



# The Preschool Research and Technical Assistance Project

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## **Preschool Supply and Demand in the State of California**

**An assessment of preschool enrollment in publicly contracted and  
privately operated preschool programs**

### **Policy Brief**

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## **Introduction**

With support from the David and Lucile Packard Foundation, the American Institutes for Research offers research-based technical assistance to support county superintendents of education, First 5 commissions, and other state and local entities interested in making high quality preschool experiences available to all children in California.

As part of AIR's *Preschool Research and Technical Assistance Project* for the Packard Foundation, staff have conducted an assessment of preschool supply and demand in the state of California. AIR's needs assessment uses existing public data sources to estimate, by county and zip code, the population of preschool children and the number enrolled in publicly contracted and privately operated programs.

This assessment is critical to the early care and education field. Unlike the K-12 school system, the preschool system does not maintain unique child identifiers, making it difficult to impossible to track children's enrollment in child care. Furthermore, until recently, no centralized repository of information was available on the supply of child care across program settings. AIR's assessment provides a centralized source of information on preschool enrollment across program settings that providers, policymakers, and stakeholders can use to inform planning and policy analysis.

In fall of 2008, AIR surveyed preschool program directors throughout California to inform and refine this comprehensive needs assessment on early care and education for preschool children. The survey was designed to assess the validity of the assumptions AIR has applied to convert existing data on *licensed capacity* into an estimate of *enrollment*. These assumptions include the programs' desired and actual enrollment versus licensed capacity, the percentage of preschool capacity occupied by each age in the preschool cohort that includes two- to five-year-olds, and the percentage of programs that offer two more sessions per day. The following Policy Brief presents the challenges associated with conducting a needs assessment, findings from other studies of preschool supply and demand, and how findings from the Preschool Provider Survey were used to refine AIR's needs assessment.

## **Challenges Involved in Estimating Enrollment in Preschool**

Several factors contribute to the challenges of estimating enrollment in preschool center-based settings. First and foremost, terms are often defined differently in the field and in the literature. For example, while the terms "preschool" and "center" are often used interchangeably in the field, the research often only considers enrollment in center-based settings. Secondly, supply and demand data can vary depending on the time the data was collected. For example, fall enrollment

of four-year-olds in publicly contracted programs is likely to be greater than spring enrollment, when some of the four-year-olds have turned five years old.

In addition, the duration of enrollment in a program can greatly affect the findings of a needs assessment. In other words, a needs assessment that counts children who are served just one day a week alongside those who are served five days a week will show greater supply than a study that only includes full-time enrollment. For example, Head Start, which collects information on enrollment and funded enrollment, reports that each funded Head Start slot serves approximately 1.2 children per year.

Because of the challenges involved in estimating preschool supply and demand, research studies should always cite data sources and note both the methodology used and the assumptions made. Comparisons among studies should be made with circumspection and with an understanding of the methodological and conceptual differences.

### **Studies of Supply and Demand in Preschool**

Several studies have examined the state of preschool supply and demand in California. Researchers (Karoely et al, 2008) from RAND, a nonprofit research organization, conducted a study to gather detailed information on the range of non-parental early childhood education arrangements in the state. The data collection involved a telephone survey of households with preschool-age children. Based on parent reports, researchers found that 67 percent of four-year olds and 51 percent of three-year olds were enrolled in center-based settings.

Munger et al (2007) of the Advancement Project, a policy, communications, and legal action group, have also conducted a study on the availability of preschool space in California. Their analysis of the California Department of Social Services' Community Care Licensing Division (CCLD) database, coupled with a review of declining enrollment in elementary school classrooms, found that no preschool space was available for one out of five four-year-olds.

Researchers Lopez & de Cos (2004) analyzed 2000 Census data to address various questions that included the number of children enrolled in preschool/childcare. Researchers found that 54 percent of four-year olds and 34 percent of three-year olds were enrolled in preschools and nurseries. Similarly, Children Now, a national public-policy organization, analyzed data from the 2006 American Community Survey to inform its *California Report Card 2008: The State of the State's Children*. The *Report Card* is intended to provide a clear, complete and concise picture of the state of the state's children along with recommendations for how they can be better supported through new and improved public policies. The 2008 Report Card reports that 47 percent of three- and four-year-olds attend preschool in California.

## **AIR's Assessment of Preschool Supply and Demand**

As mentioned earlier, AIR's needs assessment uses existing public data sources to estimate, by county and zip code, the population of preschool children and the number enrolled in publicly contracted and privately operated programs. AIR's 2006 assessment presents enrollment of four-year-olds by program setting, zip code, county, and state. Staff compiled data from several sources. Researchers used birth data for three and four years prior to preschool entry from the Department of Mental Health Services as the proxy for population or "Demand." The needs assessment also considered enrollment in public and private kindergarten as another proxy for demand, both for comparison purposes and to account for migration between years.

For "Supply," AIR obtained data from the California Child Care Resource and Referral (CCR&R) Network, the California Department of Education, Child Development Division, and a survey of Head Start grantees and delegate agencies. Based on this data, AIR found that 49 percent of four-year-olds were enrolled in some form of licensed, center-based care.

However, AIR's needs assessment was predicated on three key assumptions, made in conjunction with an advisory group that included members from the California Department of Education, Preschool California, the CCR&R Network, school district representatives, Head Start, and Karen Hill Scott & Company. First, the CCR&R Network provided capacity data for the preschool cohort, which is composed of two- to five-year-olds. AIR estimated that four-year-olds constituted 50 percent of this preschool cohort. Second, the CCR&R network collects capacity data and AIR reports enrollment. AIR estimated that enrollment equaled 90 percent of capacity. Finally, AIR's estimates have accounted for a certain percentage of programs that offer two or more sessions per day. In the fall of 2008, AIR sought to assess the validity of these assumptions with a statewide survey of preschool providers.

## **Refining the Needs Assessment with Findings from the Preschool Provider Survey**

### *Methodology*

In October 2008, AIR distributed a survey to a statistically significant sample (n=750) of providers, which included 400 publicly funded and 350 privately operated programs throughout the state. The sample was selected randomly from a list of publicly and privately operated programs obtained from the Department of Social Services (DSS). Staff matched this list to a list of publicly contracted programs from the California Department of Education (CDE) to determine which programs on the list from the DSS were publicly contracted. A total of 138 surveys were submitted from the first mailing and telephone follow-up. In an effort to bolster the response rate, AIR staff sent a subsequent mailing of surveys to 472 additional publicly

contracted and privately operated programs and followed up by telephone with those programs that did not respond. All respondents received a \$20 gift card as a stipend for their participation.

A total of 242 surveys were submitted to AIR, representing a 32 percent response rate. Data were analyzed across all programs, and by type of program (publicly contracted versus privately operated). Of the 242 surveys, 55 percent (n=134) were submitted from privately operated programs, and 45 percent (n=108) were from publicly contracted programs.

### *Enrollment versus capacity*

#### Actual enrollment

AIR's needs assessment has previously estimated that the actual enrollment of preschool programs is 90 percent of the licensed capacity. Survey results for all programs show that actual enrollment is equivalent to 86 percent of the licensed capacity. When analyzed independently, actual enrollment is equivalent to 90 percent of licensed capacity in publicly contracted programs, and actual enrollment is equivalent to 83 percent of licensed capacity in privately operated programs.

#### Desired enrollment

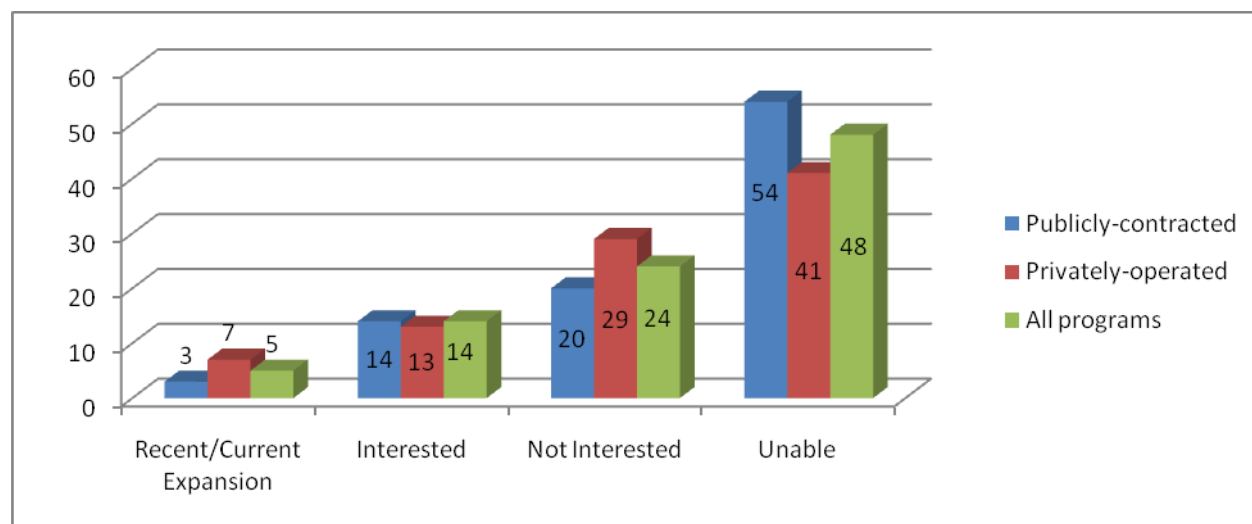
Desired enrollment refers to the number of children that programs choose to enroll, which may differ from a program's licensed capacity. For example, a center may be licensed to serve 24 children, but *choose* to enroll 20 children for a variety of reasons, such as limited space or staffing ratios.

The survey asked respondents to indicate the actual licensed capacity of each of the preschool classrooms at their site, and to subsequently note the desired enrollment in each classroom. Survey results for all programs show that desired enrollment is equivalent to 89 percent of the licensed capacity. When analyzed by type of program, the results were the same (89 percent) in both publicly contracted programs and privately operated programs.

#### Desire and ability to increase capacity

Survey respondents were also asked to indicate whether they were interested in or able to increase the capacity at their site. As shown in Exhibit 1, the largest percentage (48 percent) of respondents indicated that they were unable to increase capacity, 24 percent indicated that they were not interested in increasing capacity, 14 percent reported that they were interested in increasing capacity, and 5 percent had recently increased capacity or were planning to increase capacity.

### Exhibit 1. Desire and Ability to Increase Capacity



As shown in Table 1, the largest percentage (48 percent) of respondents indicated that they could not increase capacity because of space restrictions or funding limitations. Fourteen percent of all respondents indicated that they would like to increase capacity to better serve the needs of the community. Several of these programs who wanted to increase capacity reported that they had long waiting lists, had families who needed full-day child care, or special populations (e.g., infants, toddlers, school-age children, or children with special needs) who were underserved in the community. Another 5 percent of respondents indicated that their programs had recently expanded or would be expanding in the near future.

Twenty-four percent of all respondents indicated that they were not interested in expanding the capacity of their programs. Seven percent of these programs indicated that they did not want to increase capacity because they already had issues with low enrollment at their current capacity. Five percent of respondents felt that it was in the best interest of the children to enroll fewer children. As one respondent explained, “We have had great success with our program the way it is, and we prefer to keep it small.” Two percent of respondents reported that they were already at capacity, and 10 percent did not indicate a reason why they were not interested in expansion. Nine percent of respondents left the question blank.

When analyzed by type of program, the results were fairly similar, with a few exceptions. Forty-six percent of publicly contracted programs cited space limitations, as opposed to 34 percent of privately operated programs. As one respondent from a publicly funded program explained, “There is no more space available because we are an elementary [school] site.” In addition, ten percent of privately operated programs cited that they were under enrolled, versus five percent of publicly contracted programs. Finally, while only 3 percent of the publicly contracted programs noted recent or future expansion, 7 percent of the privately operated programs indicated that they had done so recently or planned to expand their site in the near future.

**Table 1. Desire and Ability to Increase Program Capacity**

Type of Program	Interested	Unable		Not Interested				Recently or Currently Expanded	Blank
	Would Better Serve Unique Community Needs	Limited by Space	Limited by Funding	Best Interest of Children to Have Smaller Classes	Already Under-Enrolled	At Capacity	Unspecified		
Publicly contracted	14%	46%	8%	4%	5%	2%	9%	3%	9%
Privately operated	13%	34%	7%	6%	10%	3%	10%	7%	10%
<b>All programs</b>	<b>14%</b>	<b>40%</b>	<b>8%</b>	<b>5%</b>	<b>7%</b>	<b>2%</b>	<b>10%</b>	<b>5%</b>	<b>9%</b>

*Percentage of three- and four-year-olds occupying preschool-age spaces in private child care centers*

AIR obtained enrollment data by specific age group for State Preschool, General Child Care, and Head Start for its needs assessment. However, to assess the number and percentage of three- and four-year-olds enrolled in private centers, staff had to apply an estimate to the data available. While the California Child Care Resource and Referral Network (CCR&R Network) provided AIR with data on the number of licensed spaces by zip code for preschool children, the Network preschool category includes two- to five-year-olds; it does not break down the preschool category by age cohort. AIR’s 2006 needs assessment has previously assumed that 50 percent of the preschool spaces were occupied by four-year-olds.

To validate this assumption, survey respondents were asked to specify the number of two-, three-, four-, and five-year-olds enrolled in each classroom at their site. As shown in Table 2, based on the survey responses, four-year-olds constitute 54 percent of the preschool cohort in all programs; however, results varied when analyzed by type of program. Four-year-olds constituted a greater percentage of the preschool cohort in publicly contracted programs than in privately operated programs (64 percent versus 46 percent).<sup>1</sup> This is not surprising, given that both Head Start and State Preschool require that programs give four-year-olds priority for enrollment.

The results for three-year-olds did not vary as significantly by type of program. For all programs combined, three-year-olds constituted 32 percent of the preschool cohort. Three-year-olds constituted 29 percent of the preschool cohort in publicly contracted programs and 34 percent of the preschool cohort in privately operated programs. Another survey finding is that two-year-olds constituted 13 percent of enrollment in privately operated programs – a much larger

<sup>1</sup> AIR’s needs assessment presents actual enrollment as opposed to funded enrollment. For example, each Head Start slot serves approximately 1.2 children per year. If one multiplies our finding of 54 percent of four-year-olds enrolled times this factor of 1.2, it results in 65 percent of four-year-olds served, which is closer to the RAND estimate of 67 percent of four-year-olds served.

percentage than the 4 percent served in publicly contracted programs. Again, this might be expected because the two largest publicly contracted programs included in our survey, Head Start and State Preschool, are targeted at older preschool children.

**Table 2. Preschool Cohort Enrollment by Age Group**

Type of Program	2 years old	3 years old	4 years old	5 years old
Publicly contracted	4%	29%	64%	3%
Privately operated	13%	34%	46%	7%
<b>All programs</b>	<b>9%</b>	<b>32%</b>	<b>54%</b>	<b>5%</b>

### *Double Sessions*

AIR had previously estimated that 50 percent of publicly contracted programs operate at least two part-day sessions. However, the survey found that 18 of private centers offer double sessions and 38 percent of State Preschool and Head Start programs offer double sessions.

### *Multiple Preschool Arrangements*

Survey respondents were asked whether any of the preschoolers enrolled at their site were also served by another program, family child care home (FCCH), or other non-relative care arrangement that week or month. The clearest finding was that one out of four providers (25 percent) indicated that at least one of the children in their program was also served in another arrangement, with family child care the most frequent secondary arrangement. Twenty-four percent indicated that they did not know, and 51 percent indicated that the children were not served by an additional arrangement. These findings are similar to those of RAND (Karoly et al, 2008), which found that three out of four preschool-age children in California are in some form of regular non-parental care, with most of these children in one regular arrangement (57 percent overall) in contrast to having two or more arrangements (the remaining 18 percent). In other words, of those families who had some form of regular non-parental care, 24 percent had two or more arrangements.

As shown in Table 3, of those respondents who indicated their enrolled children were served in another location, the largest percentage (61 percent) of programs served children who were also served in a family child care home. Another 22 percent indicated that their enrolled children were served in “other” arrangements such as Title I pre-kindergarten classes, special education, nannies and babysitters, and relatives. Small percentages of children were also served in State



Preschool centers (8 percent), Head Start programs (6 percent), or Title 5/General Child Care programs (4 percent).

Fifty-three percent of the programs with children who were also served in another location were privately operated. Of these, the largest percentage (69 percent) of programs served children who were also served in a family child care home. Another 19 percent indicated that their enrolled children were served in “other” settings that included special education, arrangements with nannies, and relative care. Ten percent had children who were also served in State Preschool centers, and 2 percent had children who were also served in Head Start programs.

Forty-seven percent of the programs with children who were also served in another location were publicly contracted. Of these, the largest percentage (51 percent) of programs served children who were also served in a family child care home. Another 24 percent marked that their enrolled children were served in “other” locations that included Title I pre-kindergarten classes, special education, nannies and babysitters, and relatives. Small percentages had children who were also served in State Preschool centers (5 percent), Head Start programs (11 percent), or Title 5/General Child Care programs (8 percent).

**Table 3. Preschoolers Served in Additional Arrangements**

Type of Program	Head Start	State Preschool	Title 5/ General Child Care	Family Child Care with vouchers/ no contract	Family Child Care with vouchers/ no contract	Family Child Care/ unaware of funding	Other
Publicly contracted	11%	5%	8%	8%	16%	27%	24%
Privately operated	2%	10%	0%	10%	33%	26%	19%
<b>All programs</b>	<b>6%</b>	<b>8%</b>	<b>4%</b>	<b>9%</b>	<b>25%</b>	<b>27%</b>	<b>22%</b>

Note: Of the programs whose enrolled children were served in additional locations, 25 percent reported that their children were served in multiple additional arrangements.

### *Refining AIR’s Needs Assessment*

Based on the above findings from the Preschool Provider Survey, AIR refined some of the underlying assumptions of its assessment of the enrollment of four-year-olds in licensed programs. For example, as mentioned previously, AIR obtained licensed capacity data from the CCR&R Network. But the Network provides data on the preschool cohort, which includes two to five-year-olds, and does not have data on each individual age group. AIR’s 2006 needs

assessment has previously assumed that 50 percent of the preschool spaces were occupied by four-year-olds. The survey results found that four-year-olds actually make up 54 percent of the cohort, which undoubtedly reflects the fact that many publicly contracted programs offer priority enrollment to four-year-olds.

In addition, as discussed above, the CCR&R Network collects data on the licensed capacity of programs; however, AIR’s needs assessment examines enrollment, and capacity often differs from enrollment. AIR had previously estimated that enrollment represented 90 percent of capacity; the Preschool Provider survey found that enrollment is actually 86 percent of capacity. Finally, AIR had previously estimated that 50 percent of publicly contracted programs offered dual sessions, yet survey findings found that 18 percent of private centers offer double sessions, and 38 percent of State Preschool and Head Start programs offer double sessions.

As shown in Table 4, the percentage of four-year-olds served in licensed programs does not change dramatically when the results of the survey are applied to the estimates of other licensed enrollment. The modified estimate shows that 52 percent of four-year-olds were served in licensed programs as of 2006 (versus 48 percent with the original estimate).

**Table 4. Enrollment of Four-Year-Olds in Licensed Programs, 2006**

Estimate	Births (2002 for 4-year- olds)	Head Start	State Preschool	Title 5/ General Child Care	% Served, Publicly Contracted	Other Licensed	% Served, Publicly Contracted and Privately Operated
Original	529,245	66,693	56,305	22,356	27%	109,368	48%
Refined	529,245	66,693	56,305	22,356	27%	129,708	52%

*Enrollment of three- and four-year-olds in licensed programs*

To provide a more comprehensive picture of preschool enrollment, AIR also added data on enrollment of three-year-olds in licensed programs. As shown in Table 5, 27 percent of four-year-olds and 15 percent of three-year-olds were enrolled in publicly contracted licensed early care and education programs as of 2006, and a little over half of four-year-olds and nearly a third of three-year-olds were enrolled in publicly contracted or privately operated licensed child care programs as of 2006.

**Table 5. Enrollment of Three- and Four-Year-Olds in Licensed Programs, 2006**

<b>Age Group</b>	<b>Births (2002 for 4-year-olds; 2003 for 3- year-olds)</b>	<b>Head Start</b>	<b>State Preschool</b>	<b>Title 5/ General Child Care</b>	<b>% Served, Publicly contracted</b>	<b>Other Licensed</b>	<b>% Served, Publicly Contracted and Privately operated</b>
3-year-olds	540,827	38,436	25,511	19,762	15%	77,810	30%
4-year-olds	529,245	66,693	56,305	22,356	27%	129,708	52%
<b>Total</b>	<b>1,070,072</b>	<b>105,129</b>	<b>81,816</b>	<b>42,118</b>	<b>21%</b>	<b>207,518</b>	<b>41%</b>

### **Use of AIR’s Needs Assessment Data**

AIR’s needs assessment data has been utilized for many different purposes. Many counties incorporated the data into their local AB172 applications. Several counties (e.g., Merced, San Diego, San Mateo, Sacramento, Riverside, Sonoma Counties) and the city of San Bernardino have used the data to inform their local preschool plans. The data was shared in four regional forums held around the state in 2006. The needs assessment has also been made available to Karen Hill-Scott & Company’s (KHS) *Plan4Preschool* web portal and the KHS Preschool Data Wizard makes use of its data.

Finally, the data is the driving force behind AIR’s cost estimator, which is available on the website, [www.earlylearningsystems.org](http://www.earlylearningsystems.org). The Cost Estimator is a user-friendly tool to assess the cost of phasing in access to preschool at the local level, as well as statewide. The Cost Estimator is individualized, allowing users to estimate the cost of a program available to all, or for a more targeted initiative, such as a program focused on children in low API school attendance areas, Title I school neighborhoods, or children from low-income families. In addition, the tool can be used to estimate the cost of implementing preschool at various projected participation rates and timeframes for implementation. The Cost Estimator also incorporates inflation, population growth, and infrastructure, such as facilities and workforce development.

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