who stated that large class sizes were a challenge, had class sizes that ranged from 18 to 30 students, with 80 percent of those falling within the range of 20 to 29 students (not shown). Thus, surveyed part-day TK teachers tend to find typical class sizes more challenging than their full-day counterparts.

The challenge is likely a reflection of having a shorter day to teach all of their students. Observations and interviews revealed that teachers were more concerned about the student—teacher ratio than the actual number of students; thus, suggesting that teachers need another qualified teacher or aide in the classroom to help serve all their students. This idea corresponds with the number two challenge listed, which was a need for extra support, such as personnel, including a full-time aide (24 percent of part-day teachers compared to 14 percent of full-day teachers).

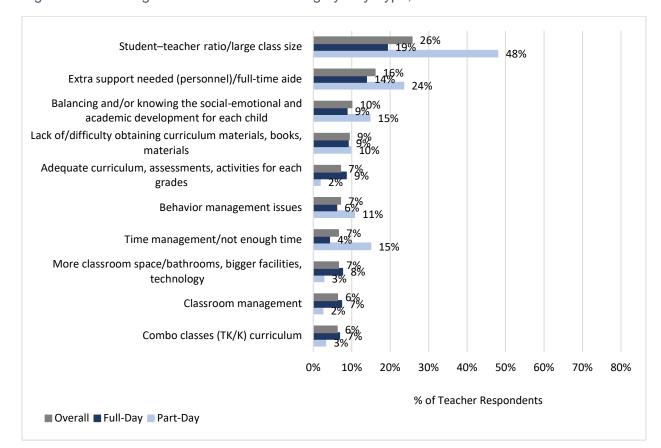


Figure 10: Challenges to Successful Teaching by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

Best Practices in Part-Day and Full-Day Transitional Kindergarten and Kindergarten Classrooms

Social-Emotional Curricula and Hands-on Activities are Considered Best Practices by TK Teachers

Overall, TK teachers in both part-day and full-day programs deemed having a socialemotional curriculum (20 percent), hands-on activities (20 percent), and small class sizes as best practices for effective instruction (20 percent) (Figure 11). Part-day teachers tended to identify hands-on activities (35 percent) and explorative approaches and free choice (32 percent) as their most effective practices, while full-day teachers' best practices were similar to the overall instructional activities and factors.

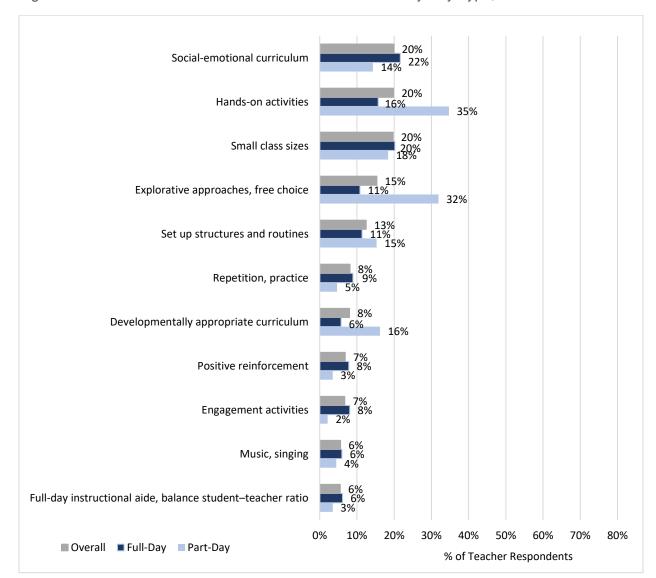


Figure 11: Most Effective TK Instructional Practices/Factors by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

Small Group Instruction and Hands-on Activities are Considered Best Practices by Kindergarten Teachers

Part-day and full-day kindergarten teachers regarded small group instruction, including child learning centers, hands-on activities (15 percent), structures and routines (13 percent), and positive reinforcement (9 percent) as best practices for effective instruction (Figure 12).

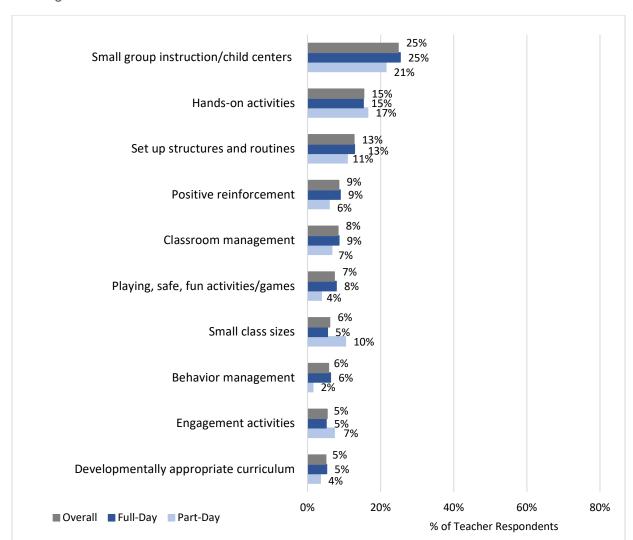


Figure 12: Most Effective Kindergarten Instructional Practices/Factors by Day Type, Kindergarten Teachers

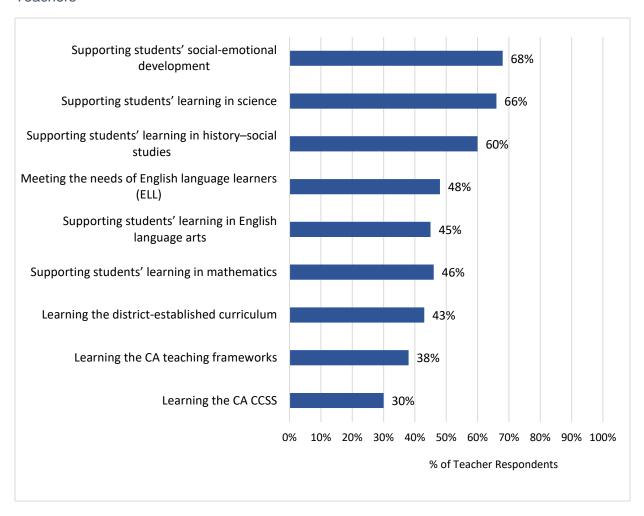
Source: TK and Kindergarten Teacher Survey. n = 471.

Teaching Social-Emotional Skills and Curricula Contributes to Kindergarten Students' First Grade Readiness Behaviors

Supporting students for successful transitions to first grade is an important part of kindergarten implementation. As such, the evaluation considered what classroom practices were linked to first grade readiness behaviors in the areas of teacher-child interactions, choice and initiative, social-emotional, engagement and persistence, and independent transitions. The results showed that those teachers who taught a developmentally appropriate social-emotional curriculum and spent more days teaching social-emotional skills had more students who demonstrated these first grade readiness behaviors.

This is an important finding because most kindergarten teachers (68 percent) indicated that they need support in social-emotional development (Figure 13). Additionally, kindergarten teachers most commonly indicated that a main challenge to successful teaching was balancing or knowing each child's social-emotional and academic development (not shown).

Figure 13: "A lot" or "Some" Additional Support Needed in the Following Areas, Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. n = 454 - 459.

Note: Teachers were asked to indicate how much support they need: "a lot," "some," "a little," "none," or "don't know." Figure shows those who selected "a lot" or "some."

Recommendations

The following are recommendations to the CDE that could further strengthen the implementation of kindergarten and TK programs statewide:

Recommendation 1: The state should consider incentivizing interested part-day LEAs to shift to a full-day kindergarten program by supporting them with funding for more classroom space. Most part-day LEAs were interested in providing a full-day kindergarten program but did not have the space and/or resources. Further, the state should consider differentiated funding as part of their Local Control Funding Formula (LCFF) whereby districts with full-day kindergarten programs receive an additional percent of the base grant per student, similar to the K-3 add-on incentive. (See Key Findings and Recommendations in the full report for estimate of LCFF percentage.) The state could also consider providing additional grants for district facility as another funding incentive.

Recommendation 2: The state should also consider reducing the TK part-day student-teacher/aide ratio by encouraging part-day TK programs, either through funding or changes to current requirements, to add a full-time teachers' aide. Many part-day TK teachers said it was challenging to provide effective instruction even with typical class sizes (18–25 students), which is likely a reflection of the difficulty of meeting all their students' instructional needs within a shorter school day. Full-day TK teachers were not as concerned about typical class sizes, but most TK part-day teachers were not interested in extending the length of time for their young students. For part-day TK teachers, the most common recommendation for improving implementation was having a smaller class or better student–teacher ratio. Their second most common suggestion for improvement was having an educated and effective full-time aide in the classroom.

Recommendation 3: The state should provide the CDE with additional resouces to support more guidance and assistance to kindergarten teachers around supporting students' social-emotional development, potentially in the form of developmentally appropriate curricula and professional learning. Most kindergarten teachers reported wanting support in the area of students' social-emotional development, and many found it challenging to support each child's social-emotional and academic development. Those teachers who did teach a developmentally appropriate social-emotional curriculum and spent more days teaching social-emotional skills tended to have more students who demonstrated first grade readiness behaviors.

Recommendation 4: The state should support the CDE to provide wider distribution of the PLF and more professional learning and for TK teachers and the LEAs since this document is a necessary tool for meeting the developmental needs of TK students. Even though the majority of teachers reported using the PLF to plan for instruction, notably about a third of the LEA leads and teachers indicated that they were not using the PLF to plan for instruction.

Recommendation 5: The state should explore the development of a TK curriculum adoption list and provide more professional learning to help the LEAs align and use the PLF and kindergarten CCSS together. State guidance on adopting a program that aligns both could be helpful to the LEAs in bridging the two sets of standards. Even though there is an established alignment the, CDE document, *The Alignment of the California Preschool Learning Foundations with Key Early Education Resources* (CDE, 2012), more than a third of the LEA leads indicated that they were not using it, and more than half of the teachers noted that they were not provided it as resource from their district.

Detailed Evaluation Findings

The previous section summarized the key findings of the evaluation. The purpose of this section is to provide more detail regarding transitional kindergarten (TK) and traditional kindergarten. The results provide a descriptive "snapshot" of TK and kindergarten enrollment and implementation in California during the 2016–17 school year. Throughout this section, much of the data are broken down by part-day and full-day programs to provide a picture of what implementation looks like in both models. In TK, data also were analyzed by regions (northern California and southern California) and density (urban and non-urban) to answer the specific evaluation question regarding potential regional differences.

Enrollment in California

Transitional Kindergarten

According to the CDE TK enrollment data, there were 89,937 students enrolled in TK in California during the 2015–16 school year. Enrollment increased by 50 percent between 2013–14 and 2015–16 while the population of five-year olds decreased slightly (-4 percent) during that same time. As shown in Figure 14, the majority (57 percent) of these students were Hispanic or Latino. The next largest groups were Whites (22 percent) and Asians (10 percent). More than half of the state's TK students (57 percent) were categorized as socioeconomically disadvantaged; little more than one-third (36 percent) were English learners; and less than 1 percent (0.8 percent) were considered migrant students (not shown).

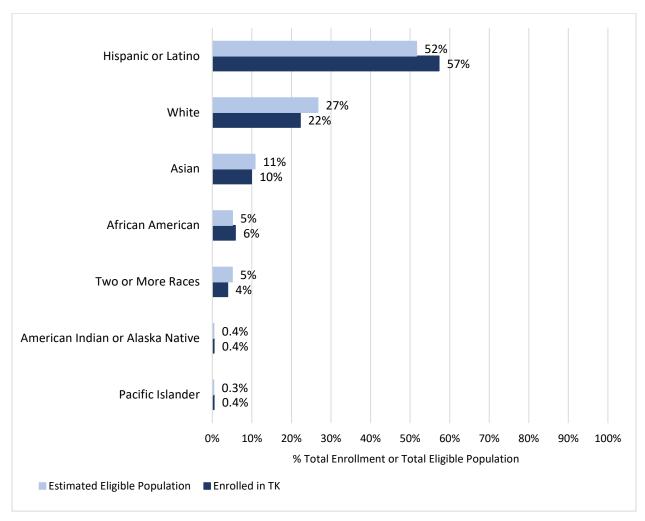
Approximately 69 percent of California's five-year olds with birthdays between September 2 and December 2—and who were thus eligible for TK—were enrolled in TK.¹⁰ Figure 14 also shows the race/ethnicity distribution of the eligible population and

⁹ 2016–17 enrollment data were not available at the time of this report.

¹⁰ The eligible population was calculated using the CA Department of Health Vital Statistics Live Births by Month of Birth data for 2010, the CDE 2015–16 TK data file, and the CA Department of Finance P-2: Total Estimated and Projected Population for CA Counties.

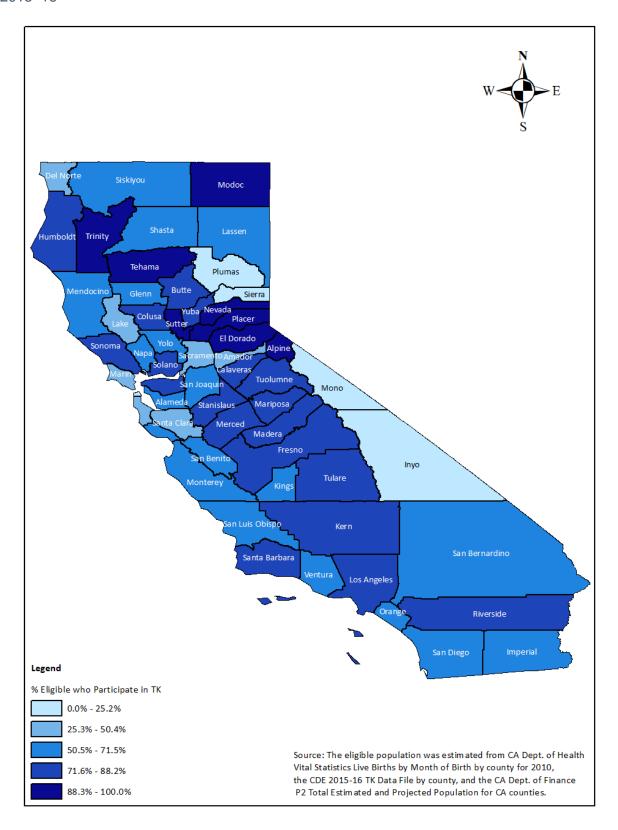
of the students who were enrolled. The distributions match rather closely, with only a slight overrepresentation of enrolled Hispanics and Latinos and a slight underrepresentation of Whites. The enrollment of the eligible population was not evenly distributed throughout the state, however. Figure 15 shows the breakdown by county.

Figure 14: TK Enrollment in California Compared to Estimated Population Eligibility by Race/Ethnicity, 2015–16



Source: CDE 2015–16 TK Data File. CA Department of Finance P-3: State and County Total Population Projections by Race/Ethnicity and Detailed Age, 2010–2060. Note: The Filipino category in the CDE file was combined with Asians to match the U.S. Census Bureau designations of race and ethnicity. Enrollment: n = 89,937.

Figure 15: Percentage of Estimated Eligible Population Enrolled in TK in California by County, 2015–16



Kindergarten

According to the CDE enrollment data, 448,673 students were enrolled in kindergarten in California during the 2015–16 school year. ¹¹ Figure 16 shows kindergarten enrollment by race/ethnicity. More than half of the students (56 percent) were Hispanic or Latino, almost a quarter of the students were White (23 percent), and Asians made up the third largest proportion of students with nine percent. Almost two-thirds (61 percent) were considered socioeconomically disadvantaged, one-third were English learners

(33.9 percent), and less than one percent (0.8 percent) were migrant education students (not shown).

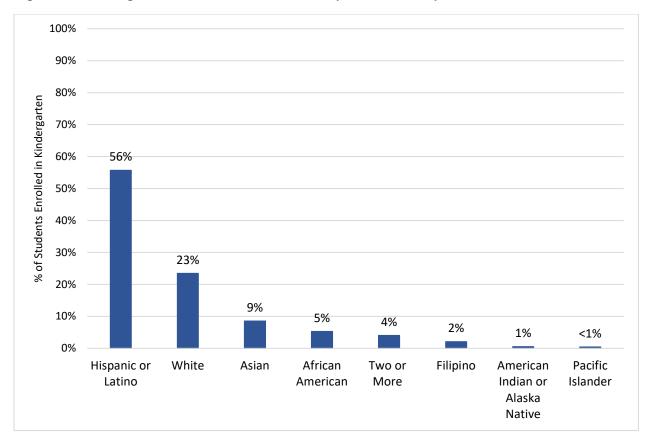


Figure 16: Kindergarten Enrollment in California by Race/Ethnicity, 2015–16

Source: CDE TK data file, Dataquest

Note: Traditional kindergarten (second year) enrollment was calculated by subtracting census day TK program participation from total kindergarten enrollment. n = 448,673.

¹¹ 2016–17 enrollment data that separated TK participation from total kindergarten enrollment were not available at the time of this report.

Implementation of Transitional Kindergarten and Kindergarten Programs in California

Transitional Kindergarten Planning and Program Design

According to the *Transitional Kindergarten Implementation Guide* (SAC, 2013), the LEAs have the flexibility to design TK programs that meet their local needs, including but not limited to geographic considerations, TK enrollment numbers, and facility availability. At the time of the evaluation, TK programs were mandated to offer the same service and length of time as the LEA's traditional kindergarten programs. However, an amendment to *EC* Section 37202(b) effective June 27, 2017, currently allows districts that implement an early primary program to maintain kindergarten or TK for different lengths of time during the school day.

Most (52 percent) of the surveyed LEAs began their TK programs in 2012–13, which was the mandated start of the program in California for eligible students (Figure 17). An additional 29 percent had begun their programs prior to 2012, and the remaining LEAs started in 2013–14 (18 percent) or 2014–15 (1 percent).

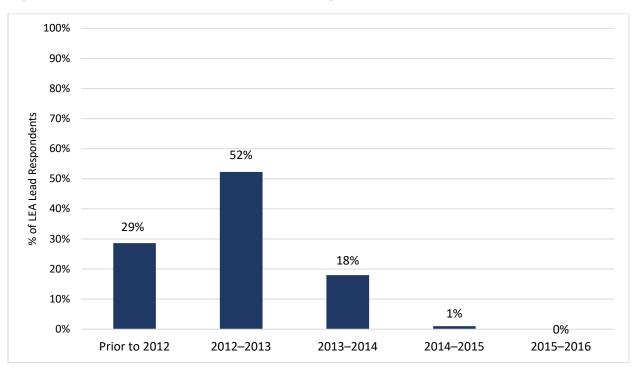


Figure 17: First Year of TK Implementation Among LEAs, LEA Leads

Source: LEA Lead Survey. n = 52.

Transitional Kindergarten Hubs

The *Transitional Kindergarten Implementation Guide* (SAC, 2013) recommends clustering TK programs regionally if enrollment numbers are too low at individual schools to justify separate TK programs. These district-wide programs are known as TK hubs or cluster sites. According to the LEA lead surveys, slightly more than half of the school districts (54 percent) offer TK hubs (Figure 18). Although not shown, responses varied somewhat by northern (56 percent) and southern (48 percent) regions and urban (66 percent) and non-urban (38 percent) areas.

The most common reason for having a TK hub—given by 71 percent of the LEA leads—was not having enough TK students at every school. Another common reason was a lack of classroom space at some schools (35 percent) (not shown).

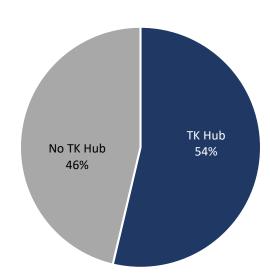


Figure 18: Presence of TK Hubs in California LEAs, LEA Leads

Source: LEA Lead Survey. n = 54.

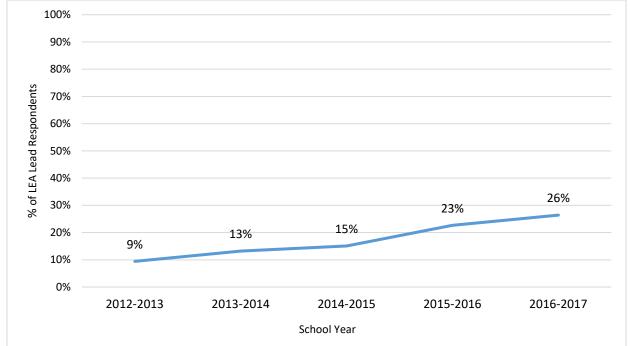
Early Admission TK

Beginning in 2015–16 with AB 104 [EC Section 48000(c)(3)(B)(i)], the LEAs have the option of offering the TK program to students who turn five years old after December 2 and by the end of the school year (June 30)—a program known as early admission TK. These children can enter TK with the approval of the school board or other governing body of a charter school and the parent(s). However, the LEA can only claim ADA funding once the student turns five years old (CDE, 2017b).

The number of LEAs with district-wide early admission TK policies has increased over the last five years (Figure 19). The results of the LEA lead survey suggest that a small percentage of districts were admitting students who turned five after December 2 in the years preceding AB 104. This increased to 26 percent by 2016–17. The most common reason the LEA leads gave for offering early admission TK was to give more students TK opportunities.

At the local level, AB 104 may have contributed to more LEAs admitting students to TK at the beginning of the school year versus later in the year. While it is unknown from the survey whether, prior to AB 104, the LEAs were admitting students at the beginning of the year *before* they turned five years old, other research suggests that these districts were in fact enrolling students in the middle of the year after they turned five (Early Edge California, 2015). In the current evaluation, of the 26 percent of the LEA leads who reported having district-wide early admission policies in 2016–17, 64 percent (9 LEAs) allowed students to enroll at the beginning of the year before they turned five (not shown).

Figure 19: Increase in LEAs Offering Early Admission TK Over Time, LEA Leads, 2012–13 to 2016-17 100% 90%



Source: LEA Lead Survey. n = 53.

Even with an early admission policy, a few respondents indicated that they still had a birthday cut-off for accepting more students, such as the end of December or February. One lead summed up their reasoning:

"My teachers are really reluctant to do [students from] the whole year. It is called early start. They don't think it is fair to any of the kids to pair a May birthday with a September birthday. There's probably some kids who that would work with, right? But with the majority of kids that is such a range. It defeats the philosophy and purpose of TK to serve children with fall birthdays."

Notably, even without a district-wide early admission policy, some schools and/or districts may still admit students who turn five after December 2. In the surveys, teachers more often than the LEA leads indicated they had students who turned five after December 2. Again, it is unclear whether these students were admitted at the beginning of the year or after they turned five in the middle of the year. Nevertheless, open-ended responses from the LEA leads suggest that some districts still allow students to enroll once they turn five in the middle of the year, even without a formal policy in place.

The most common reasons the LEA leads gave for not having district-wide early admission policies were lack of classroom space (28 percent) and funding (26 percent), which are interconnected. In open-ended responses, leads indicated that they were at capacity and needed to keep class sizes manageable. Without ADA funding at the time of enrollment, they could not set up more classrooms. Six of the 14 leads (43 percent) who did say they offer early admission noted that funding is a challenge and admitting early TK students strains the budget.

In TK programs where there were early admission students and the LEA had a district-wide policy in 2016–17 (15 LEAs), the average number of early admission students was six (not shown). The finding was fairly consistent across northern and southern LEAs, but teachers from the non-urban LEAs responded that they had fewer early admission students (five), on average, compared to urban respondents (six). (Due to the small sample sizes, caution should be used when interpreting these results.) When asked about challenges related to early admission TK students, half (50 percent) of the LEA leads cited not enough teachers to accommodate them, and more than one-third (35 percent) said that class sizes become too large.

Transitional Kindergarten and Kindergarten Program and Classroom Structure Full-Day versus Part-Day

A full-day program is defined as one that is four hours or longer. At the time of this evaluation, LEAs were required to provide the same level of service for TK as they provided for kindergarten; thus, whether a TK was full-day or part-day was often determined by the day type of kindergarten. According to the California Basic Educational Data System (CBEDS), most LEAs in California offer full-day kindergarten.

As shown in Figure 20, 59 percent of LEAs offered only full-day kindergarten, 22 percent offered only part-day, and 20 percent offered both part-day and full-day programs.¹²

In line with these findings, most TK (59 percent) and kindergarten (64 percent) students attended full-day programs in 2015–16 (not shown). On average, the full-day TK and kindergarten sessions were 5.6 hours each, and the TK and kindergarten part-day sessions were 3.5 hours each (not shown).

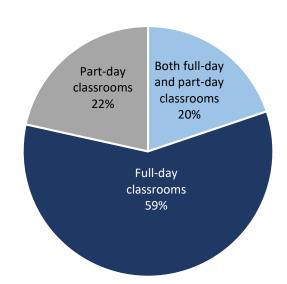


Figure 20: California LEAs by Structure of Kindergarten Classroom, 2015–16.

Source: CBEDS 2015–16 data file. n= 938 LEAs.

The LEAs were mandated to offer the same length of time for TK as kindergarten at the time of this evaluation. As a result, many leads said they offer part-day TK to be consistent with their kindergarten programs. They did not mention, and may not have

¹² LEA estimates were computed by aggregating school-level information about kindergarten program structure type from the CBEDS 2015–16 data file. LEAs with schools that offered part-day and full-day programs were defined as LEAs that offered both types. Figure represents the full population of LEAs reporting a kindergarten day type.

¹³ Student estimates were calculated by joining CBEDS data to TK participation enrollment data from the TK Data File, which breaks out TK participation from traditional kindergarten enrollment. The 2016–17 TK Data File was not available at the time of this report.

been aware, that they could secure a SBE waiver to offer different lengths of time.¹⁴ The main reason given in both surveys and interviews for not currently offering full-day TK and kindergarten was a lack of classroom space, capacity, and/or funding. A few LEA leads also indicated that contractual or collective bargaining issues prevented them from moving to a full-day model.

On the other hand, leads at LEAs with full-day kindergarten programs indicated that they chose to offer the extended day because both students and teachers benefit from additional instructional time. In interviews, kindergarten teachers said they embraced the full-day as a way to fit in more than just the rigorous academics. They also noted they had more time for explorations and "brain breaks," which they said kindergartenage students greatly need.

Although part-day leads were often confined by space and capacity issues, many of them were still interested in moving to a full-day. Forty-eight percent were "very" or "somewhat" interested in offering full-day TK and 74 percent were interested in full-day kindergarten (not shown).

Importantly, not all TK teachers felt that a longer school day would benefit their students. In fact, this was more pronounced with TK than kindergarten because of the younger age of the students. Almost three out of four (72 percent) of the surveyed part-day TK teachers said that their students would not benefit from a full-day session compared to 34 percent of kindergarten teachers (not shown). In interviews, TK teachers noted that TK students tire out much sooner due to their age, and that this may be the first school experience for many of them. Thus, TK teachers said that a full-day program would not be appropriate.

Even though 34 percent of part-day kindergarten teachers felt that a longer day would not benefit the students, most part-day teachers still acknowledged the pros and cons. For example, they noted that a benefit of part-day programs is that students never get overly tired. However, they also acknowledged that the transition to a full-day first grade is challenging for these students.

In kindergarten, based on administrators' and teachers' responses, there is willingness to implement full-day programs; however, districts lack the space, resources, and/or capacity to do so. The cost analysis revealed that implementing part-day, on average, cost less than full-day programs.

Cost of Full-Day versus Part-Day Programs

Table 2 and Table 3 present the costs for part-day and full-day TK and kindergarten programs. Due to the large size of one full-day district, full-day costs include more classrooms than part-day costs. Personnel costs include salary and benefits for paid

¹⁴ An amendment to *EC* Section 37202(b) effective June 27, 2017 now allows districts that implement an early primary program to maintain kindergarten or TK for different lengths of time during the school day without a SBE waiver.

staff (e.g., teachers, teacher aides) as well as the cost of hours worked beyond those contracted. Material/supplies include standard equipment fees such as computers/technology, instructional or classroom supplies, math and English curriculum items, and estimated out-of-pocket expenses for teachers. Facilities costs included the cost of using classroom space plus the cost of utilities/maintenance (for five of the eight LEAs). Three of the eight LEAs reported miscellaneous costs, and they included professional learning and the cost of substitute teachers.

The following tables provide the costs associated with the number of part-day and full-day TK and kindergarten classes. For TK the costs are associated with 26 classrooms serving 658 students in part-day programs and 283 classrooms and 9,471 students in full-day programs. For kindergarten the costs are associated with 143 classrooms serving 4,451 students in part-day programs and 1,457 classrooms and 42,502 students in full-day programs.

Table 2: Itemized Costs for Part-Day and Full-Day, TK Programs 2016–17

TK Programs						
	Personnel Costs Materials Facilities Other Total					
Part-						
day	\$4,321,433.64	\$161,843.97	\$369,475.68	\$65,000.00	\$4,917,753.29	
Full-						
day	\$46,774,549.24	\$1,535,299.40	\$4,979,124.64	\$272,209.00	\$53,561,182.28	

Source: LEA cost data, n = 8 LEAs.

Table 3: Itemized Costs for Part-Day and Full-Day, Kindergarten Programs 2016–17

Kindergarten Programs						
	Personnel Costs	Materials	Facilities	Other	Total costs	
Part -day	\$15,540,745.38	\$1,232,028.70	\$1,952,942.88	\$310,000.00	\$19,035,716.96	
Full- day	\$277,224,315.37	\$29,822,740.54	\$25,634,574.56	\$2,301,224.00	\$334,982,854.47	

Source: LEA cost data. n = 8 LEAs.

Table 4 and Table 5 provide average costs for part-day and full-day TK and kindergarten programs. The cost for full-day TK is \$118 more compared to the cost for part-day TK. The difference between the cost of part-day and full-day kindergarten however is much larger, a difference of \$96,796.

Table 4: Average Cost per Class, TK Programs 2016–17

	TK Programs				
	Number of classes in Sample Total costs Average cost per class				
Part-day	26	\$4,917,753.29	\$189,144.36		
Full-day	283	\$53,561,182.28	\$189,262.13		

Source: LEA cost data. n = 8 LEAs.

Table 5: Average Cost per Class, Kindergarten Programs 2016–17

Kindergarten Programs					
	Number of classrooms in sample	Total costs	Average cost per classroom		
Part-day	143	\$19,035,716.96	\$133,116.90		
Full-day	1,457	\$334,982,854.47	\$229,912.73		

Source: LEA cost data. n = 8 LEAs.

The costs were also calculated per student (Table 6 and Table 7). Results show that when looking at TK per-student average costs, full-day costs are lower compared to part-day. This pattern differs from the cost calculated above, in which the cost of full-day TK is slightly higher compared to part-day TK. The reason for this is that the average student enrollment for full-day (22 students) is higher than the average student enrollment for part-day (20 students). The average cost per student for full-day kindergarten was \$3,605 more compared to part-day kindergarten.

Table 6: Average Cost Per Student, TK Programs 2016–17

	TK Programs				
	Number of students in Total costs Average cost per				
	sample student				
Part-day	658	\$4,917,753.29	\$7,473.79		
Full-day	9,471	\$53,561,182.28	\$5,655.28		

Source: cost data. n = 8 LEAs.

Table 7: Average Cost Per Student, Kindergarten Programs 2016–17

Kindergarten Programs					
	Number of students in Total costs Average cost per				
	sample		student		
Part-day	4,451	\$19,035,716.96	\$4,276.73		
Full-day	42,502	\$334,982,854.47	\$7,881.58		

Source: LEA cost data, n = 8 LEAs.

¹⁵ Source: TK and Kindergarten Teacher Survey. TK: n = 203.

Fixed and Marginal Costs

The cost data provided by LEAs can be used to estimate the cost of adding an additional TK or kindergarten class. Estimating the cost of a full-day class depends on whether a district has the resources in place to provide an additional full-day of TK or kindergarten.

In the case that a district has the resources in place to add another full-day TK/kindergarten class, the fixed costs would include personnel and facilities costs. Fixed costs are defined as, "ingredients that are relatively invariant, regardless of the number of students who are using them" (Levin and McEwan, 2001). The cost of classroom space would remain the same regardless if there were 20 or 25 students in a classroom, making facilities costs fixed. Additionally, teachers are paid to work certain number of hours per week regardless of how many hours they do work, making personnel costs also fixed. Marginal costs then would include ingredients that vary, such as material/supply costs and other costs provided by LEAs such as professional learning.

Table 8 and Table 9 categorize the cost data provided by LEAs into fixed and marginal costs for both part-day and full-day kindergarten programs. If a district already has the classroom space and personnel in place to add a full-day TK or kindergarten class, then the estimated cost of doing so would be equivalent to the marginal costs, approximately \$6,387 for full-day TK and \$22,048 for full-day kindergarten. It should be noted that these estimates are probably low given that most LEAs did not provide "other" program costs.

Table 8: Fixed and Marginal Costs, TK Programs 2016–17

	TK Programs				
	Total fixed Average per Total marginal Average per				
	costs	class fixed costs	costs	class marginal	
				costs	
Part-day	\$4,690,909.32	\$180,419.59	\$226,843.97	\$8,724.77	
Full-day	\$51,753,673.88	\$182,875.17	\$1,807,508.40	\$6,386.96	

Source: LEA cost data. n = 8 LEAs.

Table 9: Fixed and Marginal Costs, Kindergarten Programs 2016–17

	Kindergarten Programs			
	Total fixed Average per costs Class fixed costs Class marginal class marginal costs Class marginal class margin			
				costs
Part-day	\$17,493,688.26	\$122,333.48	\$1,542,028.70	\$10,783.42
Full-day		\$207,864.72	\$32,123,964.54	\$22,048.02
	\$302,858,889.93			

Source: LEA cost data. n = 8 LEAs.

However, it is unlikely that districts will have the resources in place to add additional full-day TK and kindergarten programs based on administrator data. A significant barrier to implementing full-day programs is inadequate facilities/not enough classrooms. It can also be assumed that implementing full-day programs would require additional personnel. In this case, the cost of adding an additional full-day class would be equivalent to the per class average, approximately \$189,262 for full-day TK and \$229,913 for full-day kindergarten.

Incentivizing Full-Day

Ways to incentivize the implementation of full-day programs need to begin with more classroom space and funds/resources. The state should consider differentiated funding as part of the LCFF whereby districts that implement full-day kindergarten could receive additional funding of 11.3 percent of the base grant per ADA. This percentage was estimated from the differences between the full-day average cost per student and the 2016–17 LCFF target base grant amount of \$7,083 per kindergarten ADA (CDE, 2017e). This incentive structure would be like the current LCFF class size reduction incentive of 10.2 percent of the base grant. The state should also consider another funding option in which districts transitioning from part-day to full-day kindergarten receive grants to pay for facilities as an incentive.

Class Size

According to the teacher survey, the average TK and kindergarten class sizes were 22 and 23 students, respectively (Figure 21). Full-day and part-day teacher responses varied somewhat for both TK and kindergarten, with the average full-day class size calculated as 22 and 23 students and part-day class size calculated as 20 and 21 students. This slight difference is a product of those part-day LEAs with morning and afternoon classes being able to accommodate more students by allotting them across more classes. For example, the average class size of part-day kindergarten with two sessions is lower (17 students) than part-day with one session (23 students) (not shown).

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¹⁶ The differentiated funding incentive percentage of 11.3 percent was estimated using the following formula: (\$7,882 - \$7,083)/\$7,083. The UCLA used the 2016-17 kindergarten base grant per ADA because it matched the year in which cost data were collected. Please note that using a different base grant amount will result in a different percentage. Before applying this percentage, more consideration should be given for which base grant amount is most appropriate because it is updated each year. Also, please note that the average cost per full-day student (\$7,882) was based on a small sample of LEAs.

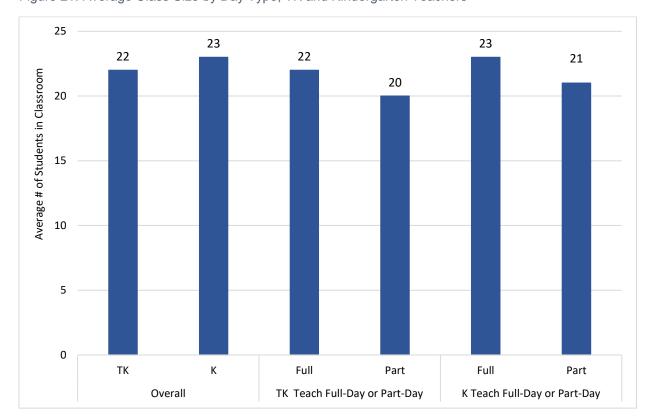


Figure 21: Average Class Size by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 203. Kindergarten: n = 469.

Transitional Kindergarten/Kindergarten Combination Classes

The *Transitional Kindergarten Implementation Guide* recommends that TK programs be self-contained, meaning that they do not mix grade levels (SAC, 2013). If enrollment is too low, the guide suggests clustering TK programs regionally; one school may draw from several neighborhood schools to create the self-contained TK. When combination classrooms must be created, it is advised that districts carefully consider the composition of the class to ensure that the TK students get exposure to a modified kindergarten curriculum that is both developmentally and age-appropriate.

Among the LEAs who offered combination classrooms, the most common reason was that they did not have enough students to hold either a full TK or kindergarten class. Other reasons included budget or lack of facilities. One lead indicated that they made a choice between clustering or combination classes. Because parents would have difficulty transporting their children to a school outside of their home neighborhood, the LEA chose combination classes in many cases. However, many of the leads with combination classes were concerned about how to meet the social-emotional and developmental needs of their TK students while ensuring that their kindergarten students received more rigorous content.

TK/kindergarten combination teachers were asked whether they used the same curriculum or texts for both groups of students. As shown in Figure 22, for many it

depends upon the subject area. Notably, about one-third of teachers indicated that TK students receive the same curriculum as kindergarten students in English language arts (39 percent) and math (34 percent). The percentage is higher for other subjects, with close to two-thirds of teachers saying they use the same curriculum in science (64 percent), history-social science (60 percent), and social-emotional learning (62 percent).

In the interviews, one LEA lead expressed frustration with the idea that combination TK students would essentially receive kindergarten twice. Another said that a major challenge of a TK/kindergarten combination class is not having a specific TK curriculum mandated by the state, requiring teachers to instead modify the kindergarten curriculum. This is especially trying for combination teachers because of the more rigorous demands of kindergarten. As one lead questioned, "How do we modify instruction that meets the needs of our TK students [in a way that is] developmentally appropriate?"

0% 0% 0% 2% 5% 100% 90% 36% 80% 38% 32% % of Teacher Respondents 70% 61% 66% 60% 50% 40% 64% 60% 62% 30% 20% 39% 34% 10% 0% History-Social Social-Emotional **English Language** Mathematics Science Arts Learning Studies ■ Subject is not taught to TK students ■ TK students use different curriculum/texts ■ TK students use same curriculum/texts as kindergarten students

Figure 22: Same TK and Kindergarten Curricula in Combination Classes by Subject Area, TK/K Combination Teachers

Source: TK and Kindergarten Teacher Survey. n = 41.

Because combination classes have teachers who have both TK and kindergarten students it places an extra burden on them. They may be responsible for teaching two curricula and they need to differentiate instruction between *and* within a program. Thus,

not surprisingly, meeting the needs of all students was widely described by teachers as one of the main challenges in combination classrooms.

In differentiated instruction, teachers vary their instruction to meet individual or small group learning needs (Tomlinson, 2000). They typically vary their strategies by grouping students and/or tailoring content, activities, products, and the learning environment. Even within a one-grade or "stand-alone" classroom, differentiation is considered a cornerstone of effective practice. Thus, most teachers are constantly thinking about how to differentiate instruction for their students. However, due to the design of the combination class—in which the teacher must address the needs of a broader range of ages, developmental stages, and abilities—the focus on differentiation tends to be even greater than in stand-alone kindergarten classrooms.

In an interview, one LEA lead summed up what appeared to be the biggest challenge of combination classrooms:

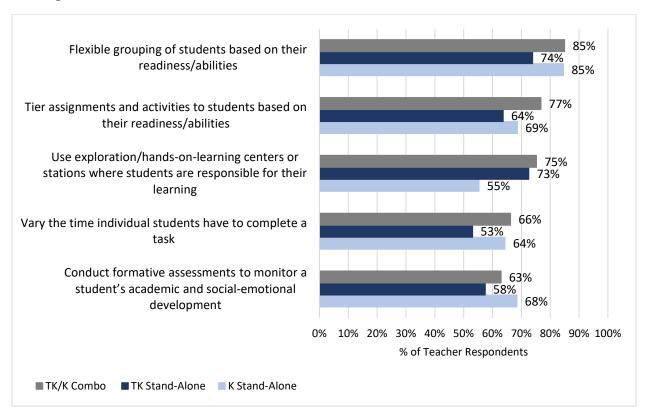
"For the students there doesn't seem to be a lot of challenges, but for the teachers it seems to be the hardest thing—the combo class—meeting the needs of all students. It's hard enough to meet the needs of all students when you have one grade level, but now you have two grade levels [TK, the first year of a two-year kindergarten program, and kindergarten together]. It is very difficult to do."

Another elaborated, "The teacher [is] trying to balance two separate curriculums. Even within each group, there are different levels." Combination teachers expressed similar frustrations in their interviews. Even stand-alone teachers made the point, without being asked, that combination classrooms were not a good practice. It should be noted, however, that teachers in schools that were able to place the students in combination classrooms strategically, using some kind of pre-assessment, talked more favorably about their experiences.

Both combination and stand-alone classroom teachers were asked about their use of instructional differentiation strategies to compare whether they are more commonly used in combination classes. The survey asked about five broadly defined best practices that were identified through a review of recommended differentiation practices. At least nine out of ten combination teachers said they used all five strategies "often" or "sometimes" (not shown). Figure 23 lists the strategies and shows the percentage of combination, TK stand-alone, and kindergarten stand-alone teachers who said they use each one often.

Flexible grouping of students based on their abilities was the most relied upon strategy. More than three out of four teachers (both combination and stand-alone) said they use often; notably, this was also the number-one-ranked best practice by all teachers in the survey (not shown).

Figure 23: Differentiated Instruction Strategies Used "Often" by Classroom Type, TK and Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. TK: n = 210-211. Kindergarten: n = 471. Note: Teachers were asked to indicate how often they used each strategy: "often," "sometimes," "seldom," "never," or "not sure." Figure shows only teachers who selected "often."

For the most part, combination classrooms and TK stand-alone classrooms were similar in their usage of strategies, while there were some differences between combination and kindergarten stand-alone teachers. The similarity with TK and the distinction from kindergarten may reflect combination teachers' awareness of using strategies that work best with their younger students. The biggest difference between combination and kindergarten stand-alone respondents was in their use of exploration/hands-on learning centers: Three out of four combination teacher respondents (75 percent) said they use that strategy often compared to slightly more than half of the kindergarten stand-alone respondents (55 percent). In interviews, some teachers noted it was difficult to have all the play and hands-on TK materials and not allow the kindergarteners the same exploration time. (It should be noted that most said this was a good practice for kindergarten—it was just not what they expected to be doing with the kindergarten students.)

The difficulty of balancing TK and kindergarten was further expressed by interviewed teachers. Teachers strongly believed that TK should be very different from kindergarten—they considered it special, and definitively *not* kindergarten. Most felt deeply that exploration through student-directed, hands-on experiences and play

needed to form the basis for TK learning. Even though the survey suggests that TK students are getting exploration time, teachers still worried that TK students would not get enough of that opportunity in combination classes because of the pressures of preparing kindergarteners for first grade. Noting that the two programs are markedly different, one teacher said:

"TK should not be run like a kinder...in TK you can take a more developmental approach; Kindergarten has more on their plates, sight words even before all the letters are learned, a lot of pressure...in TK we slow it down and take our time."

When considering the extra burden placed on combination teachers, it is also notable that combination classes may have a higher proportion of students with special needs. Teachers were asked about the number of the students in their class who could be classified as special education. While 83 percent of the combination teacher respondents said their classes have at least one student with special needs, only 51 percent of stand-alone teachers said the same (Figure 24). On average, combination teachers reported that 10 percent of their students could be classified as special education, versus five percent of stand-alone respondents (not shown). Differences by day type were minimal.

100% 17% 90% 38% 80% 42% 47% 46% 49% 50% % of Teacher Respondents 70% 60% 50% 83% 40% 62% 30% 58% 53% 54% 50% 51% 20% 10% 0% Full Part Full Part TK Stand-Alone K Stand-Alone TK/K Combo TK Teach Full-Day or Part-Day K Teach Full-Day or Part-Day Classroom Type ■ Class Has at Least One Student with Special Needs ■ Class Does Not Have Students with Special Needs

Figure 24: Classrooms with at Least One Student who can be classified as Special Education by Day Type and Classroom Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 212. Kindergarten: n = 471.

Teachers also noted other challenges when teaching combination classes. When asked about their biggest challenge to successful teaching, they most often cited needing extra support from another teacher or aide and classroom management. Classroom observations also suggested that classroom management and extra assistance are important ingredients for successful combination classrooms. Teachers' capacity for classroom management was a key factor in their ability to do small group or indiviualized instruction, which requires that large portions of the class be able to stay on task doing a self-directed activity for significant amounts of time. Also, from the observations and interviews, it became clear that an extra helper in the classroom can have a positive impact on a teacher's ability to differentiate and conduct small group instruction.

From all the data gathered, the primary challenge of the multi-grade combination classroom appears to be that the need for differentiation is accentuated. Meeting the needs of all students from two programs is the primary challenge for these teachers. Strong classroom management skills and having another adult in the classroom, such as a teacher's aide, can help teachers overcome these challenges.

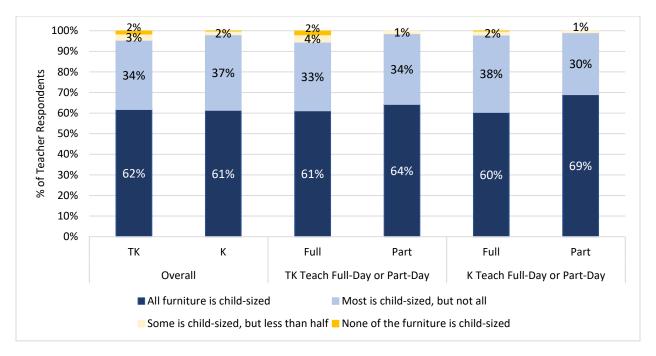
Classroom Environment

The 5 *CCR* provides guidelines for kindergarten facilities in California. Following these guidelines, most classroom facilities are appropriate for TK and kindergarten students.

A majority (62 percent) of all TK teachers indicated that all the student furniture in their classrooms is child-sized (Figure 25), with another 34 percent stating that most is child-sized. The differences between regions and between urban and non-urban areas were not notable, as almost all TK teachers in all areas said most or all of the furniture is child-sized. Likewise, the overwhelming majority of kindergarten teachers indicated that all (61 percent) or most (37 percent) of the student furniture in their classrooms is child-sized. Differences between full-day and part-day for both TK and kindergaren were not notable.

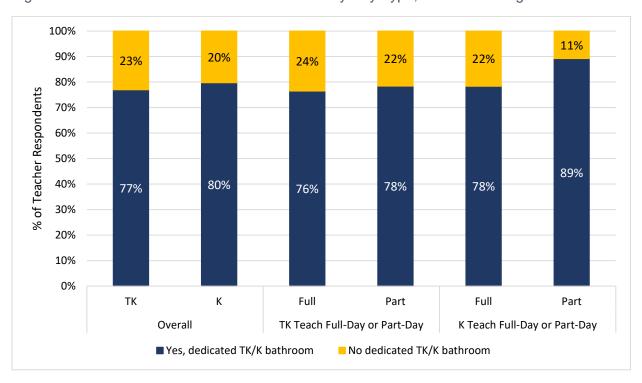
Additionally, more than three out of four TK and kindergarten teachers overall had a dedicated bathroom (77 percent and 80 percent, respectively) and outside play area (86 percent and 88 percent, respectively) for students (Figure 26 and Figure 27). Looking across type of school day, practical differences were minimal between part-day and full-day classrooms. However, 89 percent of part-day kindergarten teacher respondents said they had a dedicated bathroom, compared to 78 percent of full-day respondents. Ninety-four percent of part-day TK respondents reported having a dedicated outside play area compared to 83 percent of full-day. For TK, the differences between the northern and southern areas of the state were neglible, and responses varied a little by urban and non-urban areas. Specifically, 83 percent of non-urban area TK teacher respondents said they had a dedicated bathroom, compared to 73 percent of urban respondents (not shown). Likewise, 91 percent of TK non-urban respondents indicated they had a dedicated outside play area, compared with 82 percent of urban respondents (not shown).

Figure 25: Amount of Child-Sized Furniture in the Classroom by Day Type, TK and Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. TK: n = 212. Kindergarten: n = 471.

Figure 26: Classrooms with Dedicated Bathroom by Day Type, TK and Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. TK: n = 212. Kindergarten: n = 471.

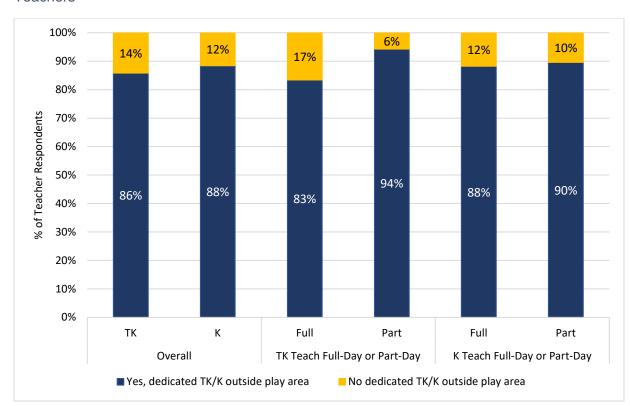


Figure 27: Classrooms with Dedicated Outside Play Area by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 212. Kindergarten: n = 471.

Teachers were also asked about whether they had established specified areas in their classrooms. All or almost all TK teachers had a literacy or library area (100 percent), an art area (93 percent), a writing area (91 percent), a dramatic play area (90 percent), and a mathematics area (88 percent) (Figure 28). A science/nature area was found least often, although it was in two-thirds of the TK classrooms (66 percent). Differences across regions and urban and non-urban areas were minimal for TK respondents.

Likewise, almost all kindergarten teachers had a literacy or library area (99 percent), a writing area (90 percent), and a mathematics area (87 percent) (Figure 29). Although still noted by more than half of the teacher respondents, science/nature areas and dramatic play areas were found least often in kindergarten classrooms (59 percent and 57 percent, respectively).

For both TK and kindergarten respondents, the most pronounced difference between full-day and part-day was regarding a science/nature area, with a smaller percentage of part-day respondents having an established interest area. It was unclear why there was a difference.

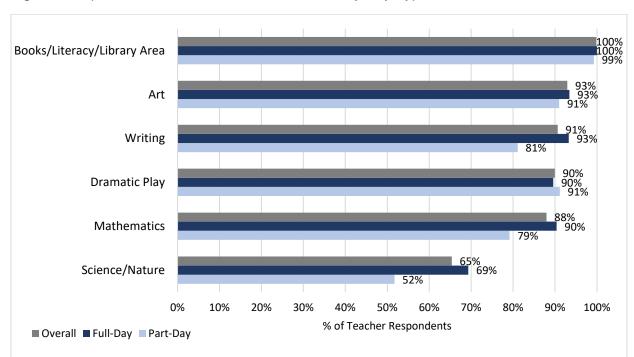


Figure 28: Specific Interest Areas in the Classroom by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

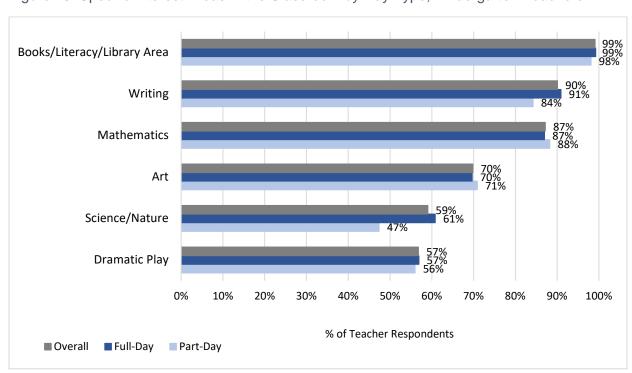


Figure 29: Specific Interest Areas in the Classroom by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 468 - 471.

Curriculum, Instruction, and Interaction

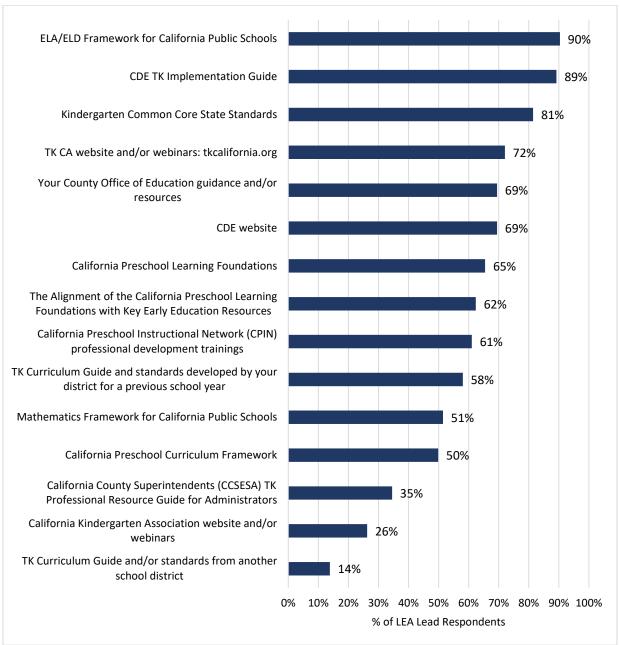
Transitional Kindergarten Curriculum

As mentioned in the program description, the purpose of TK is to teach a "modified kindergarten curriculum that is age and developmentally appropriate" (CDE, 2017b). Pursuant to *EC* 48000(f) it is the intent of the state Legislature that the TK curriculum be aligned to the PLF developed by the CDE. Currently, there is no California adoption list for TK curriculum; teachers and administrators are tasked with the challenge of developing or choosing a curriculum that is developmentally appropriate and also provides exposure to the kindergarten CCSS.

The LEA leads reported using an assortment of resources when planning their TK programs for the 2016–17 school year (Figure 30). The most commonly named were the English Language Arts/English Language Development Framework for California Public Schools: Kindergarten Through Grade Twelve (CDE, 2015), cited by 90 percent of leads, the Transitional Kindergarten Implementation Guide (SAC, 2013), used by 89 percent, and the kindergarten CCSS, used by 81 percent.

The LEA leads were also asked how their districts develop TK curricula, texts, and instructional materials for their classes. Leads could indicate whether: (1) the TK curriculum or instructional materials are selected by the district and required in all TK classes, (2) each school has some flexibility but is provided resources and/or general guidelines, or (3) each school develops its own guidelines and selects its own curriculum and materials. As shown in Figure 31, the LEA leads' responses depended upon the subject area. The majority (60 percent) indicated that the district selects the curricula and/or instructional materials in English language arts, while in math it was somewhat split between district selection and some school choice with district guidelines and/or resources (44 percent versus 47 percent, respectively). For the other subjects, if taught, at least half of the LEA respondents indicated that the district provides guidelines and/or resources but the schools have some choice in selecting what to use.





Source: LEA Lead Survey. n = 51 - 54.

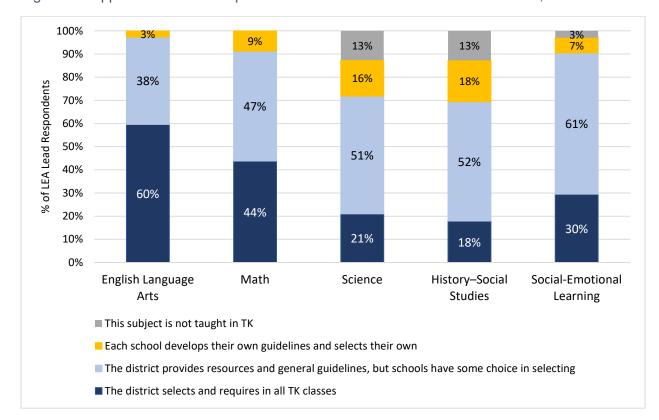


Figure 31: Approaches to Development of Instructional Materials for TK Classes, LEA Leads

Source: LEA Lead Survey. n = 53.

TK teachers indicated that they are provided a variety of resources by their districts to help them plan for classroom instruction (Figure 32). The kindergarten CCSS and English Language Arts/English Language Development Framework for California Public Schools: Kindergarten Through Grade Twelve (CDE, 2015) were the most commonly provided resources (86 percent and 71 percent, respectively), which is not surprising considering that the LEA leads also most commonly utilized them. Notably, 68 percent of teachers said they were provided the PLF—this means that almost one-third (32 percent) were not provided this resource. This is notable because the Transitional Kindergarten Implementation Guide (SAC, 2013) indicates that TK programs may use the PLF to guide their planning and align their curriculum.

Depending upon the resource, teacher responses varied somewhat by day type. Notably, 83 percent of part-day respondents said that their district provided them with the PLF compared to 63 percent of full-day respondents. A larger percentage of part-day respondents (66 percent) also indicated that their district guided them to utilize their county office of education as a resource than full-day respondents (82 percent). Other differences are shown in Figure 32.

Additionally, teachers' responses about district-provided resources varied by region and by urban and non-urban areas (not shown). Three-fourths (76 percent) of southern respondents said they received the *California Preschool Curriculum Framework* versus

just over half (54 percent) of northern respondents. However, 49 percent of northern respondents said they received the California Preschool Instructional Network (CPIN) trainings compared to 35 percent of southern respondents. More respondents (80 percent) from non-urban or more rural areas indicated that they were provided guidance and/or resources from their local county office of education than urban respondents (63 percent). There were also once again differences regarding the *California Preschool Curriculum Framework* (71 percent of urban respondents versus 57 percent of non-urban).

Kindergarten Common Core State Standards ELA/ELD Framework for CA Public Schools Your County Office of Education guidance and/or resources 82% Mathematics Framework for CA Public Schools **CA Preschool Learning Foundations** 83% CA Preschool Curriculum Framework District-developed TK curriculum guide and/or standards 80% CDE TK Implementation Guide CDE website TK CA website and/or webinars: tkcalifornia.org 59% Alignment of the CA Preschool Learning Foundations with Key Early Education Resources CA Preschool Instructional Network (CPIN) professional development trainings 20% 30% 40% 50% 60% 70% 80% 90% 100% % of Teacher Respondents Overall ■ Full-Day Part-Day

Figure 32: Most Common District-Provided Resources to Teachers by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 196 - 209.

Beyond the materials provided to TK teachers for planning, the teachers were also asked what resources they actually *use* (Figure 33). These results corresponded with the resources provided, although TK teachers were only asked about the kindergarten CCSS, the PLF, the *Transitional Kindergarten Implementation Guide* (SAC, 2013), and the *California Preschool Curriculum Framework*. Again, the kindergarten CCSS ranked as the most common resource, with 54 percent utilizing it "a lot" and 30 percent using it "somewhat." A little more than one-third (37 percent) said they used the PLF "a lot," with another 30 percent using it "somewhat." This too suggests that about one-third (34 percent) of TK teachers are utilizing the PLF either a little or not at all.

In interviews, TK teachers discussed the many resources they felt were necessary to plan instruction and support and modify their given curricula. They were especially appreciative of trainings or meetings specifically focused on TK needs and issues, such as the CPIN trainings that focus on using the PLF and the *California Preschool Curriculum Framework*.

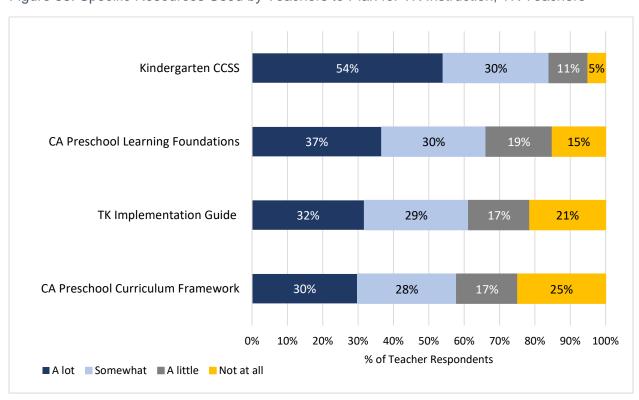


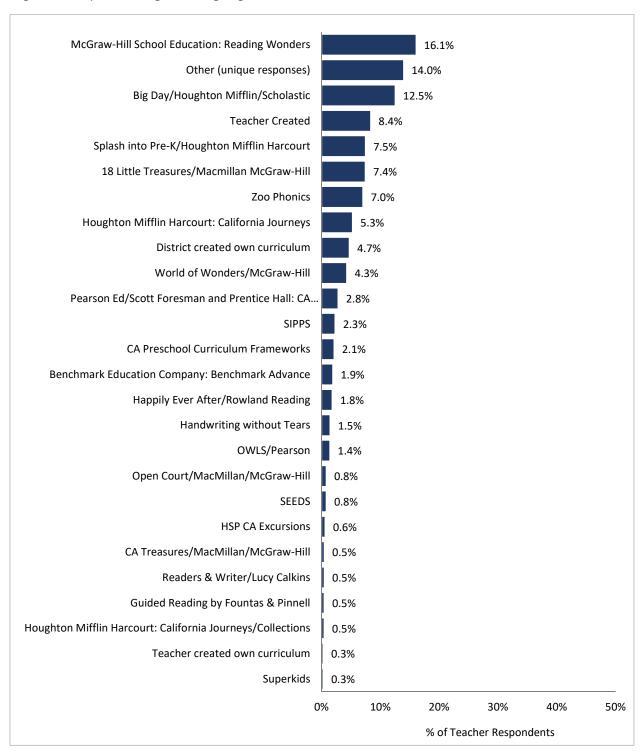
Figure 33: Specific Resources Used by Teachers to Plan for TK Instruction, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 194 - 209.

Because there is no California adoption list for TK curriculum, the *Transitional Kindergarten Implementation Guide* (SAC, 2013) suggests teachers be thoughtful in their selection and also be able to modify the curriculum to match the needs of their young students. With this in mind, teachers were asked to identify the curriculum they

use in each subject area. They chose from a pre-identified list or wrote in answers if their curricula were not shown. Figure 34 through Figure 38 show the most common answers by subject for TK teachers overall. Due to the small numbers in each category, the tables are not broken down by day type.

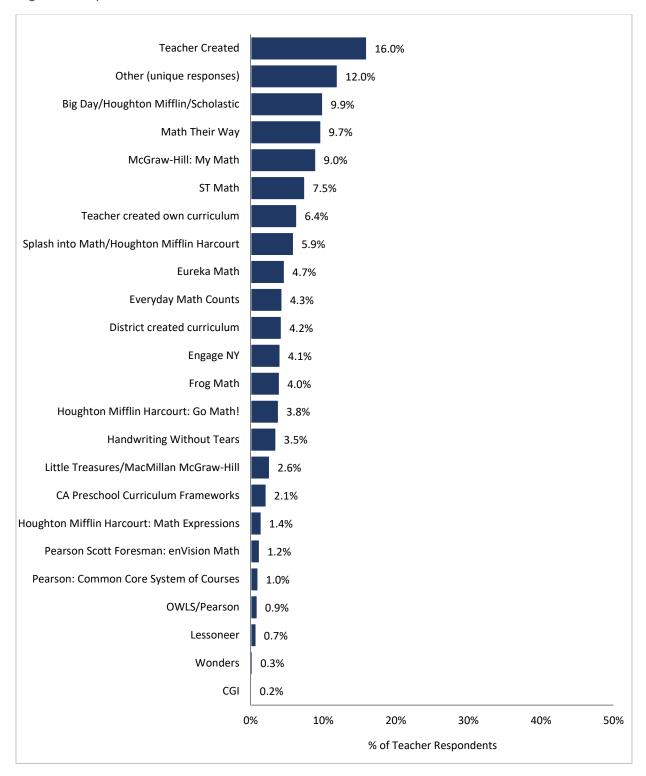
Figure 34: Specific English Language Arts Curricula Used in TK Classes, TK Teachers



Source: TK and Kindergarten Teacher Survey. n = 212.

Note: "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

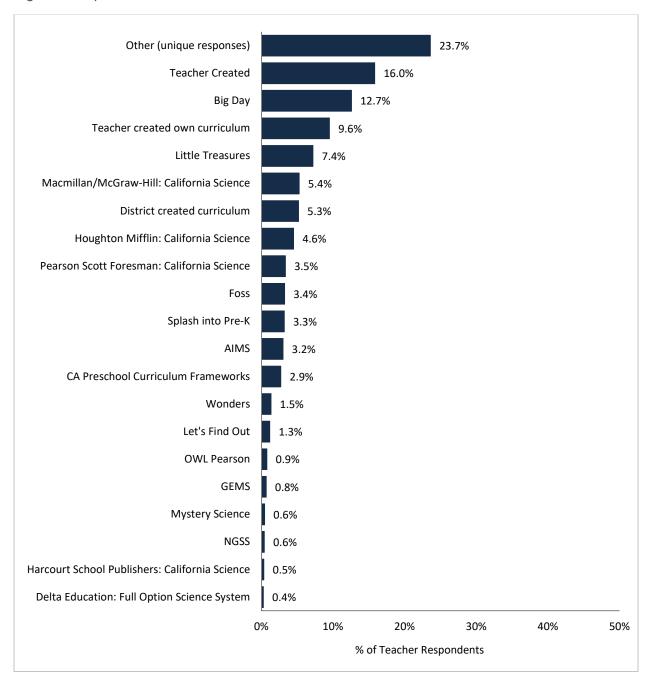
Figure 35: Specific Math Curricula Used in TK Classes, TK Teachers



Source: TK and Kindergarten Teacher Survey. n = 212.

Note: "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

Figure 36: Specific Science Curricula Used in TK Classes, TK Teachers



Source: TK and Kindergarten Teacher Survey. n = 159.

Note: "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

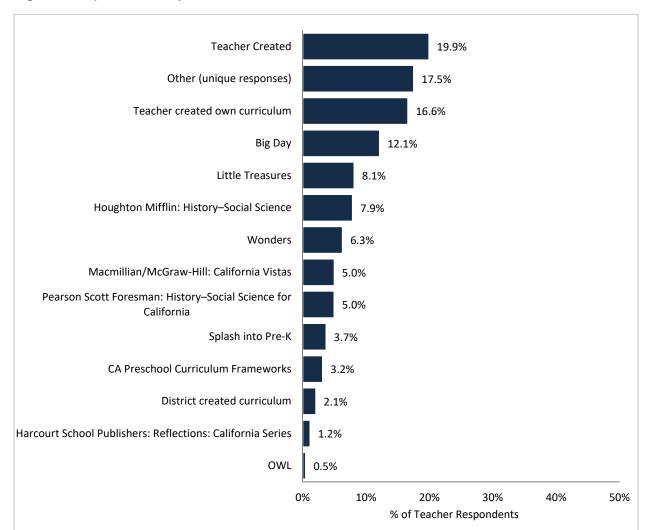


Figure 37: Specific History-Social Science Curricula Used in TK Classes, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 144.

Note: "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

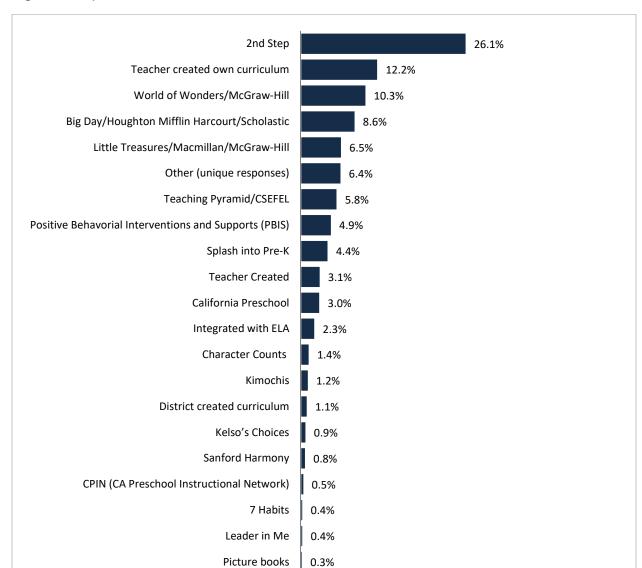


Figure 38: Specific Social-Emotional Curricula Used in TK Classes, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

Note: "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

0%

0.2%

10%

20% % of Teacher Respondents

30%

40%

50%

Mind Up

Again, the purpose of TK is to teach a "modified kindergarten curriculum that is age and developmentally appropriate" (CDE, 2017b). To achieve this, TK programs may use the PLF to help teachers map and monitor students' development over time and to plan accordingly (SAC, 2013). Currently, the most widely used curriculum, as shown in the previous figures, does not officially align its content with the PLF. However, teachers can modify their curricula by using *The Alignment of the California Preschool Learning Foundations with Key Early Education Resources* (CDE, 2012). This document aligns the PLF with the CCSS in language arts and math and the CCSS for other curricular areas. Almost half of the teachers (47 percent) indicated that they use it when planning for instruction.

In interviews, teachers often said they had to modify and supplement their curriculum in order to align it to the developmental needs of their students and to the PLF. They said it was very helpful to meet and plan together as a group. Almost all of the LEA leads (99 percent) indicated that they provided time and space for TK teachers to collaborate on planning and implementation (not shown).

Teachers were asked whether they thought the curricula they use in their classes was developmentally appropriate for TK students. As shown in Figure 39, the vast majority across subjects felt they were either "very" or "somewhat" appropriate. Notably, a larger percentage of teachers answered this way about social-emotional learning (96 percent) than English language arts (85 percent), math (80 percent) science (80 percent), or history-social science (79 percent). While the results were consistent between urban and non-urban areas, there were some differences between the northern and southern respondents. In the subjects of English language arts, math, and science, a higher proportion of northern respondents felt their curricula was developmentally appropriate compared to southern respondents. However, even in the southern region, more than three out of four respondents still said their curricula were developmentally appropriate. Additionally, there were notable differences by day type. With the exception of social-emotional learning, a larger percent of part-day respondents indicated that curriculum was developmentally appropriate compared to full-day respondents.

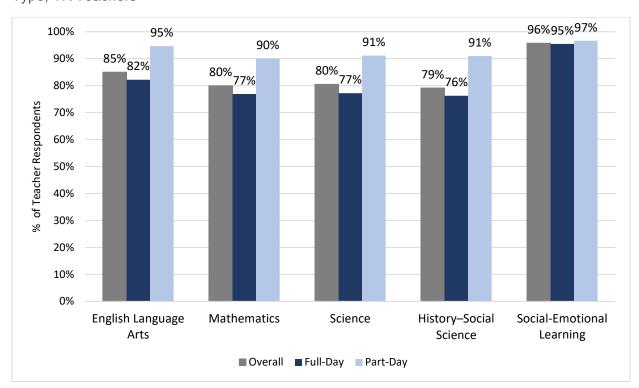


Figure 39: "Very" or "Somewhat" Developmentally Appropriate Curriculum by Subject by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 180 - 210.

Note: Teachers were asked to indicate appropriateness by choosing "very appropriate," "somewhat appropriate," "slightly appropriate," or "not at all appropriate." Figure shows those who selected "very appropriate" or "somewhat appropriate."

Interview data show that teachers are following the directive about what curriculum to use and how to modify the curriculum laid out in the *Transitional Kindergarten Implementation Guide* (SAC, 2013). All teachers reported modifying and supplementing materials to be more developmentally appropriate. They also consistently noted the importance of helping students to be ready for the rigors of kindergarten, and felt that their curriculum aligned well to the kindergarten curriculum. Figure 40 shows that 86 percent of teachers think that their TK curriculum is well aligned (43 percent) or at least somewhat aligned (43 percent). There were no practical differences across regions or urban and non-urban areas, as the vast majority said it was well or somewhat aligned. Additionally, there were no practical differences by day type, as the vast majority indicated it was well or somewhat aligned; although a higher percentage of part-day respondents (57 percent) did feel their curriculum was well aligned compared to full-day respondents (39 percent).

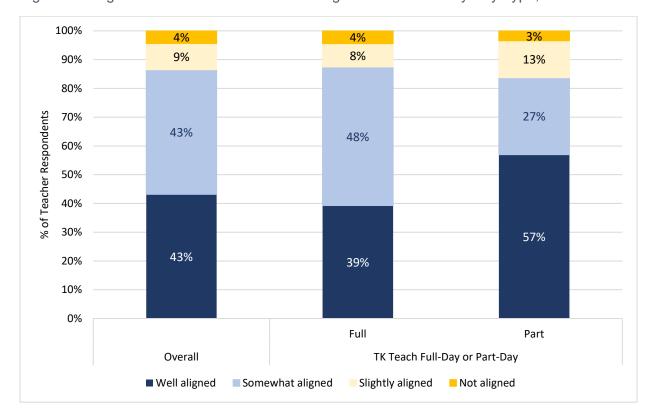


Figure 40: Alignment of TK Curriculum to Kindergarten Curriculum by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 209.

Finally, the *Transitional Kindergarten Implementation Guide* (SAC, 2013) notes the importance of integrating the curriculum. This means that teachers teach several content areas within one lesson, for example a science exploration that also touches on measurement and writing. Many of the observed TK teachers included some kind of integrated instruction in their day. For example, one teacher taught her TK students a song about a plant growing, which included music, movement, and content vocabulary relating to their unit on plants. Likewise, in an interview, a teacher noted that she was able to teach social-emotional development lessons through her language arts curriculum, which included stories dealing with themes that touched on age-appropriate social topics such as making friends.

Kindergarten Curriculum

When planning for classroom instruction, almost all teachers (99 percent) stated that they used the CCSS "a lot" or "somewhat." Teachers also indicated that they used the ELA/ELD Framework for California Public Schools (75 percent), the Mathematics Framework for California Public Schools (70 percent), or the History-Social Science Framework for California Public Schools (41 percent) (not shown) with the same frequency.

All or almost all kindergarten instructors said they teach English language arts, math, science, and history-social science curricula (Figure 41). A smaller but significant proportion of teachers (75 percent) said that they teach a social-emotional curriculum. There were no notable differences by day type.

According the LEA lead survey (not shown), most English language arts and math curriculum and instructional materials were selected by the district (86 percent). A smaller proportion of LEAs, but still a majority, indicated that their materials for science (63 percent) and history-social science (61 percent) were selected by the district. In almost all instances where the curriculum or instructional materials were not selected by the district, the district still provided resources and general guidelines. The exception is social—emotional learning, for which only a small percentage of LEAs (16 percent) selected the curriculum or instructional materials. In most cases, the district provided guidelines and/or resources (47 percent), or the school selected or developed its own (23 percent).

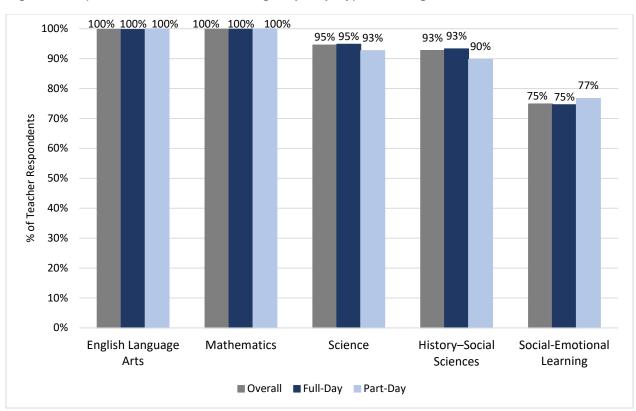
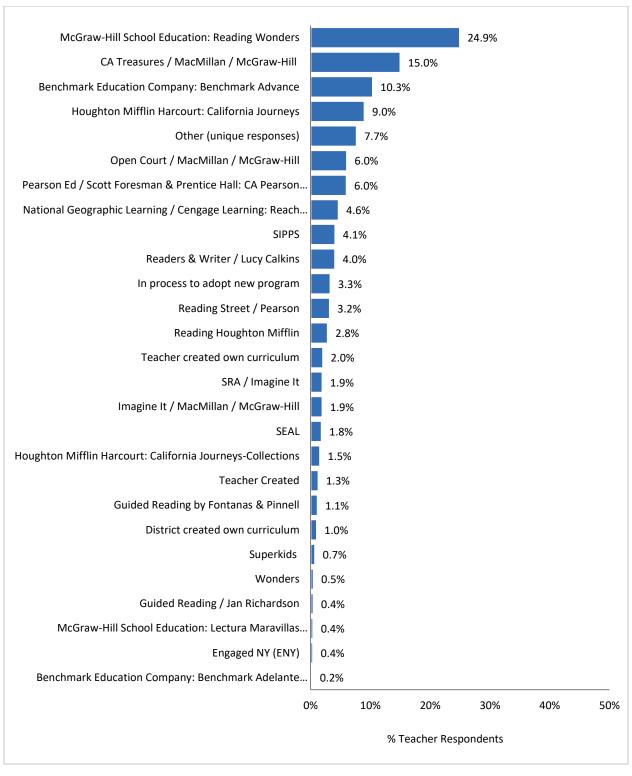


Figure 41: Specific Curricula Areas Taught by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 392 - 471.

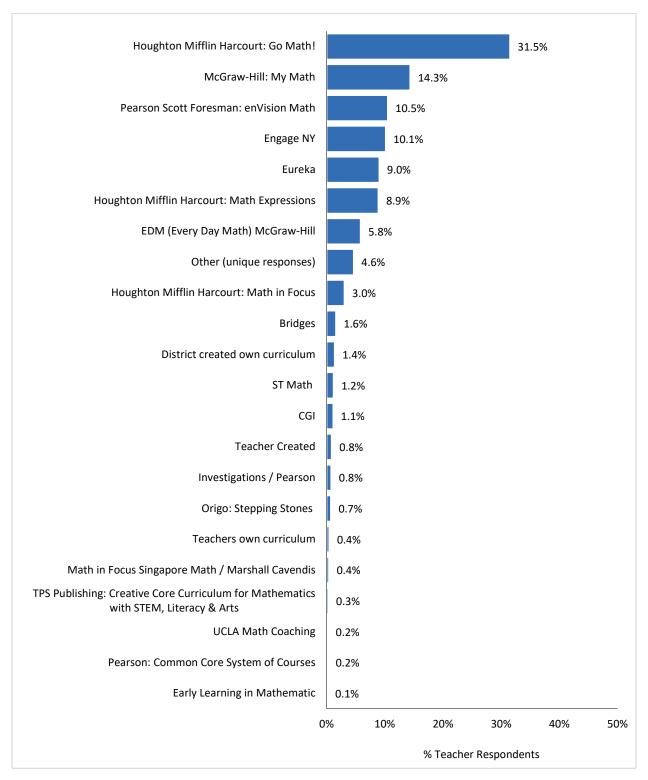
Teachers were asked to identify the curriculum they use in each subject area. They were asked to choose from a pre-identified list or write in an answer if their curriculum was not shown. Figure 42 through Figure 46 show the most common answers for teachers overall in English language arts, mathematics, science, history-social science, and social-emotional learning. Due to the small numbers in each category, the tables are not broken down by day type.

Figure 42: Specific English Language Arts Curricula Used in Kindergarten Classes, Kindergarten Teachers



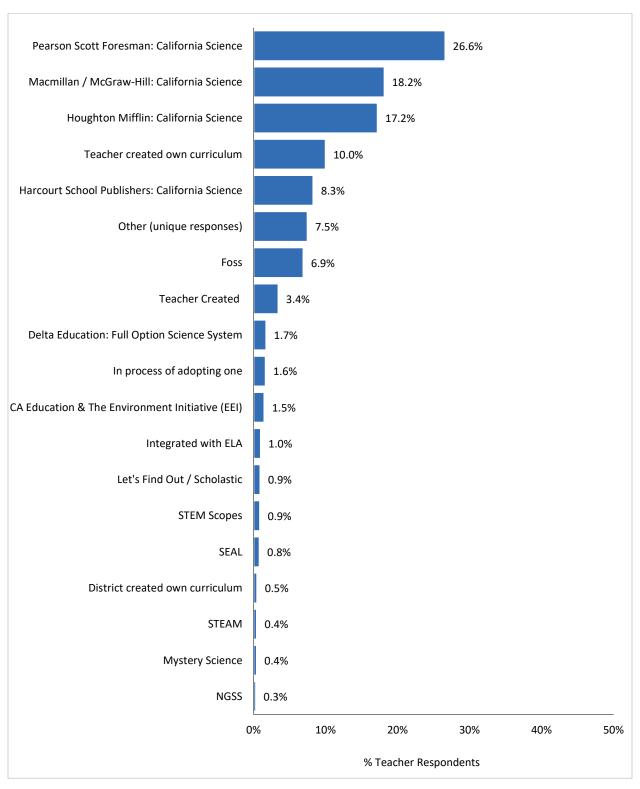
Source: TK and Kindergarten Teacher Survey. n = 452.





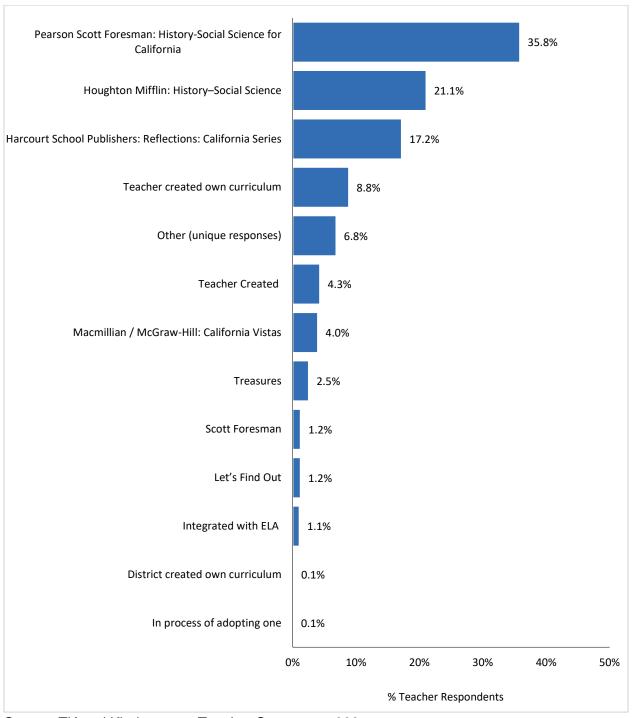
Source: TK and Kindergarten Teacher Survey. n = 469.





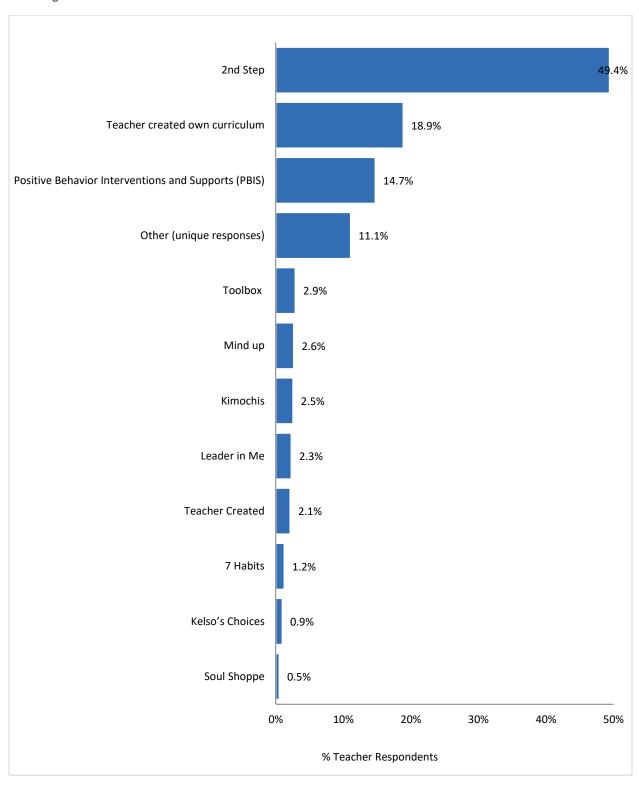
Source: TK and Kindergarten Teacher Survey. n = 392.

Figure 45: Specific History–Social Science Curricula Used in Kindergarten, Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. n = 360.

Figure 46: Specific Social-Emotional Learning Curricula Used in Kindergarten Classes, Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. n = 269.

Teachers were also asked whether they thought the curricula used in their classes were developmentally appropriate for kindergarten students. As shown in Figure 47, the majority of teachers responded that their curricula in all listed subjects were either very or somewhat appropriate. However, a larger percentage of teachers said that the curricula were developmentally appropriate in English language arts (87 percent) and math (89 percent) than in science (73 percent), history-social science (72 percent), and social-emotional learning (72 percent).

Interestingly, 18 percent of teachers said that they did not know whether their socialemotional curriculum was developmentally appropriate (not shown). Also notable was that 82 percent of part-day respondents indicated that their science curriculum was appropriate, compared to 71 percent of full-day respondents. The reason for this difference is unclear.

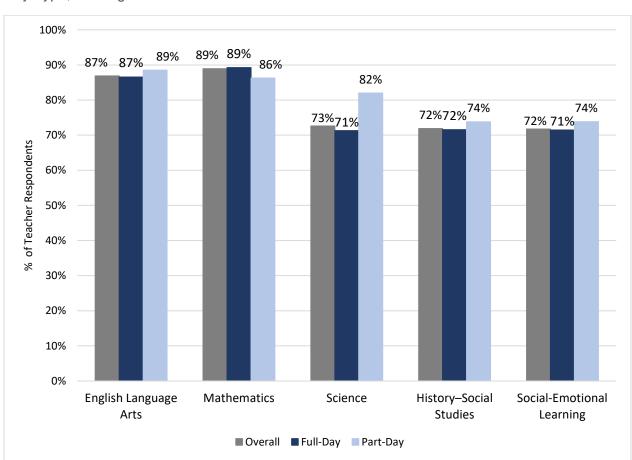


Figure 47: Specific Curricula "Very" or "Somewhat" Developmentally Appropriate Curriculum by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 315 - 427.

Note: Teachers were asked to indicate appropriateness by choosing "very appropriate," "somewhat appropriate," "slightly appropriate," or "not at all appropriate." Figure shows those who selected "very appropriate" or "somewhat appropriate."

Transitional Kindergarten and Kindergarten Instruction and Interaction

TK teachers spend most of their time each week teaching English language arts and math. As shown in Figure 48, on average, teachers spend about 6.9 hours on English language arts instruction and related activities, followed by math (4.2 hours) and social-emotional learning (4.0 hours). Teachers said that they spend approximately the same amount of time on art (2.1 hours) as they do on music/dance (1.8 hours); their time spent on science (1.4 hours) and history-social science (1.3 hours) is likewise comparable.

Compared to part-day teachers, full-day respondents indicated that they spend more time on average each week on every content area. Particularly notable are the differences in English language arts (7.3 hours versus 5.5 hours) and social-emotional skills (4.4 hours versus 2.7 hours).

There were some survey response differences across the state for TK teachers (not shown). Most notably, TK teacher respondents from non-urban areas indicated that they spend more time on average each week on English language arts (7.7 hours), math (4.7 hours), and social-emotional skills (4.6 hours) than their urban counterparts (6.4 hours, 3.9 hours, and 3.6 hours, respectively). Part of that difference may be attributable to the fact that non-urban teachers reported sessions that were 5.4 hours, on average, while urban teachers reported 5.0 hours (not shown).

Kindergarten teachers also indicated that they spend most of their time each week teaching English language arts and math. As shown in Figure 48, teachers spend, on average, about 9.2 hours on English language arts instruction and related activities; math followed with 4.9 hours. Social-emotional learning occurred, on average, for 1.7 hours each week. Teachers said that they spend approximately equal amounts of time on science, history-social science, and art — from 1.3 to 1.4 hours each week.

As with TK, not surprisingly, kindergarten teachers in full-day programs spend more time on core instructional content each week than those in part-day programs. Figure 48 shows that full-day respondents spend approximately 9.7 hours on English language arts instruction and related activities and 5.1 hours on math each week. Part-day respondents, on the other hand, spend about 6.3 hours on English language arts instruction and 3.8 average hours on math. The differences between full-day and part-day respondents in the other areas were less notable, with the exception of science. Full-day respondents reported spending 1.5 hours on science, compared to 1 hour for part-day. In one interview, a teacher specifically linked her ability to go in-depth in her science instruction to her full-day schedule.

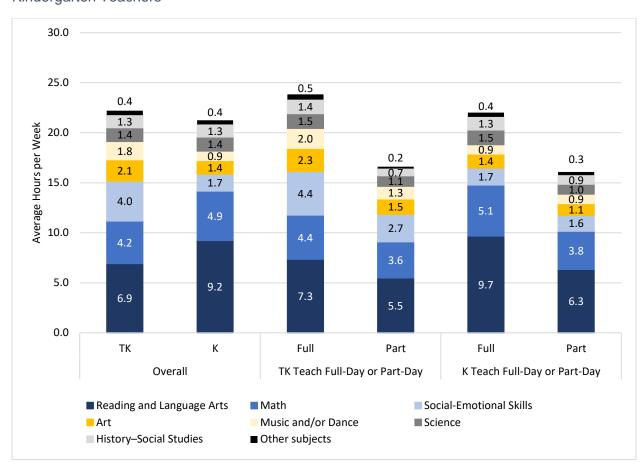


Figure 48: Average Hours Spent on Specific Subjects per Week by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 210 - 212. Kindergarten: n = 443 - 459.

Overall, TK teachers spend the largest portion of their day conducting teacher-directed whole class activities (31 percent of minutes in the day) (Figure 49). After that, they tend to spend their day in teacher-directed small group activities (24 percent) or child-selected individual activities (16 percent). This pattern was consistent across the state, and classroom observations mirrored this pattern. There were no practical differences by day type either. In interviews, teachers viewed small group activities and child-directed activities as best practices. This type of instruction requires very strong management and planning, as well as supplies and resources beyond the basics, to create meaningful experiences for the students.

Likewise, kindergarten teachers spend the largest portion of their day (38 percent) conducting teacher-directed whole class activities (Figure 49). After that, they tend to spend their day in teacher-directed small group activities (28 percent) or teacher-directed individual activities (15 percent). Most classroom observations supported this finding. Notably, day type does not seem to influence how teachers divide their time, as differences between full-day and part-day respondents were minimal.

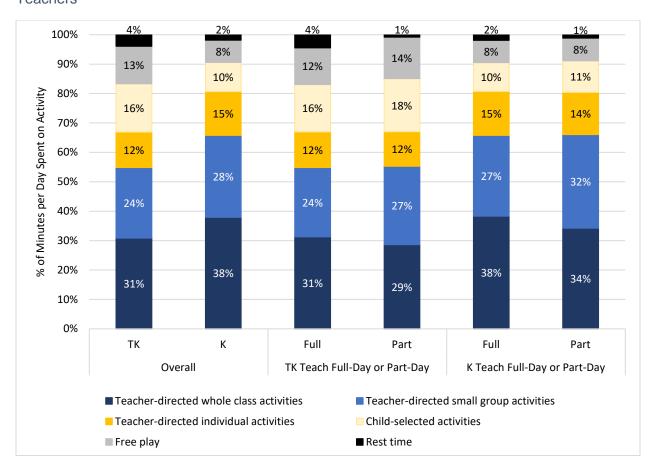


Figure 49: Percentage of Time Spent on Specific Activities by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 194 - 208. Kindergarten: n = 439 - 457.

Assessments

On the surveys, teachers and leads were asked about which assessments they use in the classroom and how they use them. The list of assessments included on the survey was compiled from those commonly found in TK, kindergarten, and other primary grades. Survey participants could write in other assessments if theirs were not on the list; they could also give more than one answer.

Transitional Kindergarten

Figure 50 shows the most commonly used assessments as reported by teachers. TK teachers typically use assessments that are unique to them. Even after responses were reviewed and written open-ended responses were re-categorized, 37 percent of teachers indicated they use an assessment other than one that was pre-identified or written in by others. Because several teachers from each district were surveyed, these are mostly likely individual class assessments developed by the teachers themselves. Thirty percent of teachers said they use a district-developed assessment.

Several assessments are more commonly used in TK among LEAs, as indicated by both the teacher and the LEA lead surveys (LEA data are not shown). The Beginning Phonic Skills Test (BPST) is the most notable, with 23 percent of teachers using it in the classroom and 25 percent of leads using it districtwide. Educational Software for Guiding Instruction (ESGI) assessments were the next most commonly cited among teachers (16 percent), followed by the Desired Results Developmental Profile (DRDP) and Fountas & Pinnell Benchmark Assessment System (BAS), noted by 15 percent of teachers each. (Overall, 23 percent of leads indicated that they use DRDP districtwide.) The Renaissance STAR assessments were the next most common with teachers (11 percent).

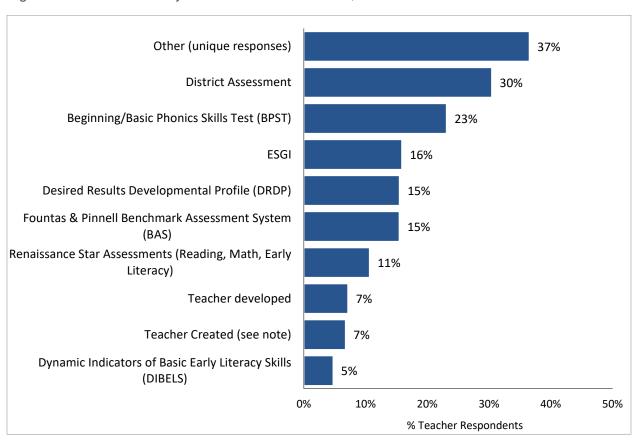


Figure 50: Most Commonly Used Assessments in TK, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

Notes: Teachers could select or write in more than one assessment. "Teacher Created" refers to either Teacher Created Materials Publishing or Teacher Created Resources. These are both pre-developed materials for purchase.

Most if not all of the assessments necessitate teachers collecting data from students one-on-one—a time-consuming process that is a challenge for teachers. Several LEA leads and teachers discussed this in their interviews, expressing concern about the loss

of instruction time and how to manage the children who were not being assessed. Some handle this challenge by hiring substitute teachers to provide instruction while the teacher assesses students, and/or they make sure the teacher has an aide or other classroom support available.

TK teachers use assessment data for multiple purposes. All of the pre-identified assessments in Figure 50 can be used diagnostically to identify students' learning levels in order to provide them appropriate instruction or support. Regarding the other assessments—that is, those written in by respondents—96 percent of teachers indicated that they use those for diagnostic needs as well (not shown). All of the assessments, both pre-identified and unique write-ins, are used by teachers to monitor student progress, tailor instruction to student needs, and provide progress reports to parents.

TK teachers appreciate assessments that allow them to easily analyze student data, create reports, and create practice resources for parents. (The ESGI platform is one example.) Some noted that mandated assessments can be burdensome and do not provide added information that the teacher does not already have from informal assessments. TK teachers often created their own assessments because they felt they would better represent what the student knows and align better with what is being taught. In interviews, the LEA leads indicated that district-wide assessment data are used to monitor student progress and share information with parents.

Kindergarten

As with TK, kindergarten teachers typically use assessments that are unique to them (Figure 51). Thirty-two percent of teachers said they use an assessment other than those that were pre-identified on the survey or written in by others. Again, because several teachers from each district were surveyed, these are mostly likely individual class assessments developed by the teachers themselves. Similarly, 29 percent of teachers said they use a district-developed assessment.

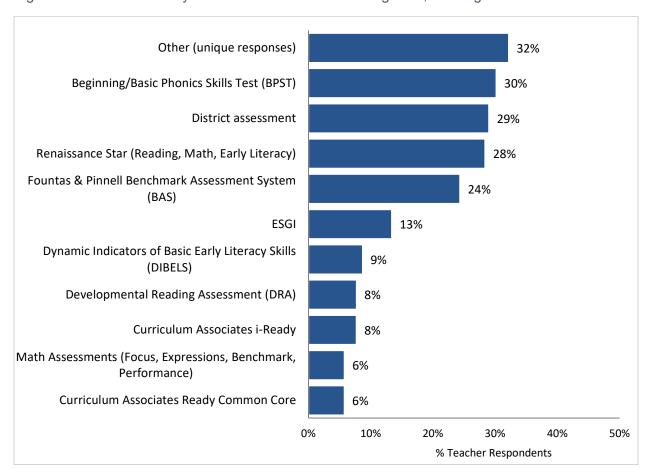


Figure 51: Most Commonly Used Assessments in Kindergarten, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 471.

Note: Teachers could select or write in more than one assessment.

Several established assessments are commonly being used among the LEAs (lead data are not shown). BPST is the most notable, with 30 percent of teachers and 34 percent of the LEA leads naming it. The Renaissance STAR assessments were the next most commonly cited (28 percent of teachers and 24 percent of leads), followed by the Fountas & Pinnell BAS (24 percent of teachers and 27 percent of leads), ESGI (13 percent of teachers), and DIBELS (9 percent of teachers).

As with TK, many assessments require teachers to collect data from students one-on-one. In interviews, several LEA leads and teachers noted that, because of this, the amount of time they require is a challenge. Again, some LEAs indicated that they handle this challenge by hiring substitute teachers to fill in while the teacher assesses students, or they make sure the teacher has an aide or type of other classroom support.

Kindergarten teachers use assessment data for a variety of purposes and in similar ways to their TK teacher counterparts. The assessments, both established and unique write-ins, are used by most teachers for diagnostic purposes, monitoring student

progress, tailoring instruction to student needs, and providing progress reports to parents.

Kindergarten teachers also appreciate assessments like the ESGI platform, which allows them to easily analyze student data, create reports, and create practice resources for parents. A few teachers reported that some mandated assessments are more burdensome and do not give additional information that the teacher does not already have from informal assessments.

The LEA leads suggested that district-wide assessment data are used for benchmarking or monitoring student progress, as well as for reviewing aggregate class- or district-level data. Almost all of the interviewed LEA leads also indicated that they collect data through some sort of online platform, whether a specific assessment platform or a more universal one that collects and stores several assessments, such as ESGI or Illuminate.

Transitional Kindergarten and Kindergarten Staffing and Support

TK and kindergarten teachers typically receive assistance with instruction or other activities, most often from teacher assistants and/or aides (2.9 hours and 2.4 average hours per week, respectively). In a typical week, TK and kindergarten teachers also receive about a day and a half (1.4 and 1.6 days, respectively) of assistance from volunteers (Figure 52 and Figure 53). While the TK survey answers did not vary a great deal between regions, it is notable that non-urban respondents said they receive teacher aide assistance for 3.6 days per week, on average, compared to 2.4 days for urban respondents (not shown). TK findings varied little by day type.

Kindergarten results, on the other hand, varied more considerably. Particularly, part-day respondents reported that they receive the most assistance from other teachers (3.1 hours per week, on average). It is important to note that the survey asked about hours *per week*, rather than *per day*; thus, it is not clear how much assistance teachers received each day. Interviews and observations provided examples of part-day kindergarten teachers overlapping between morning and afternoon sessions. In this model, two classes share the same room, and the afternoon teacher acts as an assistant for the morning teacher for some part of the day and, when the classes switch, the morning teacher helps the afternoon teacher. Participating teachers talked about this model very favorably. Additionally, on average, part-day respondents reported receiving more assistance from volunteers (2.4 days versus 1.4 days for full-day teachers). However, they also reported receiving fewer days from regular teacher assistants/aides.

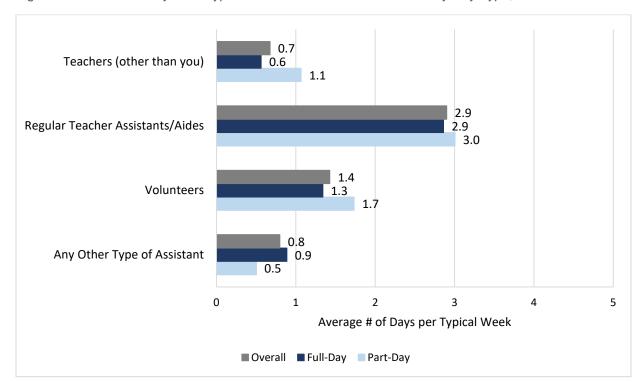


Figure 52: Number of Days in a Typical Week that Receive Assistance by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

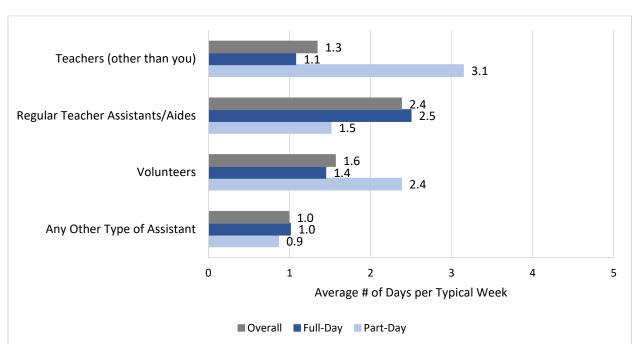
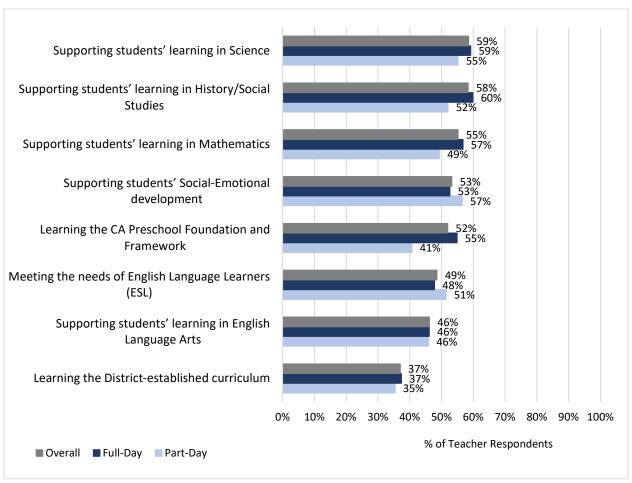


Figure 53: Number of Days in a Typical Week that Receive Assistance by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 464 - 470.

Teachers were asked how much additional support they need in select areas to successfully address their students' needs (Figure 54 and Figure 55). TK teachers most commonly indicated that they need "a lot" or "some" additional help to support students' learning in science (59 percent of teachers overall)—the single area where only a small percentage of districts provided a curriculum or instructional materials. The next most common areas where TK teachers expressed a desire for assistance were in supporting students' learning in history-social science (58 percent), math (55 percent), and social-emotional development (53 percent). Responses were fairly consistent across regions, but did differ by regional density, with non-urban teachers most often indicating they needed help supporting students' social-emotional development (52 percent) and learning the preschool foundations and framework (50 percent) (not shown). Importantly, however, across categories a smaller percentage of non-urban respondents than urban respondents indicated they needed support. Responses did not differ notably by day type.





Source: TK and Kindergarten Teacher Survey. n = 194 - 206.

Note: Teachers were asked to rate on a scale of "a lot," "some," "a little," and "none" and "don't know." Figure shows those who selected a lot or some.

Kindergarten teachers most commonly indicated that they need "a lot" or "some" additional assistance to support their students' social-emotional development (67 percent of teachers overall). This is not surprising, considering that only a small percentage of districts provided a curriculum or instructional materials in this area. The next most common areas where teachers indicated they need assistance were to support students' learning in science (66 percent) and history-social science (60 percent).

A slightly smaller proportion of part-day respondents than full-day respondents indicated that they need support in all areas, although the differences in many areas are negligible. However, the pattern seems to correspond with the amount of professional learning already received, where a larger proportion of part-day survey respondents indicated already receiving professional learning in these areas (not shown).

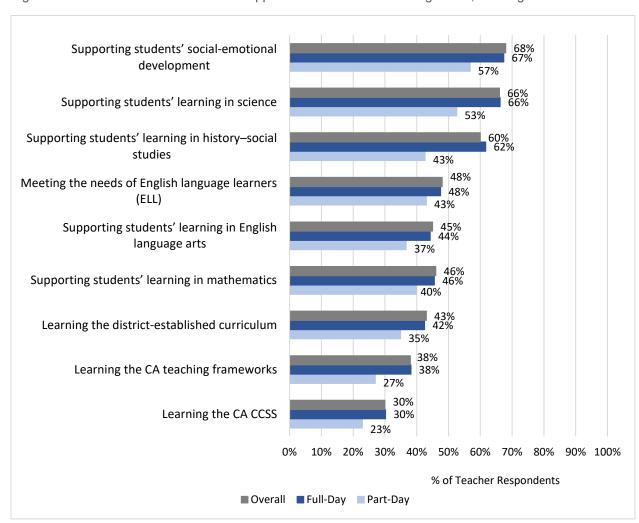


Figure 55: "A lot" or "Some" Additional Support Needed in the Following Areas, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 454 - 459.

Note: Teachers were asked to indicate how much support they need: "a lot," "some," "a little," "none," or "don't know." Figure shows those who selected "a lot" or "some."

Transitional Kindergarten and Kindergarten Teacher Background

As shown in Figure 56, about half of TK and kindergarten teachers overall reported having four-year degrees (47 percent and 51 percent, respectively), while the other half have master's degrees (51 percent and 49 percent, respectively). This finding was consistent across day type. TK responses did vary by region, with a higher percentage of southern California respondents indicating that they had a master's degree (64 percent versus 36 percent) (not shown). A larger percentage of TK urban respondents also said they had a master's degree (70 percent) compared to non-urban respondents (20 percent) (not shown).

Almost all TK and kindergarten teachers said they hold multiple subject teaching credentials (98 percent and 97 percent, respectively), which was again consistent between day type (not shown).

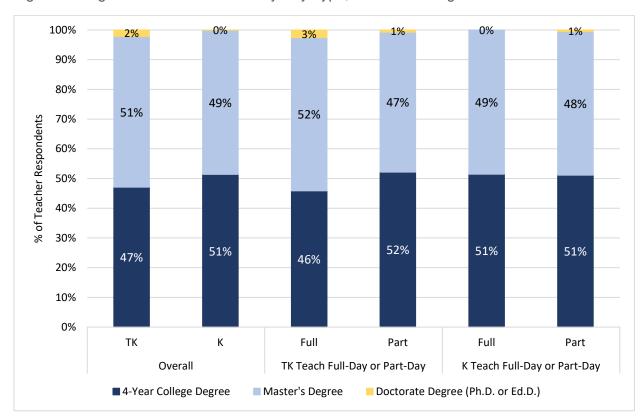


Figure 56: Highest Level of Education by Day Type, TK and Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. TK: n = 211. Kindergarten: n = 466.

Because TK teachers work with the youngest students, those hired after July 1, 2015, are required to obtain 24 units of early childhood education or childhood development coursework, unless they have equivalent professional experience in a preschool age classroom or obtain a child development teacher permit (CDE, 2017c). Almost half of

the TK teachers overall (49 percent) reported they had taken some early childhood education units; one-fourth (25 percent) had taken at least 21 units (Figure 57). Notably, 35 percent were unsure whether they had taken any or not, suggesting that the percentage who had taken none may be higher than the 16 percent reported here.

The median level of experience for TK teachers teaching any grade level is 19.0 years, with a median of 3.1 years teaching TK (not shown). This did not vary notably by region, urban and non-urban areas, or day type. Additionally, 36 percent reported having preschool teaching experience (not shown).

Kindergarten teachers have 17.0 years median experience teaching any grade level, with a median of 9.0 years teaching kindergarten. Full-day respondents have 17.0 median years of experience teaching any grade level and 9.0 median years teaching kindergarten; part-day respondents reported 18.4 median years for any grade level and 10.0 median years for kindergarten (not shown).

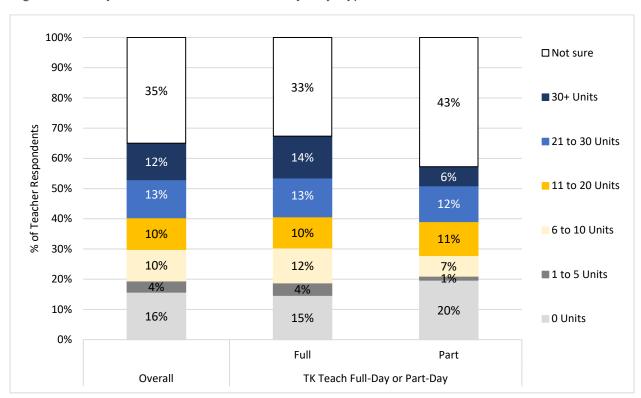


Figure 57: Early Education Units Obtained by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 211.

Key Challenges to Implementation

Teachers and LEAs were asked about challenges to implementing TK and kindergarten. When asked about the biggest challenge to successful teaching, teachers gave a variety of responses.

Transitional Kindergarten

The most common answer among TK teachers was a high student–teacher ratio or large class size (26 percent) (Figure 58). Notably, about half of the part-day respondents (48 percent) indicated that this was a challenge compared to 19 percent of full-day respondents. This is particularly interesting because class sizes on average are slightly smaller for part-day respondents (20) than full-day respondents (22); thus, the challenge may reflect having a shorter day to teach all of their students. The high student–teacher ratio also appeared to be a bigger challenge for more northern respondents (35 percent) than southern respondents (16 percent) (not shown). The next most common challenge in TK was a need for extra support, such as personnel, including a full-time aide (16 percent overall). This challenge was fairly consistent across the state. Notably, non-urban respondents identified classroom management as a challenge (15 percent, versus 1 percent in urban areas) (not shown). Again, a higher percentage of part-day respondents (24 percent) indicated this was a challenge for them compared to full-day (14 percent), further suggesting that part-day teachers may find it difficult to serve all of their TK students in a shorter day.

The LEA leads also were asked about challenges and additional support needed from CDE regarding TK. The vast majority (80 percent) said they would benefit from additional support or guidance from CDE in planning or preparing their TK program (not shown). They wrote in the supports they needed. Of those who answered the question, the most common responses were support with curriculum and/or standards, including clear guidelines (48 percent of leads), more professional learning (26 percent), and more guidance on how/why TK and kindergarten are distinct but aligned (18%) (not shown). As one teacher stated:

"TK is a developmental program in a non-developmental system. This is a hands-on and child-centered program and it is hard for teachers in some districts to provide that—the facilities are just not set up."

Not surprisingly, the supports the leads described correspond to the biggest challenges they described in implementing TK. About half (51 percent) said that identifying or developing appropriate curriculum for TK students is a big or moderate challenge, and 40 percent indicated that identifying and providing professional learning for TK teachers is a big or moderate challenge. Other notable challenges included students' social-emotional readiness for the TK classroom environment (50 percent), identifying staffing resources (teachers/staff time) needed to implement (44 percent), and enrolling enough students to fill a classroom (38 percent) (not shown).

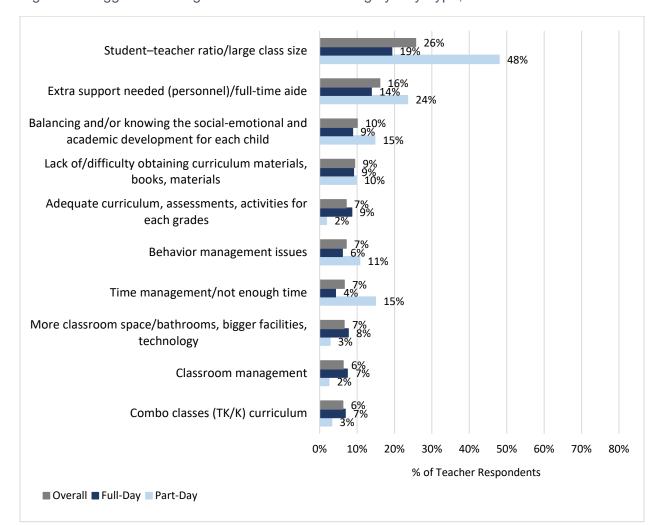


Figure 58: Biggest Challenges to Successful Teaching by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

Kindergarten

In kindergarten, the most common challenge was balancing or knowing each child's social-emotional and academic development (22 percent) (Figure 59). This corresponds with the previous findings in Figure 55, where kindergarten teachers indicated that they need more help supporting students' social—emotional development. Time management or a lack of enough time was the next most common type of answer overall (18 percent), but part-day respondents indicated it was their biggest challenge by far (39 percent of teachers, compared to 15 percent of full-day respondents). There were no other practical differences by day type.

The LEA lead responses support the idea that kindergarten teachers' biggest challenge is balancing social—emotional development with the academic rigors of kindergarten. Some also noted that it is a challenge to balance teacher or parental expectations with

the rigor required for CCSS. A couple of the part-day leads also said their biggest challenge was not having the facilities to offer full-day classes (not shown).

Balancing and/or knowing the social-emotional and academic development for each child Time management/not enough time 39% Student-teacher ratio/large class size 10% Students with lack of school experience/readiness 9% Behavior management issues Extra support needed (personnel)/full time aide Parental involvement/lack of knowledge of curriculum Students with extreme behavioral/academic needs Classroom management Curriculum and/or assessments not developmentally appropriate/too challenging 60% 10% 20% 30% 40% 50% 70% 80% % of Teacher Respondents ■ Overall ■ Full-Day ■ Part-Day

Figure 59: Biggest Challenges to Successful Teaching by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 471.

Teacher Perspectives on How to Improve Implementation for Student Learning Transitional Kindergarten

Teachers were asked what they would change to improve student learning and readiness in their classrooms (Figure 60). For TK teachers overall, the two most common answers were reducing class size and having an effective full-time aide or paraprofessional in the classroom (20 percent each, overall). There were no notable regional or density differences. Similar to their answers regarding the biggest challenge in the classroom, part-day teachers again indicated that a smaller class size or better student—teacher ratio would improve student learning, with 34 percent of part-day respondents compared to 16 percent of full-day. Again, when considering that part-day classes are slightly smaller on average than full-day classes, this finding supports the theme that part-day TK teachers need more support, potentially in the form of an additional full-time aide. In interviews, teachers (both part-day and full-day) also spoke

passionately about the benefit of having another qualified adult in the room. As one stated:

"[Our] biggest need is support staff. Money for support staff like aides. With more aides we could do more interventions. More small-group instruction. We could meet the needs of our students. We try to do it—but we could do it even more."

Interestingly, the third most common response for TK teachers overall was that no changes were needed or that "everything is fine" (11 percent). This aligns with the sentiment that almost all teachers expressed in their interviews that they feel overwhelmingly positive about TK and feel it is a very special program—something to be protected and supported. One teacher summarized this sentiment:

"When TK was created, I observed a classroom and was mesmerized. I felt like that was what K should be. Kids were happier, there weren't behavior problems. I am so glad we have it now! Those students are being serviced. Being in kindergarten for 10 years. It's definitely been a need and I am glad they [the TK students] are being recognized. I want them to know how valuable this program is. I think it's the best thing that has happened in the last 10 years. I wish it could be offered to all 4 year olds. Knowing what I know they need to know in K, children need equitable access to education. I really wish they could find a way to make TK available to everyone."

Educated, effective full-time aide/paraprofessional

Smaller class, better student—teacher ratio

No changes needed/everything is fine

Update, improve curriculum/create developmentally appropriate curriculum

Shorter days

No combination classes

No combination classes

More play, relaxation, social-developmental skills

More time to help students who need extra support or have behavioral needs

All students must attend preschool before TK

20%

30%

40%

50%

% Teacher Respondents

60%

70%

80%

Figure 60: Most Common Suggestions to Improve Student Learning by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

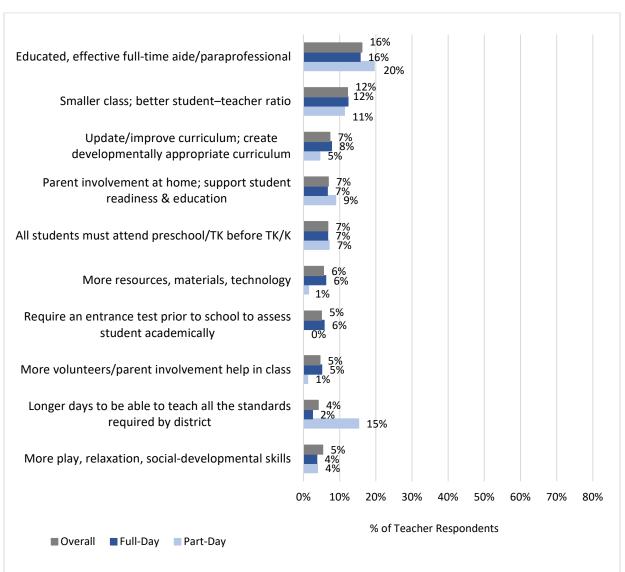
More resources, materials, technology

■ Overall ■ Full-Day ■ Part-Day

Kindergarten

In kindergarten, the most common suggestion to improve student learning was having an effective full-time aide or paraprofessional in the classroom (16 percent); the next most common answer overall was smaller class size (12 percent) (Figure 61). For part-day kindergarten respondents, however, the next most common answer was different. These respondents indicated they would like to have a longer day to teach all the standards required by the district (15 percent). As discussed earlier, most part-day kindergarten teachers said they felt their students would benefit from a longer day. Thus, it is not surprising that a lack of time and a desire for longer days was a reoccurring theme among them. As with TK, kindergarten teachers also spoke passionately in interviews about the benefit of another qualified adult in the room.

Figure 61: Most Common Suggestions to Improve Student Learning by Day Type, Kindergarten Teachers



Source: TK and Kindergarten Teacher Survey. n = 471.

Best Implementation Practices

One of the goals of this implementation evaluation was to identify positive practices around the state, including those kindergarten practices that contribute to first grade readiness behaviors. 17 To this end, the evaluation collected perception data in surveys and interviews and observed classrooms to identify positive practices.

Transitional Kindergarten

In TK, when teachers were asked what instructional practices are most effective they most commonly mentioned the social-emotional curriculum, hands-on activities, and small class size (20 percent each, overall) (Figure 62). Notably, part-day respondents identified hands-on activities (35 percent) and explorative approaches and free choice (32 percent) as their most effective practices. It was unclear from observations, however, why their answers differed.

The LEA leads were asked the same question about positive practices (not shown). The two most common answers were having developmentally appropriate teaching practices (22 percent of leads) and having a strong social-emotional component in the classroom (15 percent).

¹⁷ Due to project time constraints, it was not possible to incorporate a pre- and post-assessment of student learning in the final evaluation design.

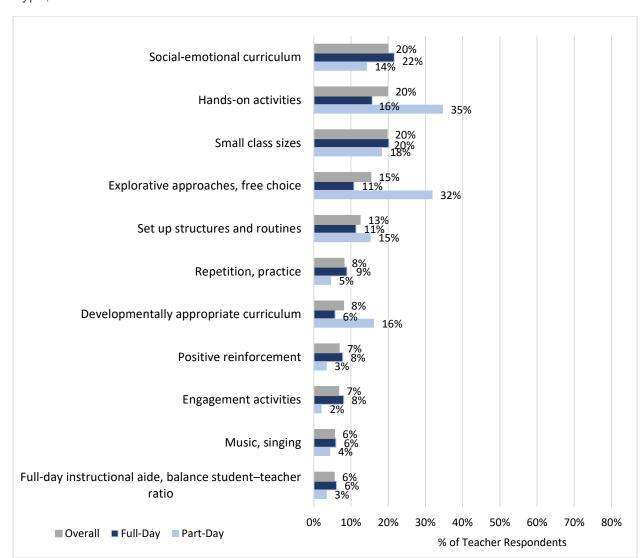
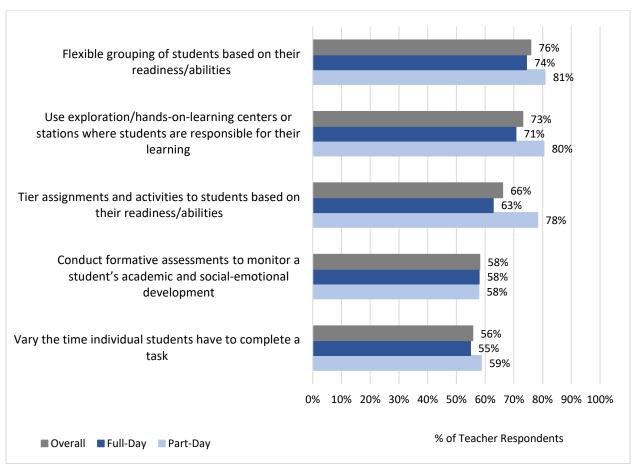


Figure 62: Most Effective Instructional Practices and Factors Identified by Teachers by Day Type, TK Teachers

Source: TK and Kindergarten Teacher Survey. n = 212.

The Figure 63 shows the differentiated instructional strategies that TK teachers reported using often. Overall, the vast majority said they group students based on ability (76 percent) and use exploration and hands-on learning centers (73 percent). These strategies were consistently used by a majority of teacher respondents from both full-day and part-day classrooms. There was one notable difference by day type: specifically, 78 percent of part-day respondents said they tier assignments and activities based on ability, compared to 63 percent of full-day respondents.





Source: TK and Kindergarten Teacher Survey. n = 210 - 211.

Note: Teachers were asked to rate on a scale of "often," "sometimes," "seldom," "never," and "not sure." Figure shows those who selected often.

The effective practices reported in the teacher survey, classroom observations, and teacher interviews all suggest that teachers are using knowledge of child development to guide decisions about instructional strategies, as suggested by the *Transitional Kindergarten Implementation Guide* (SAC, 2013). Classroom observations and interviews in both full-day and part-day classrooms further support teachers' perceptions of effective practices as well as the use of differentiation strategies. Two major themes emerged with respect to effective classroom practices.

First, teachers with strong management skills were observed being able to efficiently break students into small groups to differentiate their instruction and meet the needs of individual students, often using a hands-on activity such as pattern blocks or learning games. Teachers were often able to meet with more than one group. Switching groups also provided many opportunities for movement. Giving students breaks to move that also served as transitions was considered a best practice since it touched on aspects of

developmentally appropriate practice while maximizing instructional time. Notably, the TK classroom environment supported this type of instruction. Most observed classrooms contained clearly defined areas for both whole group and small group instruction as well as diverse materials, from props for dramatic play to sand tables to pattern blocks.

Second, the TK teachers who were able to best manage routines and procedures without much reminding and minimal redirection also allotted more time for unstructured exploration, often meeting the recommendation of 45 minutes of uninterrupted choice time. For example, a teacher might set up a variety of centers around the room and students would seamlessly direct themselves around, choosing areas in which to work and play. When students knew the routines and procedures, they were able to make these selections more easily and also choose when to move on to other activities. Teachers were able to use this unstructured time to help students practice being independent. When these practices were in place, students were observed being able to transition, get materials, and solve problems with minimal help from their teacher.

Kindergarten

When asked what instructional practices or factors are most effective at producing positive outcomes, kindergarten teachers most commonly pointed to small group instruction, including child learning centers (25 percent overall) (Figure 64). The next most common effective practices, per teachers' overall responses, were hands-on activities (15 percent), structures and routines (13 percent), and positive reinforcement (9 percent). Part-day respondents also identified small class sizes (10 percent) and differentiated instruction in general (10 percent, not shown because not in top 10 overall).

Although the data are not shown, the LEA leads were asked the same question, and the most common answer was having a well-qualified teacher in the classroom (28 percent). They also cited using differentiated instruction strategies including small group instruction (15 percent) and using assessments and data (15 percent).

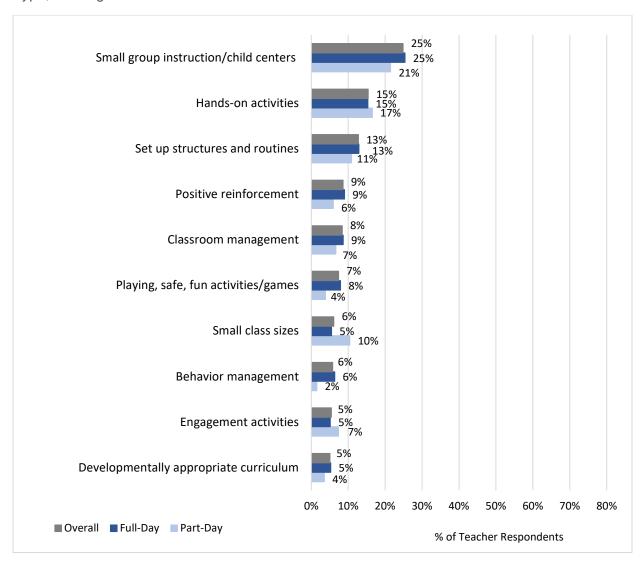


Figure 64: Most Effective Instructional Practices and Factors Identified by Teachers by Day Type, Kindergarten Teachers

Source: TK and Kindergarten Teacher Survey. n = 471.

Classroom observations and interviews in both full-day and part-day classrooms further support teachers' perceptions of effective practices. Though the teachers came from diverse sites from across the state and they all faced unique challenges, there were two major themes. First, as with TK teachers, kindergarten teachers with strong management skills were able to efficiently break students into small groups and have them complete different tasks. If the materials were available, these groups often included some kind of hands-on activity such as pattern blocks or learning games. Teachers were often able to meet with more than one group and differentiate their instruction.

Second, teachers who could best manage routines and procedures without much reminding and minimal redirection incorporated opportunities for movement. For

example, they would use a fun activity while students gathered on the rug, such as a song or chant with a dance, playing a video, or counting to 100 by 10. Giving students breaks to move also served as a transition, and was considered a best practice since it touched on aspects of developmentally appropriate practice while maximizing instructional time. Not only did this provide students a chance to move and offer a break from teacher-directed instruction, it also gave teachers an additional opportunity to address content in a different way—for example, by practicing vocabulary through a song and video as students transitioned to a whole group activity on the rug. Teachers were able to use these procedures and routines to help students practice being independent. When these practices were in place, students were observed being able to transition, get materials, and solve problems with minimal help from their teachers.

Connecting Kindergarten Classroom Practices to First Grade Readiness

Kindergarten teachers acknowledged feeling pressure to prepare students for the rigors of first grade. They cited increased academic demands as well as the importance of students being able to sit and focus for extended periods of time. In interviews, teachers emphasized the need to support students to become more independent in navigating all facets of the classroom and school, especially the social and emotional aspects. Thus, supporting students for successful transitions to first grade is an important part of kindergarten implementation.

To connect classroom implementation factors to first grade readiness behaviors, classroom observation and survey data were linked through an analytical technique known as pattern matching. Five categories of student readiness behaviors were collected through classroom observations: teacher—child interactions, choice and initiative, social-emotional, engagement and persistence, and independent transitions. Survey items that would likely be related to these behaviors and that had varied responses among the observed teachers were considered in this analysis.

The analysis pointed toward a few factors as being related to first grade readiness behaviors (Table 10). First, teachers who perceived that they were teaching a developmentally appropriate English language arts or social-emotional curricula were found to support all of the readiness markers. Since teachers reported spending the majority of their instructional time on English language arts, it is not surprising that using a developmentally appropriate curriculum—one that integrates age-appropriate literature, themes, and activities—might also support the appropriate developmental behaviors in students. The use of such a curriculum could support social-emotional development both explicitly, through literature selections that touch on themes like friendships and relationships, and implicitly through the integration of age-appropriate activities that encourage interactions between students as well as between the teacher

¹⁸ Evaluators used a semi-structured protocol to collect data on observable and expected first grade readiness behaviors. These data were coded into a 4-point classroom observation rubric that ranged from no evidence of behavior to strong evidence of behavior.

and students. Likewise, the analysis indicated that teachers who spent more days teaching social-emotional skills had more first grade readiness behaviors in the areas of teacher-child interactions, choice and initiative, and social-emotional development.

Additionally, observation data revealed that teachers prepared students for first grade by using small leveled groups for reading instruction, having students work for extended periods of time at tables or desks on a single task, and encouraging students to problem solve on their own when disputes arose.

Table 10: Contributing Classroom Practices or Factors related to First Grade Readiness Behaviors.

First Grade Readiness Behaviors	Contributing Practices or Factors
Teacher-Child Interactions Examples: Structured and unstructured opportunities for oral language practice and development; student- or teacher-initiated interactions.	 Teaching a developmentally appropriate English language arts curricula (as perceived by the teacher). Teaching a developmentally appropriate social-emotional curricula (as perceived by the teacher). More days spent teaching social-emotional skills.
Choice and Initiative Examples: Students carry out multi-step investigations, adjust problem solving strategies without prompting; students choose activities or materials.	 Teaching a developmentally appropriate English language arts curricula (as perceived by the teacher). Teaching a developmentally appropriate social-emotional curricula (as perceived by the teacher). More days spent teaching social-emotional skills.
Social-Emotional Development Examples: Students use socially appropriate strategies to self-regulate, self-control feelings and behaviors, share, and help others; appropriate relationships and social interactions.	 Teaching a developmentally appropriate English language arts curricula (as perceived by the teacher). Teaching a developmentally appropriate social-emotional curricula (as perceived by the teacher). More days spent teaching social-emotional skills.
Engagement and Persistence Examples: Students pay attention to teacher; students try new approaches if they struggle, and do not give up on tasks.	 Teaching a developmentally appropriate English language arts curricula (as perceived by the teacher). Teaching a developmentally appropriate social-emotional curricula (as perceived by the teacher).
Independent Transitions Examples: Students transition to whole group rug time, small group learning centers, or recess with minimal prompting.	Teaching a developmentally appropriate social-emotional curricula (as perceived by the teacher).

Conclusions

With the exception of the amount of time to spend on instruction, part-day and full-day programs, in both TK and kindergarten, are implemented similarly. In TK, however, challenges emerge for part-day teachers. They tend to note that smaller class sizes and having another full-time qualified adult, such as a teacher's aide, would be beneficial. Because part-day programs are slightly smaller on average than full-day programs, TK teachers' suggestions are potentially a reflection of their difficulty serving all their students within a shorter day. However, most part-day teachers (72 percent) did not feel that switching to a longer school day would benefit their students at this young age; thus, their findings instead suggest having fewer students or more qualified adults in their classrooms would best serve their students. The findings also suggest that TK is implemented consistently across the state with few practical differences by region (northern and southern California) or density (urban and non-urban).

When planning TK programs, the LEA leads indicated that they need more support from CDE. They need more guidance and support regarding what curricula to use and how to align TK and kindergarten while meeting the distinct needs of each group. The results also suggest that about a third of the LEAs may need additional support with learning and incorporating the PLF, as these LEAs are not providing this resource to their teachers even though *EC* 48000(f) and the *Transitional Kindergarten Implementation Guide* (SAC, 2013) state that TK programs may use the PLF to guide their planning and align their curriculum.

In kindergarten, the challenges were similar between part-day and full-day respondents, save the challenge of less time in the part-day programs. Even so, among many part-day leads (74 percent) and teachers (47 percent), there is a desire to shift from part-day kindergarten to a full-day program. Per the leads, a lack of classroom space is the foremost reason for not switching to a full-day. Another related reason is a lack of funding and/or capacity. On average, the cost of implementing a full-day kindergarten is \$229,913 compared to part-day at \$133,117.

The kindergarten findings also suggest that teachers could use more support in developing their students' social-emotional skills. In addition to many teachers indicating that they want support in this area, when asked about the biggest challenge to successful teaching, the most common answer given was balancing or knowing each child's social-emotional and academic development. Furthermore, the findings signify that those teachers who spent more days teaching social-emotional skills had more first grade readiness behaviors in the areas of teacher-child interactions, choice and initiative, and social-emotional development.

REFERENCES

California Department of Education. (2011). A Look at Kindergarten in California public schools and the Common Core State Standards. Sacramento, CA: Author.

California Department of Education. (2012). The Alignment of the California Preschool Learning Foundations with Key Early Education Resources. Sacramento, CA: Author.

California Department of Education. (2015). *English Language Arts/English Language Development Framework for California Public Schools: Kindergarten Through Grade Twelve*. Sacramento, CA: Author.

California Department of Education. (2016). *TK 2015–16 data* [Data file]. Retrieved from https://www.cde.ca.gov/ds/sd/sd/filestkdata.asp

California Department of Education. (2017a). *Kindergarten frequently asked questions:* Frequently asked questions regarding California state law relating to kindergarten. Retrieved March 14, 2017, from https://www.cde.ca.gov/ci/gs/em/kindergartenfaq.asp

California Department of Education. (2017b). *Kindergarten in California*. Retrieved March 27, 2017, from https://www.cde.ca.gov/ci/gs/em/kinderinfo.asp

California Department of Education. (2017c). *Transitional kindergarten FAQs:* Frequently asked questions (FAQs) regarding California state law relating to kindergarten. Retrieved April 11, 2017, from https://www.cde.ca.gov/ci/gs/em/kinderfaq.asp

California Department of Education. (2017d). 2016–17 CBEDS about schools and districts [Data file]. Retrieved from https://www.cde.ca.gov/ds/sd/sd/filescbedsorab.asp

California Department of Education (2017e). Funding Rates and Information, Fiscal Year 2017–18. Retrieved September 13, 2017, from https://www.cde.ca.gov/fg/aa/pa/pa1718rates.asp

California Department of Finance. (2017a). *P-3 State and county total population projections by race/ethnicity and detailed age, 2010–2060* [Data file]. Retrieved from http://www.dof.ca.gov/Forecasting/Demographics/projections/

California Department of Finance. (2017b). *P-2 Total estimated and projected population for California counties: July 1, 2010, to July 1, 2060, in 1-year increments* [Data file]. Retrieved from http://www.dof.ca.gov/Forecasting/Demographics/projections/

California Department of Health. (n.d.). Vital statistics: Live births by month of birth, 2010 [Data file].

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research.* Thousand Oaks, CA: SAGE.

Early Edge California. (2015). *Getting students kindergarten ready: Expanded transitional kindergarten.* Retrieved from http://www.tkcalifornia.org/resource-library/resources/files/150624-expanded-tk-brief.pdf

Levin, H.M. & McEwan, P.J. (2001). Cost-effectiveness analysis: Methods and applications (Vol. 4). Thousand Oaks, CA: SAGE.

State Advisory Council on Early Learning and Care. (2013). *Transitional Kindergarten Implementation Guide: A Resource for California Public School District Administrators and Teachers*. Sacramento, CA: California Department of Education.

Tomlinson, C. A. (2000, August). Differentiation of instruction in the elementary grades. *ERIC Digest*.

Appendices

Appendix A: Survey Instruments

Appendix B: Interview and Observation Protocols

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Appendix A: Survey Instruments

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Appendix B: Interview and Observation Protocols