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California Early Care and Education Workforce Study: Licensed Child Care Centers, Merced County 2006

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Licensed Child Care Centers

Merced County 2006

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Introduction

Reflecting the growth in the number of working families with young children and the importance of early learning, the U.S. has witnessed an explosion of early care and education services in centers and homes over the last 30 years. What was once a relatively small, unnoticed sector of the economy is now viewed as a growing industry with substantial economic impact in terms of widespread use, consumer and public spending, and job creation (National Economic Development and Law Center, 2001). At the same time, researchers in cognitive science, psychology and education, among others, have expanded our understanding of the developmental significance of the early years, underscoring the importance of high-quality early learning settings to ensure that children realize their potential (Shonkoff & Phillips, 2000).

Evidence that the quality of early care and education settings can and does influence children's development during and beyond the preschool years (Gormley, Gayer, Phillips & Dawson, 2004; Henry, Gordon, Henderson & Ponder, 2003; Reynolds, Temple, Robertson & Mann, 2001; Schulman, 2005; Schulman & Barnett, 2005; Schweinhart et al., 2005) has increasingly shifted attention to the early care and education workforce, and the extent to which those who care for young children are adequately prepared to facilitate their learning and well-being.

Creating a skilled and stable early care and education workforce, however, has emerged as a daunting challenge. Reflecting a shortage of resources throughout the industry, employment in the field is characterized by exceptionally low pay, leading to high turnover that, in turn, undermines program quality and children's development (Helburn, 1995; Whitebook, Howes & Phillips, 1998; Whitebook, Sakai, Gerber & Howes, 2001).

High turnover, coupled with the expansion of services, has led to a high demand for personnel in the field, and has also contributed to maintaining relatively low requirements for working with young children. As a result, employment qualifications in the field do not tend to match the level of skills and understanding truly needed to meet the demands of this work. This gap between professional challenges and regulatory requirements is further exacerbated by changes in the child population – notably the increasing numbers of children from immigrant families who are dual language learners, and the growing numbers of children identified as having special developmental needs. Many students of early childhood education still do not receive training related to serving such children (Whitebook, Bellm, Lee & Sakai, 2005).

The recognition that the workforce is the backbone upon which early care and education services depend has underscored many of the activities undertaken by First 5 commissions at the state and local level. Since the program's inception in 2000, for example, California has spent over $240 million on the state- and county-level effort known as CARES, which has awarded stipends to over 40,000 ECE practitioners for pursuing further training and education. Increasing attention is also turning to institutions of higher education to assess the resources they will need, in order to adapt their programs and to support students in meeting more rigorous standards for working with young children (Whitebook, Bellm, Lee & Sakai,

2005).

This report is intended to identify the characteristics of Merced County's current center-based early care and education workforce, both in light of proposed new requirements, and to help assess the size of the task of training the next generation of workers to care for young children.

Licensed Child Care Centers in California

In California, child care provided outside of a home environment is called a child care center. A child care center is usually located in a commercial building, school or church. In a child care center, non-medical care and supervision can be provided for infants (birth to 23 months), preschoolers (two to five years) and school-age children (kindergarten students and older) in a group setting for periods of less than 24 hours.

Almost all child care centers are required to be licensed by the Community Care Licensing Division (CCLD) of the California Department of Social Services. Centers that are exempt from licensing include certain school-age and preschool programs run by Park and Recreation Departments and school districts; informal arrangements in which no money changes hands for care, such as co-ops and play groups; on-site military child care programs; and programs administered by the Department of Corrections.

To receive a license, child care centers must meet the requirements established in the Code of California Regulations Title 22 related to personnel, the facility, and the number and ages of children served.[1]

Personnel requirements include the following:

- Child care centers must have qualified directors and qualified teaching staff. Directors and teachers must have 12 units in early childhood education. To be a qualified infant teacher, at least three of the units must be related to the care of infants. Directors must have three units in administration or staff relations.
- Employees must have a fingerprint clearance from the California Department of Justice and the Federal Bureau of Investigation, and have a Child Abuse Index Clearance.
- All staff must have a TB clearance and a health report.
- At least one person on-site must have 15 hours of health and safety training approved by the Emergency Medical Services Authority. This includes a current CPR and First Aid Certificate.

Requirements for a child care facility include the following:

- 35 square feet of indoor play space per child, 75 square feet of outdoor space per child, and one toilet and one sink for every 15 children.
- Compliance with CCLD health and safety requirements pertaining to storage space, equipment and materials, drinking water, food preparation, storage of dangerous materials, adult/staff restrooms, isolation areas for sick children, and facility temperature.
- Compliance with all other state, federal, and/or local codes and regulations such as zoning, building restrictions, fire, sanitation, and labor requirements.

Number and ages of children served:

- The total number of children who can be served in a facility is called the licensed capacity of the center.

1 For more information about child care center licensing see: http://ccld.ca.gov.

The licensed capacity is based on the physical space of a site (as described above) and the number of staff available to provide care.

- CCLD issues separate licenses for the different ages of children that can be served: infants, preschoolers, and school-age children. Each age group requires a specific ratio of children to adults:

  Infants: 1 adult to 4 children
  Preschoolers: 1 adult to 12 children
  School-age children: 1 adult to 14 children

Additional regulations for child care centers:

In addition to the Title 22 regulations described above, centers contracted with the California Department of Education (CDE) must meet the regulations set by Title 5 of the California Code of Regulations. Head Start centers are also required to meet additional regulations established by the federal Head Start Bureau. Table 1.1 below compares the educational levels for child care center staff required by Titles 5 and 22. Head Start educational requirements are not included in the chart, as the Head Start staffing structure is unique to that program. Fifty percent of all Head Start teachers nationwide in center-based programs, however, are required to have an AA, BA or advanced degree in early childhood education, or an AA, BA or advanced degree in a field related to early childhood education, in addition to experience teaching preschool children.

According to the *2005 California Child Care Portfolio*, there were 10,143 child care centers with 639,443 child care spaces (commonly referred to as "slots") in the state in 2004. Six percent of these slots were licensed for infants, 70 percent for preschoolers and 24 percent for school-age children. Child care centers made up 64 percent of all licensed child care spaces, with family child care homes comprising 36 percent of the capacity (California Child Care Resource and Referral Network, 2005).

Table 1.1. *Comparison of Title 22 and Title 5 Regulations for Child Care Center Staff*

Position	Title 22	Title 5 (CDE-contracted centers)
Assistant teacher	None	6 units of college-level Child Development (CD)/ Early Care and Education (ECE)
Associate teacher	Not specified	12 units of college-level CD/ECE
Teacher	12 units of college-level CD/ECE 6 months experience	24 units of college-level CD/ECE 16 units of General Education (GE)
Site supervisor	Not specified	AA or 60 units including: 24 units of CD/ECE 16 units GE 8 units administration
Program director	12 units of college-level CD/ECE 3 units administration	BA or higher including: 24 units of CD/ECE 8 units of administration

Merced County

Located just outside of the Bay Area, in the San Joaquin Valley, much of Merced County is unincorporated. The largest cities are Merced, Los Banos, and Atwater. The county's economy relies on manufacturing and farming.

In 2004, Merced County's population of 232,100 represented a 10.2-percent increase over the 2000 Census (US Census Bureau, 2000a). The county is projected to increase in population by 31.7 percent between 2000 and 2010, with a 33.4-percent increase in the number of children ages 0-4 (California Department of Finance, 2004).

Population estimates for 2005 describe the county as 49.5 percent Hispanic; 38.6 percent White, Non-Hispanic; 6.1 percent Asian; 3.3 percent Black; 1.7 percent Multiethnic; and 0.8 percent American Indian or Pacific Islander (California Department of Finance, 2005). At the time of the 2000 Census, 54.8 percent of county households were estimated as speaking English, 34.2 percent Spanish, and 4.1 percent an Asian or Pacific Island language (US Census Bureau, 2000b).

Several demographic measures, as well as summary statistics concerning economic well being, suggest the breadth of need for early care and education in Merced County:

- Median family income in 1999 was $38,009 (California Department of Finance, 2003).
- In 1999, 21.7 percent of residents had incomes below the poverty level (California Department of Finance, 2003).
- These figures disguise families' economic stress, which increasingly is driven by high housing costs. The county's 2005 annual fair market rent for a two-bedroom unit was $7,380 (US Department of Housing and Urban Development, 2005).
- At the time of the 2000 Census, 29.9 percent of children 0-5 years of age lived in poverty[2] (California Child Care Resource and Referral Network, 2003).
- In 2000, 56,488 children under the age of 14 resided in the county, 51.2 percent of whom had both parents or a single head of household in the labor force[3] (California Child Care Resource and Referral Network, 2003).
- Among those children were 22,744 children under age six, 47.3 percent of whom had working parents[4] (California Child Care Resource and Referral Network, 2003).
- 12.0 percent of children ages 0-5 resided in a single-parent household[5]

2 Data derived from 2000 U.S. Census (universe: population for whom poverty status is determined). Poverty threshold varies by family size and composition. For a family of four, two adults and two children under 18, the 1999 poverty threshold used for the 2000 Census was $16,895.

3 Data derived from 2000 U.S. Census (custom tabulation). Number of children with either both parents or a single-head-of-household in the labor force (universe: own children in families and subfamilies).

4 Data derived from 2000 U.S. Census (custom tabulation). Number of children with either both parents or a single-head-of-household in the labor force (universe: own children in families and subfamilies).

5 Data derived from 2000 U.S. Census (universe: own children).

(California Child Care Resource and Referral Network, 2003).

In 2004, 7,338 licensed child care slots were available in Merced County, 53.6 percent of which were in family child care homes, and 46.4 percent in child care centers (California Child Care Resource and Referral Network, 2005).

Purpose of the Study

Recognizing the critical role that early childhood educators play in the lives of California's children and families, First 5 California commissioned in 2004 a statewide and regional study of the early care and education (ECE) workforce in licensed child care centers and licensed family child care homes. The overall goal of the study was to collect information on the current characteristics of this workforce – particularly its educational background, and its potential need and demand for further opportunities for professional development.

The statewide study sample included centers from every county in the state, but there were not sufficient numbers of centers in the sample to generate county-specific reports. Counties were invited, however, to contract for additional local interviews in order to build a representative county sample, and First 5 Merced County was one of nine county organizations that agreed to commission a local study of its early care and education workforce, building on the statewide study. An identical procedure was used for statewide and county data collection, although the statewide study interviews were conducted earlier in 2005.

The following description applies to the sample and response rate for the Merced County-commissioned component of the study. For information about the statewide completion and response rate, see the statewide *California Early Care and Education Workforce Study* report at http://www.ccfc.ca.gov.

In partnership, the Center for the Study of Child Care Employment (CSCCE) at the University of California at Berkeley, and the California Child Care Resource and Referral Network (Network), have gathered this information to help Merced County policy makers and planners assess current demand at teacher training institutions; plan for further investments in early childhood teacher preparation; and gain a baseline for measuring progress toward attaining a well-educated ECE workforce whose ethnic and linguistic diversity reflects that of Merced County's children and families.

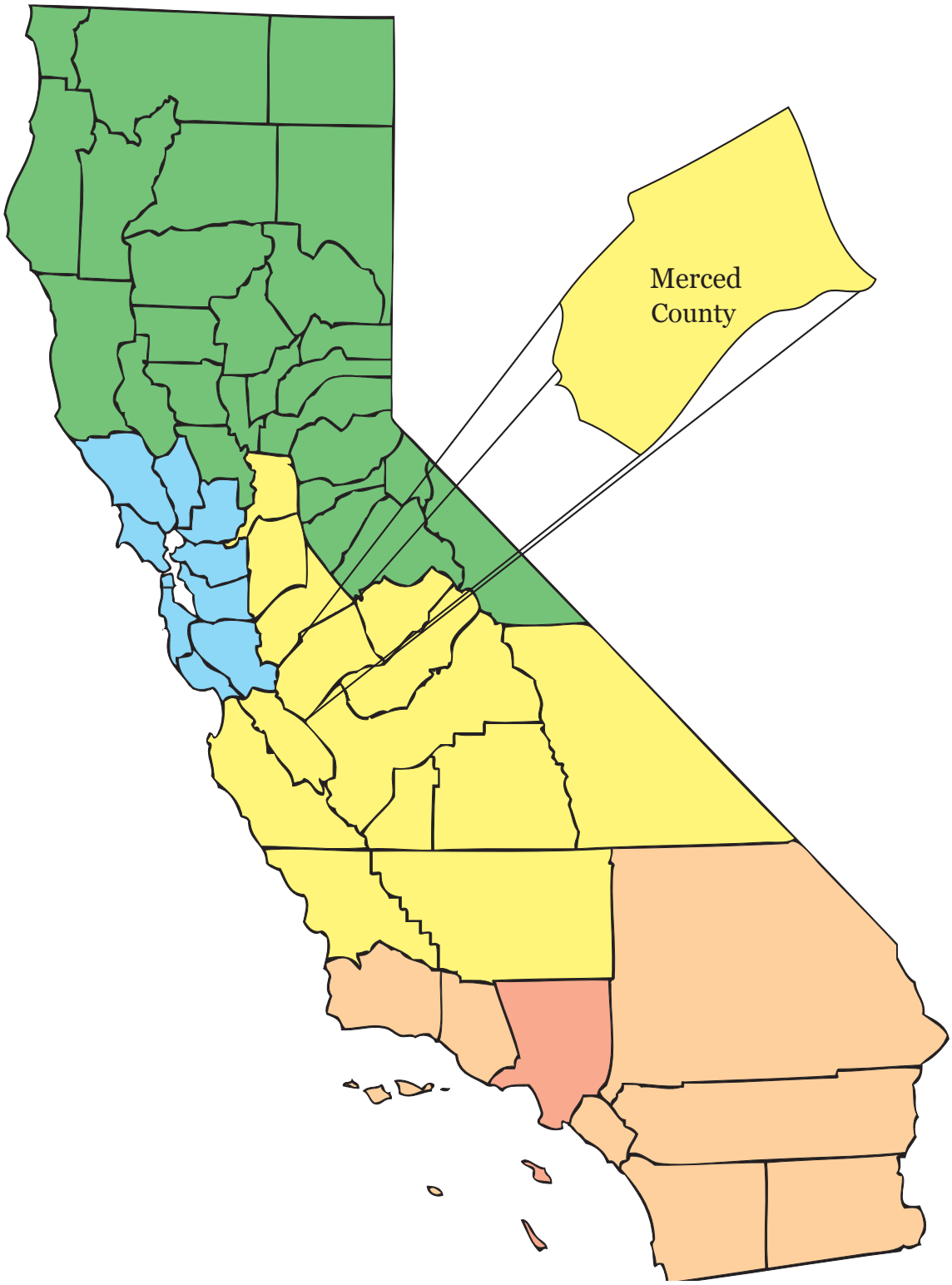
The present report contains the study's findings for licensed child care centers that have infant and/or preschool licenses. Some of these centers have school-age licenses as well. This study, however, does not include data for centers that have a license to serve school-age children only.

A separate report containing information about licensed family child care homes in Merced County can be found at the First 5 California website, http://www.ccfc.ca.gov.

In studying the county's population of licensed child care centers, our primary objectives were to:

- Compile baseline data on the demographics, wages, tenure, and educational characteristics of child care center directors, teachers and assistant teachers;
- Identify the extent to which their educational backgrounds vary with respect to ethnicity, language and age;
- Profile the business and program characteristics of centers, including organizational status and participation in various subsidy programs;
- Profile the children that staff with varying characteristics serve, in terms of numbers, ages, subsidy status, and special needs;

- Document the professional preparation of licensed child care center staff to work with children who are dual language learners and/or have special needs;
- Develop a sound estimate of the number of assistant teachers, teachers and directors in licensed child care centers; and
- Identify differences among licensed child care center staff, along the dimensions noted above, between centers with and without public subsidies, and between centers serving and not serving infants.


Merced
County

Study Design

Survey Population and Study Sample

First 5 Merced County sought countywide information about directors, teachers and assistant teachers employed at licensed child care centers in Merced County. The survey population included all 73 licensed child care centers serving infants and/or preschoolers that were listed as of January 2004 with the county's state-funded child care resource and referral (R&R) agency, ACCESS. These data were aggregated, cleaned and verified by the California Child Care Resource and Referral Network (Network) and updated in August 2005. Centers licensed to serve only school-age children were not included in the survey population.

Because of the relatively small number of child care centers, we attempted to interview directors at all the centers. The final number of 32 completed interviews included 16 interviews conducted in Merced County as part of the statewide study and 16 interviews conducted during the county study. (See Table 2.1.)

Survey Instrument

The Child Care Center Survey used in this study was the same questionnaire used in the statewide study. It built upon numerous workforce studies conducted by the Center for the Child Care Workforce over the last three decades (Center for the Child Care Workforce, 2001). Specifically, the survey instrument was adapted from the 2001 California Child Care Workforce Study, an eight-county effort funded by the David and Lucile Packard Foundation as a pilot for this statewide survey (Whitebook, Kipnis, Sakai, Voisin, & Young, 2002).

Certain changes were made to the 2001 survey to capture specific information requested by First 5 California to assist in its workforce development planning related to the expansion of preschool programs in California. Prior to data collection, the survey instrument and data collection procedures were approved by the Committee for the Protection of Human Subjects at the University of California at Berkeley, and were then pre-tested in the field.

Telephone interviews were conducted in English with directors of child care centers. The directors answered questions about themselves and about their teaching staff. None of the eligible centers were unable to complete the interview because of a communication barrier.

For the three groups of child care center staff – directors, teachers and assistant teachers – the questions in the survey addressed:

- *Demographics*: age, ethnicity, and languages spoken in addition to English;

Table 2.1. *Merced County Sample Composition*

	Merced County licensed centers	Percentage of final sample
Completed interviews: statewide study	16	50.0%
Completed interviews: county study	16	50.0%
Final sample	32	100.0%

- *Levels of education and training*: highest level of education; type of degree, if any; college credit related to Early Childhood Education; credit and non-credit training related to children with special needs and English language learners; permits and credentials; and participation in Merced County CARES;
- *Employee characteristics:* staff wages, tenure, and turnover; and
- *Business and program characteristics*: number and ages of children served, including children with special needs; participation in government subsidy programs; public contracts with the California Department of Education or Head Start; and organizational status, including private for-profit, private nonprofit, or public.

Data Collection Procedures

The Network mailed a notification letter, describing the purpose of the survey and encouraging participation, to all the centers in the survey universe. The letter was signed by representatives of First 5 California, the Center for the Study of Child Care Employment (CSCCE) and the Network. In addition to the letter, directors received an Interview Worksheet, outlining the survey questions, to help them prepare for the telephone interview. Centers were informed that they would receive a copy of the latest version of First 5's Kit for New Parents as an incentive for completing the interview.

Field Research Corporation, Inc. (FRC), a professional public opinion research firm, conducted the interviews using computer-assisted telephone interviewing (CATI). During the CATI process, the interviewer reads the survey question from a computer screen and enters the survey data directly into the computer. This promotes uniformity of interview technique as well as accuracy and consistency during data input. FRC completed 16 interviews between September 12 and October 14, 2005.

Center directors were contacted during the work day, and whenever they requested it, were called back at an appointed time, including in the evening or during the weekend, to complete the interview. Interviews took an average of 20 minutes to complete. FRC made up to eight attempts to complete an interview with each center director.

Survey Completion and Response Rate

The Network provided FRC with contact information for 73 centers in the survey population. Because some of these centers either had completed an interview or had been coded ineligible for some reason during the statewide survey, FRC released 51 infant and/or preschool centers for the county survey. As anticipated, we were unable to interview all the centers in the released sample.

Of the 51 center contacts, 33.3 percent were determined to be ineligible, either because they were out of business or were presumed to be, due to the nature of the unresolved phone number. (See Table 2.2.) Among those eligible, 47.1 percent completed the survey. To increase the likelihood of interviewing as many directors as possible, the Network attempted to correct all incorrect phone numbers and contact all directors with answering machines or voice mails to encourage them to participate in the study.

Table 2.2. *Survey Response Rate of County Sample*

	Merced County number of centers	Percentage of sample	Percentage of eligible
Sample released and dialed	51	100.0%	
Ineligible: out of business	2	3.9%	
Presumed ineligible*	15	29.4%	
Eligible	34	66.7%	100.0%
County surveys completed	16	31.4%	47.1%
No response, presumed eligible**	5	9.8%	14.7%
Refusals	1	2.0%	2.9%
Multi-site refusals***	6	11.8%	17.6%
Respondent not available	6	11.8%	17.6%
Communication barrier	0	0.0%	0.0%
Other reasons for non-completion	0	0.0%	0.0%

* Disconnected, wrong number, changed phone number, or no answer.
** Answering machine, voice mail, or busy signal.
***Answered for some centers in multi-site agency but not all.

Table 2.3. *Comparison of Survey Respondents and County Population of Centers, by Communities Served and by Regulation*

	County Population (N=73)	Survey Completed (N=32)
REGULATION		
Licensed for infants	12.3%	21.9%
CDE/Head Start contract	61.6%	46.9%
CITY		
Atwater	9.6%	9.4%
Delhi	1.4%	0.0%
Dos Palos	2.7%	6.3%
Gustine	2.7%	3.1%
Hilmar	1.4%	3.1%
Le Grand	2.7%	0.0%
Livingston	6.9%	6.3%
Los Banos	9.6%	9.4%
Merced	46.6%	46.9%
Newman	1.4%	3.1%
Planada	5.5%	6.3%
Santa Nella	1.4%	0.0%
Snelling	1.4%	0.0%
South Dos Palos	2.7%	3.1%
Stevinson	1.4%	0.0%
Winton	2.7%	3.1%
Total	100.0%	100.0%

The reasons for not completing a survey among eligible centers included:

- 14.7 percent: Answering machine, voice mail or busy signal prevented successful contact;
- 2.9 percent: Refusal;
- 17.7 percent: Multi-center refusals, in which a director managing multiple sites refused to complete an interview for the particular center, but did complete interviews for other centers;
- 17.7 percent: Respondent not available to complete the survey during the study period.

While we were unable to assess whether the centers that participated in the study differed from those that did not participate with respect to all the variables of interest in the study, we compared the county center population to the centers that completed interviews along three important variables. We calculated the extent to which centers participating in our study represented the county overall in terms of 1) geographical distribution, 2) contract status with Head Start or the California Department of Education, and 3) licensed capacity to serve infants. As shown in Table 2.3, our survey closely approximates the geographical distribution of centers in the county. Contracted centers are under-represented in the sample of interviewed centers (46.9 percent, vs. 61.6 percent in the universe). Centers with a license to serve infants are over-represented in the sample of interviewed centers (21.9 percent, vs. 12.3 percent in the universe).[6]

6 The implications of the representation of infant centers and contracted centers are discussed in the Findings section.

Findings

Who are the teachers, assistant teachers and directors in Merced County's licensed child care centers?

In Merced County, a teacher in a child care center licensed to serve infants and/or preschoolers is more likely to be Latina than she is to be White, Non-Hispanic. Teachers and assistant teachers are more diverse than directors, and more closely reflect the ethnic distribution of children ages birth to five in the county. In addition, teachers are more ethnically diverse than K-12 teachers. Compared to women in Merced County, teachers and assistant teachers are more likely to be under age 30 and less likely to be over 50 years of age. More than one-half of teachers and assistant teachers, and one-third of directors, are able to speak a language other than English fluently, most typically Spanish.

These demographic profiles vary, however, by such center characteristics as age group of children served. For example, centers serving infants are more likely to employ an assistant teacher who speaks a language other than English.

More than one-half of teachers and directors have worked in their present jobs for five years or less, while two-thirds of assistant teachers have been on the job for five years or less. Teachers with a BA earn, on average, $14.96 an hour. The highest-paid assistants can expect to earn $8.40 an hour, on average, if they work in a center receiving public dollars through vouchers, and $9.54 an hour in a center holding a contract with Head Start or CDE.

Age

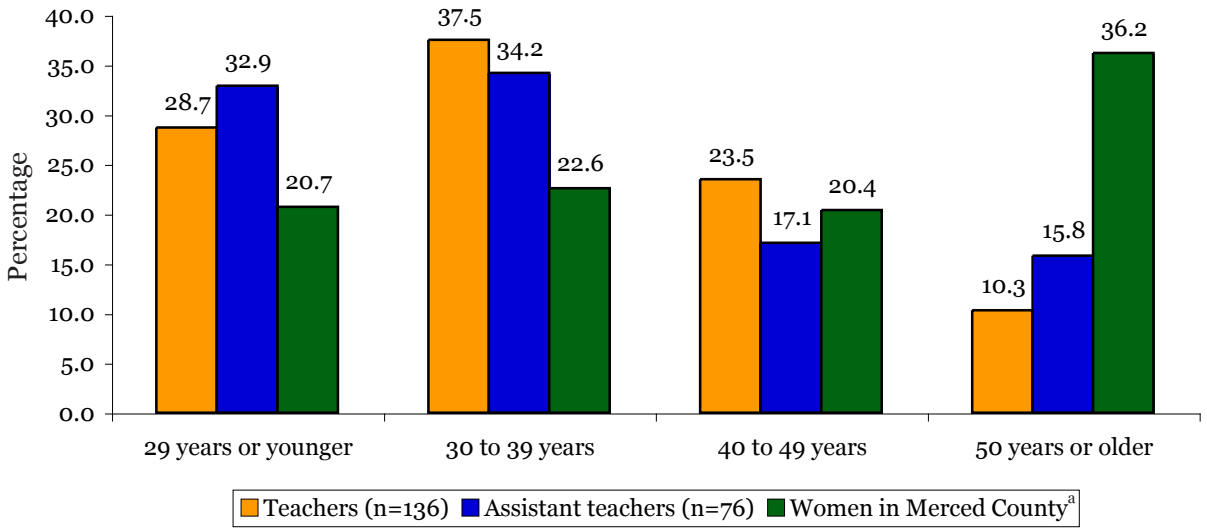
Directors were asked to report the age range of their teachers and assistant teachers; we did not collect data on the age of directors for this study. Compared to women[7] in Merced County (20.7 percent), teachers (28.7 percent) and assistant teachers (32.9 percent) were more likely to be younger than 30. (See Figure 3.1.)

The age distribution of teachers and assistant teachers differed by whether or not centers enrolled infants as well as preschoolers. (See Figure 3.2.) Centers enrolling infants employed a smaller proportion of teachers 40 years or older than centers that did not serve infants. Only 20.2 percent of teachers in centers with infants were 40 years old or older, compared to 47.7 percent of teachers in centers serving not serving infants. Similarly, assistant teachers were older, on average, in centers not serving infants. Approximately 40 percent (40.7 percent) of assistant teachers in centers serving infants were younger than 30, compared to 28.6 percent in centers not serving infants, while only 3.7 percent of assistant teachers in centers serving infants were 50 years or older, compared to 22.4 percent in centers serving only older children.

The age distribution of teachers and assistant teachers also varied depending on centers' relationship to public subsidy, as shown in Figure 3.3. Centers receiving public dollars through vouchers reported a higher proportion of teachers and

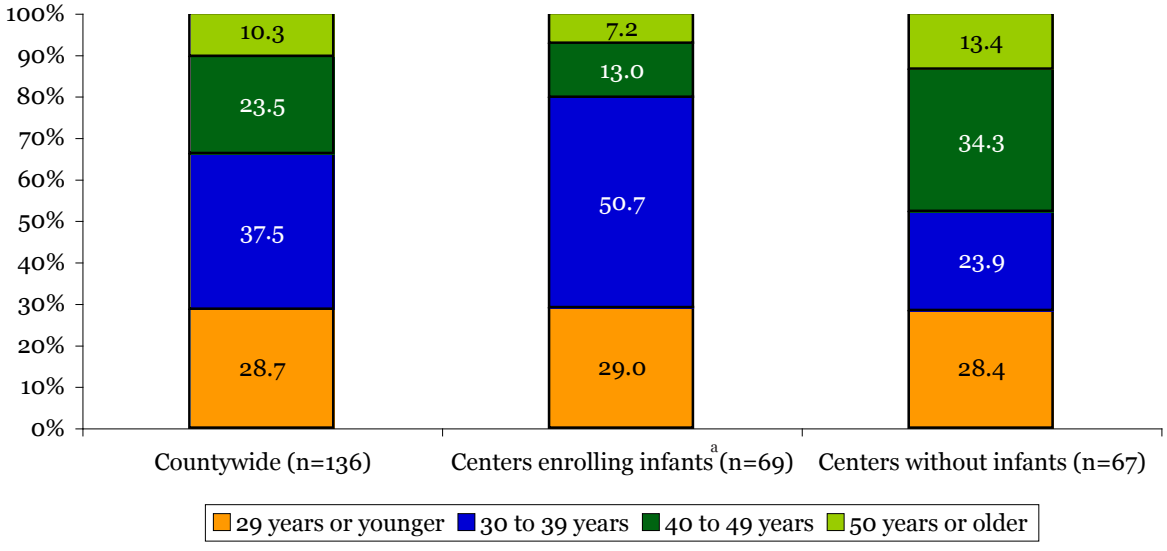
7 Previous research has established that the early care and education workforce is predominantly female. In the interest of survey length, therefore, directors were not asked about the gender of teaching staff.

Figure 3.1. *Estimated Age Distribution of Teachers and Assistant Teachers Compared to Women in Merced County: Countywide*



[a] US Census Bureau (2000c).

Figure 3.2. *Estimated Age Distribution of Teachers: Countywide, and By Ages of Children Served*



[a] Most of these centers also enroll older children.

Figure 3.3. *Estimated Age Distribution of Teachers: Countywide, and By Centers' Relationship to Public Subsidy*

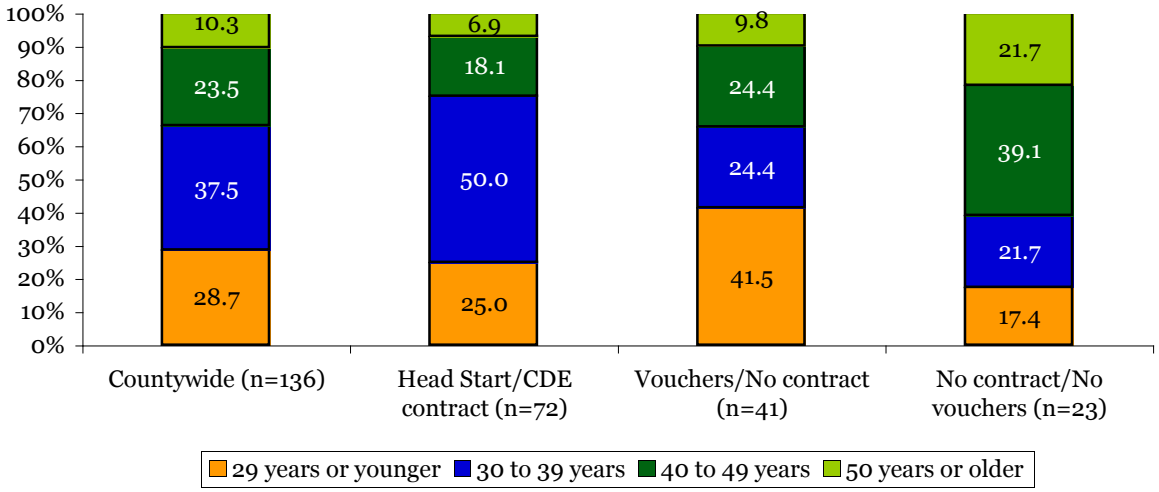


Table 3.1. *Estimated Ethnicity of Teachers, Assistant Teachers and Directors: Countywide*

	Estimated percentage		
	Teachers	Assistant teachers	Directors
White, Non-Hispanic	35.1	30.1	51.7
Latina	51.5	60.3	34.5
African American	5.2	2.7	0.0
Asian/Pacific Islander	2.2	2.7	6.9
American Indian or Alaskan Native	0.0	0.0	0.0
Multiethnic	3.0	4.1	3.4
Other	3.0	0.0	3.4
Total	100.0	100.0	100.0
Number of staff	134	73	29

assistant teachers under 30 years old than did centers holding a contract with Head Start or CDE, or centers receiving no public dollars.

Ethnic Background

We found that slightly more than one-half (51.5 percent) of Merced County child care teachers were Latina and 35.1 percent were White, Non-Hispanic. Approximately five percent (5.2 percent) were African American, 2.2 percent were Asian/Pacific Islander, and six percent identified as being of some other ethnicity. (See Table 3.1.) Among assistant teachers, Latinas were also a majority (60.3 percent), followed by White, Non-Hispanics (30.1 percent). Slightly more than one-half of directors (51.7 percent) were White, Non-Hispanic, and 34.5 percent were Latina. As shown in Table 3.1, African Americans, Asian/ Pacific Islanders and other ethnic groups comprised less than 15 percent of each of the job categories. Table 3.1 also shows that across job titles, directors were the least ethnically diverse group, and assistant teachers were the most diverse.

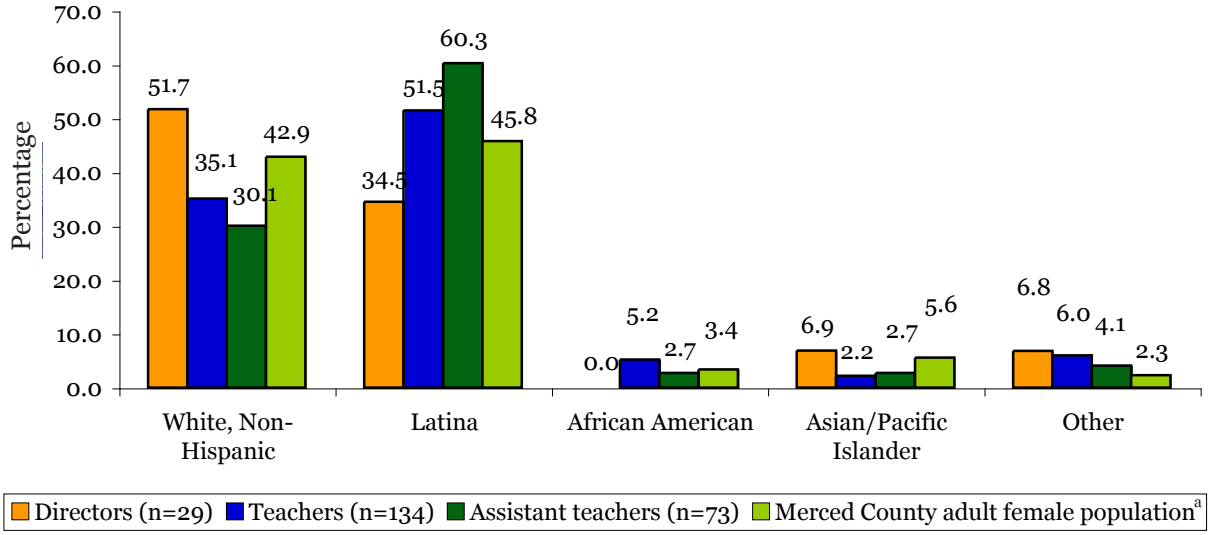
As shown in Figure 3.4, directors in Merced County child care centers enrolling infants and/or preschoolers were more likely to be White, Non-Hispanic, and less likely to be Latina, than other adult females in the county. Teachers and assistant teachers were less likely to be White, Non-Hispanic, and more likely to be Latina, than their adult female counterparts.

Teachers and assistant teachers were more diverse, and more closely reflected the ethnic distribution of children ages birth to five in Merced County, than directors in centers. Child care center teachers and assistant teachers, in addition, were much more diverse than teachers in Grades K-12 in Merced County public schools. (See Figure 3.5.) Almost three-quarters of public school K-12 teachers (74.8 percent) were White, Non-Hispanic, compared to 35.1 percent of teachers in child care centers, and 25.2 percent of children ages birth to five (California Department of Education, 2004). Child care center teachers (51.5 percent) were more likely to be Latina than were K-12 teachers (17.9 percent), but less likely to be Latina than children ages birth to five (63.5 percent). Assistant teachers, however, were almost equally likely to be Latina (60.3) as children ages birth to five.

The ethnic composition of the teaching staff also differed by the ages of children enrolled in centers. Centers serving infants reported a higher percentage of Latina teachers (63.8 percent) and assistant teachers (66.7 percent) than centers serving only older children (38.5 percent; 56.5 percent).

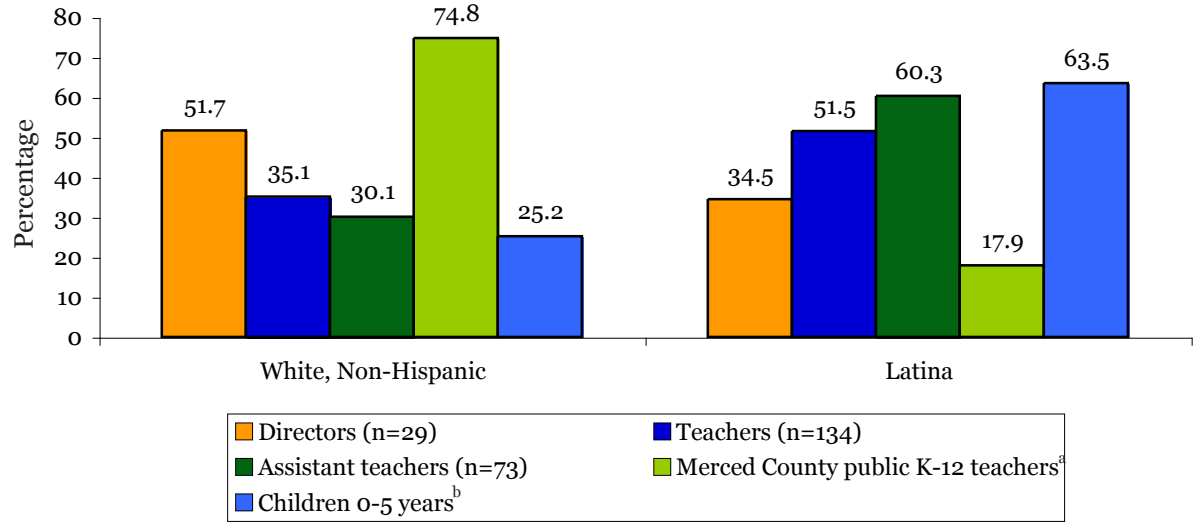
The ethnic composition of staff also differed by whether centers held a Head Start or CDE contract, received vouchers to cover the cost of subsidized children, or received no public dollars. As shown in Table 3.2, contracted programs employed the most diverse pool of teachers and assistant teachers, followed by programs not receiving any public funds. Programs not receiving any public funding employed the most diverse group of directors, followed by contracted programs. We found no statistically significant differences in the percentage of centers of a particular type employing at least one teacher from a particular ethnic group.

Figure 3.4. *Estimated Ethnic Distribution of Teachers, Assistant Teachers and Directors Compared to the Merced County Adult Female Population: Countywide*



[a] California Department of Finance (2004a).

Figure 3.5. *Estimated Ethnic Distribution of Directors, Teachers and Assistant Teachers Compared to Merced County Public K-12 Teachers and Children 0-5 Years: Countywide*



[a] California Department of Education (2004).
[b] California Department of Finance (2004a).

Table 3.2. *Estimated Ethnicity of Teachers, Assistant Teachers and Directors, By Centers' Relationship to Public Subsidy*

		Estimated percentage		
		Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Teachers	White, Non-Hispanic	23.7	51.4	47.8
	Latina	35.8	34.3	30.4
	African American	2.6	5.7	13
	Asian/Pacific Islander	2.6	0.0	4.3
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	3.9	2.9	0.0
	Other	1.3	5.7	4.3
	Total	100.0	100.0	100.0
	Number of teachers	76	35	23
Assistant teachers	White, Non-Hispanic	26.3	50.0	40.0
	Latina	63.2	33.3	60.0
	African American	3.5	0.0	0.0
	Asian/Pacific Islander	3.5	0.0	0.0
	American Indian or Alaskan Native	3.5	0.0	0.0
	Multiethnic	3.5	16.7	0.0
	Other	0.0	0.0	0.0
	Total	100.0	100.0	100.0
	Number of assistant teachers	57	6	10
Directors	White, Non-Hispanic	52.6	60.0	40.0
	Latina	36.8	20.0	40.0
	African American	0.0	0.0	0.0
	Asian/Pacific Islander	5.3	0.0	20.0
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	0.0	20.0	0.0
	Other	5.3	0.0	0.0
	Total	100.0	100.0	100.0
	Number of directors	19	5	5

Linguistic Background

We also found that the population of children served by Merced County's licensed child care centers was characterized by great linguistic diversity. Our information on the language backgrounds of young children is based on 2004-05 data from the California Department of Education (CDE), which reported that almost one-half (46.4 percent) of kindergarteners attending Merced County public schools in that year spoke a language other than English and were classified as English Learners. Of the more than 31 different languages spoken by English Learners in Merced County's public kindergarten classrooms, Table 3.3 lists the 15 most commonly spoken**.** Directors were asked whether they or any of their teachers or assistant teachers could speak fluently with children and families in a language other than English. If they answered affirmatively, they were asked which language(s) they or their teaching staff would be able to speak fluently with children and families if necessary. Our description of center staff fluency in these languages is based entirely on directors' assessments. Note that the directors' reports do not permit us to assess whether those who spoke a language other than English also spoke English fluently.

As described below, there was a great deal of language diversity among center staff. Directors emerged as the least, and assistant teachers as the most, linguistically diverse group. About one-third (30.0 percent) of directors and more than one-half of teachers (52.8 percent) and assistant teachers (57.1 percent) had the capacity to communicate fluently with children and families in a language other than English. Not all centers, however, employed a director, teacher or assistant teacher with this capacity. Most centers (65.4 percent) did not employ a director who could communicate fluently in a language other than English with children and families, but most employed at least one teacher (83.9 percent) or assistant teacher (75.0 percent) who could. (See Table 3.4.) When centers employed at least one teacher or assistant with this language capacity, it was likely that the majority of their teachers (64.5 percent) and assistants (77.0 percent) were able to communicate fluently in a language other than English. (See Table 3.5.)

Among those who spoke languages other than English fluently with children and families, the most commonly spoken language was Spanish:

Table 3.3. *Merced County Children in Public Kindergarten, 2004-2005: 15 Most Commonly Spoken Languages of English Language Learners*

	Percentage
Spanish	88.0%
Hmong	6.4%
Punjabi	2.0%
Portuguese	1.2%
Mien (Yao)	0.8%
Arabic	0.2%
Lao	0.2%
Vietnamese	0.2%
Filipino (Pilipino or Tagalog)	0.1%
Hinid	0.1%
Korean	0.1%
Russian	0.1%
Urdu	0.1%
Farsi (Persian)	0.1%
Cebuano (Visayan)	0.1%
N	1,894

Source: California Department of Education (2006).

- Among directors who spoke a language other than English fluently, 88.9 percent spoke Spanish.
- Among teachers who spoke a language other than English fluently, 89.3 percent spoke Spanish.
- Among assistant teachers who spoke a language other than English fluently, 93.2 percent spoke Spanish.

The linguistic background of teachers, assistant teachers and directors also varied among centers serving particular groups of children. As shown in Tables 3.6 and 3.7, centers serving infants were significantly more likely than centers that did not serve infants to employ at least one assistant teacher who spoke a language other than English fluently. However, among centers that employed at least one teacher able to communicate in a language other than or in addition to English, centers serving different age groups did not vary in the percentages of such teachers employed. There were no significant language differences among directors and teachers in centers serving children of different ages.

Due to small sample sizes, we were not able to test for statistically significant differences in the likelihood of employing teachers, assistant teachers or directors by whether a center had a contract with Head Start or CDE, received no public funds, or received vouchers. (See Table 3.6.) As shown in Table 3.7, however, contracted centers that employed at least one teacher with the capacity to communicate in a language other than English employed, on average, a higher percentage of such teachers than centers receiving vouchers. We were not able to test for significance among directors and assistants because of small sample sizes.

Turnover and Tenure

Center staff stability has been linked to overall program quality, the ability of a program to improve its quality, and children's social and verbal development (Whitebook, Howes & Phillips, 1998; Whitebook & Sakai, 2004). Turnover rates provide one important index of center workforce stability; namely, how much change in staffing a center has undergone in the previous year. Information on tenure offers a longer-term perspective on the level of staff stability over time within centers.

In order to determine rates of turnover, we asked directors to report the number of teachers, assistant teachers and directors who had left or stopped working at their centers for any reason, including leaves of absence, over the last 12 months.[8] On average, 14.0 percent of teachers and 17.5 percent of assistant teachers were reported to have done so. (See Table 3.8.)

The range of turnover rates varied among centers. More than one-half of centers (53.1 percent) reported no teacher turnover in the previous 12 months, and 72.0 percent reported no assistant teacher turnover, whereas approximately 15 percent of centers reported turnover rates of 25 percent or more among teachers and 50 percent or more among assistant teachers.

Director turnover (25.9 percent) was higher than turnover among teaching staff. (See Table 3.8.) However, the

8 Turnover discussed in this report refers to job turnover, the number of staff who leave employment at their centers over a fixed period of time. This study did not collect information about position turnover (changes of role while maintaining employment at the same center) or occupational turnover (departure from the child care field).

Table 3.4. *Estimated Percentage of Centers Employing at Least One Teacher, Assistant Teacher or Director with the Capacity to Communicate Fluently in a Language Other Than English: Countywide*

	Estimated percentage (SE)
Teachers	83.9 (6.72)
Number of centers	31
Assistant teachers	75.0 (9.03)
Number of centers	24
Directors	34.6 (9.51)
Number of centers	26

Table 3.5. *Estimated Mean Percentage of Employed Teachers and Assistant Teachers with the Capacity to Communicate Fluently in a Language Other than English, in Centers that Employed At Least One Such Person: Countywide*

	Estimated percentage (SE)
Teachers	64.5 (6.88)
Number of centers	26
Assistant teachers	77.0 (6.92)
Number of centers	18

Table 3.6. *Estimated Percentage of Centers Employing at Least One Teacher, Assistant Teacher or Director with the Capacity to Communicate Fluently in a Language Other Than English: Countywide, By Ages of Children Served, and By Centers' Relationship to Public Subsidy*

	Estimated percentage (SE)					
	Countywide	Centers enrolling infants[a]	Centers without infants	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Teachers	83.9 (6.72)	100.0 (0.00)	76.2 (9.45)	82.4 (9.40)	87.5 (11.89)	83.3 (15.47)
Number of centers	31	10	21	17	8	6
Assistant teachers*	75.0 (0.90)	100.0 (0.00)	62.5 (12.4)	93.3 (6.58)	50.0 (25.54)	40.0 (22.38)
Number of centers	24	8	16	15	4	5
Directors	34.6 (9.51)	55.6 (16.89)	23.5 (10.49)	47.1 (12.35)	20.0 (18.24)	0.0 (0.00)
Number of centers	26	9	17	17	5	4

[a] Most of these centers also enroll older children.
*$p < .05$, Centers enrolling infants > centers without infants.

Table 3.7. *Estimated Mean Percentage of Teachers, Assistant Teachers and Directors with the Capacity to Communicate Fluently in a Language Other Than English, in Centers that Employed At Least One Such Person: Countywide, By Ages of Children Served, and by Centers' Relationship to Public Subsidy*

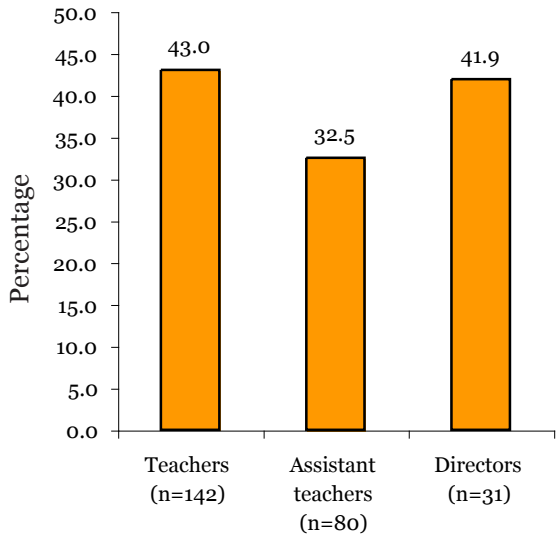
	Estimated percentage (SE)					
	Countywide	Centers enrolling infants[a]	Centers without infants	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Teachers*	64.5 (6.88)	66.5 (12.66)	63.3 (7.89)	80.0 (8.71)	37.6 (5.85)	58.6 (16.22)
Number of centers	26	10	16	14	7	5
Assistant teachers	77.0 (6.92)	84.0 (10.30)	71.4 (8.94)	78.8 (7.31)	83.3 (12.04)	58.3 (30.10)
Number of centers	18	8	10	14	2	2
Directors	94.4 (5.34)					
Number of centers	9					

[a] Most of these centers also enroll older children.
*p<.05 Head Start/CDE contact>Vouchers/No Contract. Data not reported for directors by age of children served or subsidy status because of small sample sizes.

overwhelming majority of centers (85.2 percent) reported no director turnover in the previous 12 months.

To measure rates of tenure, we asked directors to report how many teachers, assistant teachers and directors at their centers had been employed for less than one year, from one to five years, or for more than five years. Among various positions within centers, directors and teachers were more stable than assistant teachers. (See Figure 3.6.) Approximately two-fifths of directors (41.9 percent) and teachers (43.0 percent) had been employed for more than five years at their centers, compared to 32.5 percent of assistant teachers. Only 40.0 percent of centers (SE=9.80) reported employing at least one assistant teacher for five years or more.

Figure 3.6. *Estimated Percentage of Teachers, Assistant Teachers and Directors who have Worked at Their Current Center for More Than Five Years: Countywide*



While turnover for teachers, assistant teachers and directors did not significantly vary by center characteristics (see Tables 3.8 and 3.9.), tenure did vary. The percentages of directors, teachers and assistant teachers who had been on the job for more than five years did not vary by ages of children served, but there were some variations in percentages of staff who had been employed for less than one year. (See Table 3.10.) Directors employed in centers receiving vouchers were more stable than those employed in contracted centers or in centers receiving no public funding. Centers receiving vouchers, however, reported the smallest percentage of teachers and assistant teachers who had been at their jobs for more than five years. (See Table 3.11.)

Wages

We sought to document the current compensation of teachers and assistant teachers working in Merced County child care centers licensed to serve infants and/or preschoolers. Because of the length of the survey, we focused our investigation on two categories of teaching staff: teachers with BA or higher degrees, and assistant teachers. We did not collect information about benefits such as health coverage or retirement plans.

We asked directors to provide hourly wages for their highest- and lowest-paid teachers with a BA or higher degree. Our intention was to document the pay rates of those teachers with the highest level of education. By asking for the lowest rate of pay, we were able to capture what is likely to be paid at a center to a new teacher with a BA or higher degree. By asking for the highest rate of pay, we were able to gain a sense of the pay ladder available to more tenured teachers with degrees. However, because the centers we interviewed that employed a teacher with

a BA degree or higher only employed one such teacher, we will report the average wage for *all* teachers with a BA degree or higher**.** We also asked directors to provide hourly wages for their highest-paid assistant teachers. We assumed that this amount would reflect the wages of those assistants who had been at the center for some period of time, rather than new recruits. Table 3.12 provides the average hourly wages paid to teachers with BA or higher degrees and to assistant teachers, countywide.

In addition to average wages, we examined the distribution of wages among teachers with BA or higher degrees, and among assistant teachers. Forty percent of the degreed teachers earned $12.00 per hour or less (about $24,960 per year), and 60 percent earned $18.00 per hour or more (about $37,440 per year). About 20 percent of the highest-paid assistant teachers earned less than $8.00 per hour (or $16,640 per year). Less than 10 percent of the highest-paid teachers earned more than $11.00 per hour (or $22,880 per year).

There were no statistically significant differences in pay rates among centers serving different groups of children. (See Tables 3.12 and 3.13.)

Size of the Teacher, Assistant Teacher and Director Workforce in Merced County Centers Licensed to Serve Infants and/or Preschoolers

Directors were asked to report the overall number of teachers, assistant teachers and directors employed in their centers, and then to report how many teachers and assistant teachers worked in classrooms with infants and/or preschool children, and how many worked in classrooms with school-age children (if any such children were enrolled in their centers).[9] The following section provides information about:

- the overall number of teachers and assistant teachers in centers licensed to serve infants and/or preschoolers;
- the average number of teachers and assistant teachers working in such centers;
- the overall number of directors working in centers licensed to serve infants and/or preschoolers; and
- the average number of directors working in such centers.

Overall Number of Teachers, Assistant Teachers and Directors Employed in Centers Licensed to Serve Infants and/or Preschoolers

As shown in Table 3.14, the teacher, assistant teacher and director workforce in Merced County's centers licensed to care for infants and/or preschoolers comprised an estimated 582 members. (See Appendix B for a description of the estimate methodology.) An estimate of the total workforce in these centers would also include teachers and assistants working with school-age children, and would increase the estimate by approximately 12.0 percent. Because many centers also employ cooks, custodians, social workers, family support workers, educational coordinators and/or office staff (Brandon et al., 2002), the total early care and education workforce

9 Assistant teachers and teachers working with school-age children constituted approximately 12 percent of the teaching staff at these centers. We do not provide estimates of the countywide numbers of school-age teachers and assistant teachers employed in these programs, because we recognize that these staff constitute only a small portion of the teaching staff countywide working in programs to serve school-age children, most of which do not serve younger children and many of which are exempt from licensing.

Table 3.8. *Estimated Mean Percentage of Annual Job Turnover Among Teachers, Assistant Teachers and Directors: Countywide, and By Ages of Children Served*

	Estimated mean percentage (SE)		
	Countywide	Centers enrolling infants[a]	Centers without infants
Teachers	14.0 (4.58)	13.0 (4.07)	14.5 (6.55)
Number of centers	31	10	21
Assistant teachers	17.5 (6.37)	10.4 (7.00)	20.8 (8.78)
Number of centers	25	8	17
Directors	25.9 (13.71)	66.7 (37.27)	5.6 (5.56)
Number of centers	27	9	18

[a] Most of these centers also enroll older children.

Table 3.9. *Estimated Mean Percentage of Annual Job Turnover Among Teachers, Assistant Teachers and Directors: Countywide, and By Centers' Relationship to Public Subsidy*

	Estimated mean percentage (SE)			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Teachers	14.0 (4.58)	12.1 (5.99)	21.3 (11.72)	9.5 (7.06)
Number of centers	31	17	8	6
Assistant teachers	17.5 (6.37)	24.7 (9.37)	13.3 (13.33)	0.0 (0.00)
Number of centers	25	15	5	5
Directors*	25.9 (13.71)			
Number of centers	27			

* Data for director not reported because of small sample sizes

Table 3.10. *Estimated Percentages of Teachers, Assistant Teachers and Directors With Different Rates of Tenure: Countywide, and By Ages of Children Served*

		Estimated percentage		
		Countywide	Centers enrolling infants[a]	Centers without infants
Teachers	< 1 year	15.5	18.8	12.3
	1-5 years	41.5	39.1	43.8
	> 5 years	43.0	42.0	43.8
Number of teachers		142	69	73
Assistant teachers	< 1 year	33.8	25.9	37.7
	1-5 years	33.8	40.7	30.2
	> 5 years	32.5	33.3	32.1
Number of assistant teachers		80	27	53
Directors	< 1 year	12.9	10.	14.3
	1-5 years	45.2	50.0	42.9
	> 5 years	41.9	40.0	42.9
Number of directors		31	10	21

[a] Most of these centers also enroll older children.

Table 3.11. *Estimated Percentage of Teachers, Assistant Teachers and Directors With Different Rates of Tenure: Countywide, and By Centers' Relationship to Public Subsidy*

		Estimated percentage			
		Countywide	Head Start/ CDE contract	Vouchers/No contract	No vouchers/ No contract
Teachers	< 1 year	15.5	7.9	23.3	26.1
	1-5 years	41.5	46.1	41.9	26.1
	> 5 years	43.0	46.1	34	9
Number of teachers		142	76	43	23
Assistant teachers	< 1 year	33.8	35.1	41.7	18.2
	1-5 years	33.8	33.3	50.0	18.2
	> 5 years	32.5	21.6	8.3	63.6
Number of assistant teachers		80	57	12	11
Directors	< 1 year	12.9	10.5	0.0	40.0
	1-5 years	45.2	52.6	28.6	40.0
	> 5 years	41.9	36.8	71.4	20.0
Number of directors		31	19	7	5

Table 3.12. *Estimated Mean Hourly Wages Paid to Teachers with a BA or Higher Degree, and to Assistant Teachers: Countywide, and By Ages of Children Served*

		Estimated mean hourly wage (SE)	*Number of centers*
Teachers with BA or higher degree	Centers enrolling infants[a]		0
	Centers without infants	14.96 (2.03)	6
	Countywide	14.96 (2.03)	6
All assistant teachers, highest wage*	Centers enrolling infants[a]	19.12 (0.68)	6
	Centers without infants	9.43 (0.53)	10
	Countywide	9.32 (0.41)	16

[a] Most of these centers also enroll older children.

Table 3.13. *Estimated Mean Hourly Wages Paid to Teachers with a BA or Higher Degree, and to Assistant Teachers: Countywide, and By Centers' Relationship to Public Subsidy*

		Estimated mean hourly wage (SE)	*Number of centers*
Teachers with BA or higher degree	Head Start/CDE contract	11.0	1
	Vouchers/No contract	13.58 (3.34)	3
	No vouchers/No contract	19.0 (1.00)	2
	Countywide	14.96 (2.03)	6
All assistant teachers, highest wage	Head Start/CDE contract	9.54 (0.45)	9
	Vouchers/No contract	8.40 (0.93)	3
	No vouchers/No contract	9.49 (1.18)	4
	Countywide	9.32 (0.41)	16

Table 3.14. *Estimated Distribution of Assistant Teachers, Teachers and Directors Working with Infants and/or Preschoolers: Countywide*

		Assistant teachers	Teachers	Directors	*Total*
Countywide	Total number	184	327	71	582
	Percentage	31.6	56.2	12.2	100.0

for centers licensed to serve infants and/or preschoolers may approach or even exceed 786 members.

As shown in Table 3.15, centers enrolling infants as well as preschoolers employed about one-third of all assistant teachers and all directors, and about one-half of all teachers, with the remaining staff employed in centers that did not enroll infants. With respect to the proportion of their staff who were teachers, assistant teachers or directors, centers serving infants employed a higher percentage of teachers (65.0 percent) and a smaller percentage of assistant teachers (25.5 percent) and directors (9.4 percent) than centers serving only older children (49.7 percent teachers; 36.1 percent assistant teachers, 14.3 percent directors).

Table 3.16 shows the countywide distribution of teachers, assistant teachers and directors employed in centers with varying subsidy status.[10] More than two-thirds of all assistant teachers in the county (71.2 percent), one-half of all teachers (53.5 percent) and three-fifths of all directors (61.1 percent) were employed in centers holding a Head Start or CDE contract. Based on their relationship to public subsidy, centers varied with respect to the proportion of their staff who were teachers, assistant teachers or directors, as shown in Table 3.17. Centers with Head Start or CDE contracts employed the greatest percentage of assistant teachers, while centers receiving public funding through vouchers employed the smallest percentage of assistant teachers and the greatest percentage of teachers.

Average Number of Teachers, Assistant Teachers and Directors Employed in Centers Licensed to Serve Infants and/or Preschoolers

As shown in Table 3.18, we estimate that centers in Merced County licensed to serve infants and/or preschoolers employed, on average, five teachers, three assistant teachers and one director.[11] The vast majority of teachers (90.0 percent, SE=3.7) and assistant teachers (85.5 percent, SE=6.3) in these programs worked with infants and/or preschoolers. The other teachers and assistant teachers worked with school-age children.

As shown in Table 3.19, the average number of teachers and assistant teachers in centers did not vary significantly by centers' public subsidy status.

10 As described in the introduction of this report, contracted centers operate under more stringent ratio and staff qualification regulations; indeed, assistant teacher qualifications in contracted programs match or exceed those required by licensing for teachers in non-contracted programs.

11 Note that 12.5 percent of centers had more than one director, 71.9 percent had one director, and 15.6 percent had no one who served only as an administrative director. In many of the latter centers, the person with director responsibilities was also a teacher.

Table 3.15. *Estimated Number and Percentage of Assistant Teachers, Teachers and Directors Working with Infants and/or Preschoolers: Countywide, and By Ages of Children Served*

		Assistant teachers	Teachers	Directors	Total
Centers enrolling infants[a]	Total number	62	159	23	244
	Percentage	33.7	48.6	32.4	41.9
Centers without infants	Total number	122	168	48	388
	Percentage	66.3	51.4	67.6	58.1
All centers	Total number	184	327	71	582
	Percentage	100.0	100.0	100.0	100.0

[a] Most of these centers also enroll older children.

Table 3.16. *Estimated Number and Percentage of Assistant Teachers, Teachers and Directors Working with Infants and/or Preschoolers: Countywide, and By Centers' Relationship to Public Subsidy*

		Assistant teachers	Teachers	Directors	Total
Head Start/ CDE contract	Total number	131	175	44	350
	Percentage	71.2	53.5	61.1	60.0
Vouchers/No contract	Total number	28	99	16	143
	Percentage	15.2	30.3	22.2	24.5
No vouchers/No contract	Total number	25	53	12	90
	Percentage	13.6	16.2	16.7	15.4
All centers	Total number	184	327	72	583
	Percentage	100.0	100.0	100.0	100.0

Table 3.17. *Estimated Distribution of Assistant Teachers, Teachers and Directors Working with Infants and/or Preschoolers: Countywide, and By Centers' Relationship to Public Subsidy*

		Assistant teachers	Teachers	Directors	*Total*
All centers countywide	Total number	184	327	71	582
	Percentage	31.6	56.2	12.2	100.0
Head Start/CDE contract	Total number	131	175	44	350
	Percentage	37.4	50.0	12.6	100.0
Vouchers/No contract	Total number	28	99	16	143
	Percentage	19.6	69.2	11.2	100.0
No vouchers/No contract	Total number	25	53	12	90
	Percentage	27.8	58.9	13.3	100.0

Table 3.18. *Estimated Mean Number of Assistant Teachers, Teachers and Directors Employed by Centers: Countywide*

	All staff	Infant/ preschool teaching staff
Assistant teachers	2.8	2.5
	(0.41)	(0.42)
Teachers	5.1	4.4
	(0.60)	(0.50)
Directors	1.0	
	(0.10)	

Table 3.19. *Estimated Mean Number of Teachers and Assistant Teachers Employed by Centers: Countywide, and By Centers' Relationship to Public Subsidy*

	Estimated mean number (SE)			
	Head Start/CDE contract	Vouchers/No contract	No vouchers/No contract	Countywide
Assistant teachers	3.6	1.8	2.0	2.8
	(0.59)	(0.62)	(0.82)	(0.41)
Number of centers	17	9	6	32
Teachers	4.8	6.4	4.2	5.1
	(0.82)	(1.16)	(1.30)	(0.60)
Number of centers	17	9	6	32

What are the characteristics of children in Merced County child care centers licensed to serve infants and/or preschoolers?

In Merced County, teachers and assistants care for and educate approximately 4,600 children in centers licensed to serve infants and/or preschoolers. Almost 90 percent of the children in these centers are not yet in kindergarten, and about 63 percent are between the ages of three and five. Eleven percent are children under age two, about 13 percent are age two, and 13 percent are in kindergarten or a higher grade. On average, approximately four percent of the children enrolled in these centers are reported by directors to have special needs.

More than 80 percent of centers report caring for at least one child who receives public child care assistance. Twenty-eight percent of centers receive public dollars in the form of vouchers, and about one-half of centers receive public dollars through a contract with Head Start or the California Department of Education, to cover the cost of care for the subsidized children they serve. Centers vary considerably in size, with about 20 percent enrolling 31 or fewer children and 20 percent enrolling over 80 children.

Number of Children Served

As shown in Table 3.20, licensed child care centers in Merced County provided services in 2005 to an estimated 4,027 infants and/or preschoolers, not yet in kindergarten. In addition, these centers cared for 607 children in kindergarten or a higher grade.[12] (Appendix B describes the methodology used to calculate the estimated number of children served.) Table 3.20 also presents a distribution by age group of the estimated numbers of children enrolled.[13] Sixty-two percent of these children were preschoolers, ages three to five, 24.4 percent were two years old or younger, and 13.1 percent were in kindergarten or older.

Table 3.20. *Estimated Number of Children Enrolled in Merced County Child Care Centers Licensed to Serve Infants and/or Preschoolers*

	Number enrolled
Under age 2	524
Age 2	607
Ages 3 to 5, not yet in kindergarten	2,896
Ages 5 or younger, not in kindergarten	4,027
Ages 5 or older, in kindergarten or higher grade	607
All ages	4,634

Center directors were asked about the number of children in various age groups that their centers enrolled, and they reported a variety of age configurations (see Table 3.21):

- Virtually all centers (96.9 percent, SE=3.1) reported caring for children between the ages of three and five.
- 19.4 percent (SE=7.2) reported caring

12 This figure does not include centers licensed exclusively to serve school-age children.

13 The licensed capacity of a center (the number of children it is approved to serve) may be less than or greater than actual number of children enrolled. Some centers, for example, may choose to enroll fewer children than permitted in their space, or may not be able to find enough children to reach their full capacity. Alternately, some centers may enroll children in part-day sessions, and thus serve a higher overall number of children but never exceed their licensed capacity at any given time.

for children across the entire age span from infancy through school-age. This did not vary by the subsidy status of the center.

- 59.4 percent (SE=8.8) reported caring for at least one child attending kindergarten or a higher grade.
- 31.3 percent of centers (SE=8.3) enrolled children under two, and 3.1 percent of centers enrolled infants exclusively.[14]
- 67.7 percent of centers (SE=8.5) enrolled two-year-old children.

Table 3.21. *Estimated Percentage of Centers Serving at Least One Child in Various Age Groups: Countywide*

	Estimated percentage
Under age 2	31.3
Number of centers	32
Age 2	67.7
Number of centers	31
Ages 3-5, not yet in kindergarten	96.9
Number of centers	32
Ages 5 or older, in kindergarten or higher grade	59.4
Number of centers	32

Table 3.22 shows the average number of children enrolled in centers for each age group. Centers varied considerably in terms of the *overall* number of children enrolled. Approximately 20 percent of centers enrolled 31 or fewer children, and about 20 percent enrolled more than 80 children. As shown in Table 3.23, centers, on average, enrolled 62.7 children across the entire age span and 54.9 infants and/or preschoolers.

Centers and Public Dollars for Child Care Assistance

Centers subsidize the cost of services for children enrolled in their programs as a condition of a contract the center holds with Head Start or the California Department of Education (CDE), or by accepting vouchers available to families through CalWorks and Alternative Payment Program funding. Thus, to determine whether programs enrolled any children who received public child care assistance, we asked whether the program held a contract with Head Start or CDE, or enrolled at least one child who received a voucher. We estimate that 81.2 percent of centers in Merced County licensed to serve infants and/or preschoolers enrolled at least one subsidized child. More than one-half of the centers (53.1 percent) held a contract with Head Start or CDE. (See Table 3.24.) Of the centers that did not hold such a contract, 69.2 percent reported enrolling at least one child who received a voucher. These centers represented 28.1 percent of all centers in our sample.

In centers that held contracts with Head Start or CDE, most if not all children received public assistance for child care.[15] Since vouchers "follow" specific children, however, centers without contracts that reported enrolling at least one child receiving public child care assistance may or may not have enrolled additional subsidized children. We therefore asked directors who reported enrolling at least one subsidized child through a voucher, how many such children they enrolled. We

14 Some centers that do not have an infant license have a Toddler Option within their preschool license, allowing them to serve children under age two.

15 These centers may also accept vouchers, but we did not explore whether this was the case, as we knew that most enrolled children were subsidized.

Table 3.22. *Estimated Mean Number of Children Served, by Age Group: Countywide*

	Estimated mean number of children served (SE)
Under age 2	22.8 (2.86)
Number of centers	10
Age 2	12.6 (2.41)
Number of centers	21
Ages 3-5, not yet in kindergarten	40.6 (3.76)
Number of centers	31
Ages 5 or older, in kindergarten or higher grade	13.9 (2.86)
Number of centers	19

Table 3.23. *Estimated Mean Number of Children Served: Countywide*

	Estimated mean number of children served (SE)
All ages	62.7 (5.61)
Number of centers	31
Ages 5 or younger, not in kindergarten	54.9 (5.04)
Number of centers	31

Table 3.24. *Estimated Percentage of Centers That Receive Public Dollars: Countywide*

	Estimated percentage (SE)	*Number of centers*
Head Start or CDE contract	53.1 (8.96)	17
Vouchers/ No contract	28.1 (8.08)	9
No vouchers/ No contract	18.8 (7.01)	6

Table 3.25. *Estimated Mean Percentage of Subsidized Children Enrolled in Centers Receiving Vouchers: Countywide*

	Estimated mean percentage (SE)
Children receiving voucher subsidy	36.6 (12.30)
Number of centers	9

were thus able to calculate the percentage of children receiving public child care assistance in programs that enrolled at least one child with a voucher.

On average, in centers that cared for at least one child receiving a child care voucher, 36.6 percent of children enrolled in that center received this type of assistance. (See Table 3.25.) There was considerable variation in the percentage of children enrolled in centers that received vouchers. One third (33.0 percent) of centers enrolled eight percent or fewer children on vouchers, while 77 percent of centers enrolled 56 percent or fewer, and 22 percent enrolled more than 75 percent. For centers enrolling at least one child receiving vouchers, there were no significant differences in the average percentage of such children between centers enrolling and not enrolling infants.

Average center size did not vary by whether a center held a contract with Head Start or CDE, did not hold a contract but accepted public vouchers for children of low-income families, or did not receive any public dollars. Table 3.26 displays the percentage of centers serving at least one child in various age groups based on their relationship to public subsidy; because the number of centers was so small, however, we could not test for significant differences among the groups. As shown in Table 3.27, there were no differences in the average number of children served within each group among centers with different subsidy status.

We estimate that two-thirds of child care centers in Merced County (64.5 percent, SE=8.7) were private nonprofit agencies. Public agencies (e.g., school districts) operated 16.1 percent (SE=6.7) of centers, and for-profit agencies constituted 19.4 percent (SE=7.2) of centers. Table 3.28 displays the percentage of centers of various auspices according to subsidy status. Since the number of centers was so small, however, we could not test for significant differences among the groups.

Children with Special Needs

Center directors were asked how many children (if any) with disabilities, or with special emotional or physical needs, were enrolled in their centers.[16] As a result, we estimate that 51.6 percent (SE=9.1) of Merced County's centers licensed to serve infants and/or preschoolers cared for children with special needs. On average, children with special needs constituted 7.1 percent (SE=1.4) of the child population in centers that enrolled at least one child with special needs. Only one-quarter of all centers reported that five percent or more of their children had special needs, and about seven percent of all centers reported that children with special needs constituted 10 percent or more of all the children enrolled.

Centers serving infants as well as older children were no more likely to enroll children with special needs than were centers serving only children under age two.

Table 3.29 shows that 70.6 percent of contracted centers cared for at least one child with special needs, compared to 25.0 percent of centers receiving vouchers and 33.3 percent of centers without any

16 Interviewees were told, "By disabilities or special needs, we mean any child who is protected by the American with Disabilities Act (ADA)." If the interviewee asked for clarification, interviewers added, "This would include children who are considered at-risk of a developmental disability, or who may not have a specific diagnosis but whose behavior, development, and/or health affect their family's ability to find and maintain services."

Table 3.26. *Estimated Percentage of Centers Serving at Least One Child in Various Age Groups: Countywide, and by Centers' Relationship to Public Subsidy*

	Estimated percentage (SE)			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Under age 2	31.3 (8.32)	47.1 (12.30)	11.1 (10.60)	16.7 (15.50)
Number of centers	32	17	9	6
Age 2	67.7 (8.53)	58.8 (12.13)	87.5 (11.89)	66.7 (19.56)
Number of centers	31	17	8	6
Ages 3-5, not yet in kindergarten	96.9 (3.13)	94.1 (5.88)	100.0 (0.00)	100.0 (0.00)
Number of centers	32	17	9	6
Ages 5 or older, in kindergarten or higher grade	59.4 (8.82)	47.1 (12.30)	88.9 (10.64)	50.0 (20.74)
Number of centers	32	17	9	6

Table 3.27. *Estimated Mean Number of Children Served, by Age Group: Countywide, and by Centers' Relationship to Public Subsidy (Includes only those centers that care for at least one child in that age group)*

	Estimated mean number of children served (SE)			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Under age 2	22.8 (2.86)	23.3 (2.45)	35.0	7.0
Number of centers	10	8	1	1
Age 2	12.6 (2.41)	13.8 (2.45)	14.6 (6.05)	6.0 (3.44)
Number of centers	21	10	7	4
Ages 3-5, not yet in kindergarten	40.6 (3.76)	39.3 (5.12)	36.3 (5.25)	50.5 (11.66)
Number of centers	31	16	9	6
Ages 5 or older, in kindergarten or higher grade	13.9 (2.86)	11.6 (5.02)	15.8 (4.38)	15.0 (6.25)
Number of centers	19	8	8	3

pubic subsidies. Although this finding is consistent with previous research, this difference was not statistically significant. Statistical testing with a larger sample size might confirm these results. Similarly, according to Table 3.30, centers with a Head Start or CDE contract reported enrolling a higher average percentage of children with special needs than centers serving children with vouchers or not serving any subsidized children, in part reflecting these centers' mandate to do so. Again, these differences were not statistically significant, although statistical testing with a larger sample size might confirm these results.

Table 3.28. *Centers' Relationship to Public Subsidy, by Auspices: Countywide*

	Estimated percentage (SE)				
	Private nonprofit	Public	For-profit	*Total*	*Number of centers*
Countywide	64.5 (8.74)	16.1 (6.72)	19.4 (7.21)	100.0	31
Head Start/CDE contract	75.0 (11.0)	25.0 (11.0)	0.0 (0.00)	100.0	16
Vouchers/No contract	44.4 (16.84)	0.0 (0.00)	55.6 (16.84)	100.0	9
No vouchers/No contract	66.7 (19.56)	16.7 (15.47)	16.7 (15.47)	100.0	6

Table 3.29. *Estimated Percentage of Centers that Care for At Least One Child with Special Needs: Countywide, and by Centers' Relationship to Public Subsidy*

	Estimated percentage (SE)			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
No children with special needs	48.4 (9.12)	29.4 (11.23)	75.0 (15.56)	66.7 (19.56)
At least one child with special needs	51.6 (9.12)	70.6 (11.23)	25.0 (15.56)	33.3 (19.56)
Total	100.0	100.0	100.0	100.0
Number of centers	31	17	8	6

Table 3.30. *Estimated Mean Percentage of Children with Special Needs Served: Countywide, and by Centers' Relationship to Public Subsidy (Includes only those centers that care for at least one child with special needs)*

	Estimated mean percentage (SE)			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
Children with special needs served	7.1 (1.43)	7.4 (1.84)	4.6 (1.30)	7.6 (3.47)
Number of centers	16	12	2	2

What is the level of educational attainment and early childhood development-related training among teachers, assistants and directors in Merced County's child care centers?

Compared to Merced County's overall adult female population, teachers working in centers enrolling infants and/or preschoolers are more likely to have attended college and/or completed a two-year degree. They are somewhat less likely to have completed a four-year or higher college degree, and much less likely to have completed high school only.

Less than five percent of teachers have completed a four-year or graduate degree, but more than one-third have completed a two-year degree, typically with an early childhood focus. Eighty percent of centers do not employ any teachers with a four-year or higher degree, but do employ at least one teacher with an AA degree. Assistant teachers in Merced County are also more likely than the average female in the county to have attended college and/or completed a two-year degree, but they are less likely to have obtained a four-year or higher degree, or to report high school as their highest level of education. Assistant teachers have somewhat lower levels of degree attainment than teachers. Nearly one-half of assistant teachers have completed from one to 23 college credits related to early childhood development. Only seven percent have completed neither college credits nor a degree related to early childhood.

Nine out of ten directors have completed a two-year, four-year or higher degree, typically with an early childhood focus. Directors are ten times more likely than teachers to have completed a four-year or higher degree. They have also completed associate degrees at higher rates than teachers.

The overwhelming majority of AA degree holders have completed a degree related to early childhood development, compared to only one in five BA degree-holders. About fifteen percent of teachers or directors with BA or higher degrees obtained their degree through a foreign institution.

Across the county, slightly more than one-quarter of directors have heard of the CARES program, and only a few report employing at least one teacher or assistant who is a CARES participant.

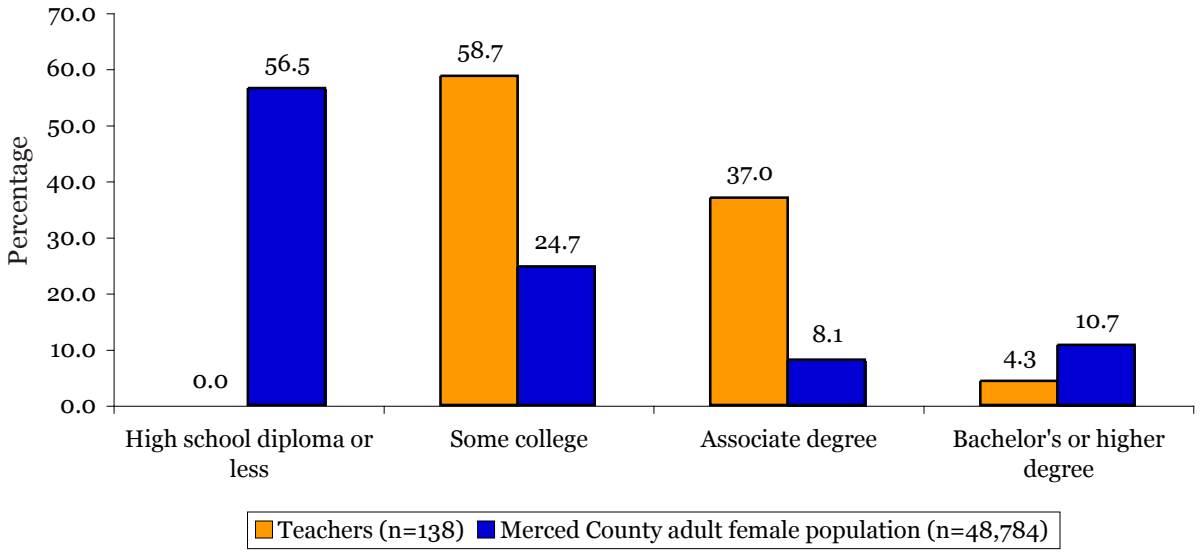
Two-thirds of all teachers with an AA or higher degree hold a Child Development Permit, and over one-half of all directors hold a Site Supervisor Permit. No teachers, but almost one-half of directors with a BA or higher degree have a teaching credential (as opposed to a Child Development Permit) issued by the California Commission on Teacher Credentialing.

Research has indicated that the presence of better-trained adults enhances the quality of child care services for children (Whitebook & Sakai, 2004; Shonkoff & Phillips, 2000). Because of the critical role that teachers' skill and knowledge play in promoting children's optimal development, considerable effort and investment have been devoted to encouraging and supporting teachers, assistants and directors to pursue professional development through CARES and other programs. With the movement toward expansion of publicly funded preschool services, there is also an increased need to assess the size of the task of recruiting and preparing a sufficient number of teachers and assistants who meet higher educational and training standards – i.e., a bachelor's (BA) degree and early childhood certification for teachers, and 48 college credits for assistant teachers. While not all teachers and assistants in publicly funded preschools will be drawn from the current early care and education workforce, many no doubt will come from its ranks. The educational and training background of the current workforce therefore becomes an important factor in planning the level of resources needed to ensure a well-prepared workforce for preschool classrooms.

Overall Educational Attainment of Teachers, Assistants and Directors

As is true nationally (Herzenberg, Price & Bradley, 2005), we found that center-based teachers in Merced County typically had completed some college credits, and were more likely than the average woman in the county to have done so. As shown in Figure 3.7, all teachers (100.0 percent) had completed some college-level work, compared to 43.5 percent of women in Merced County. Teachers had a higher completion rate for an associate degree (37.0 percent) than is true for the average adult female in the county (8.1 percent). Teachers' completion

Figure 3.7. *Estimated Educational Attainment of Center Infant and/or Preschool Teachers, Compared to the Merced County Adult Female Population*



rates for BA or higher degrees[17] (4.4 percent) was less than half that of women in the county as a whole (10.7 percent).

Not all centers employed teachers with a four-year or higher degree; such teachers were concentrated in 20.0 percent of centers. In centers that employed at least one teacher with a four-year or higher degree, 38.2 percent of teachers, on average, held such degrees. (See Table 3.31.) Most centers (80.0 percent) employed at least one teacher with an AA degree, and in centers with at least one such teacher, on average, 53.5 percent of teachers had AA degrees. Nearly one-half of all assistant teachers (45.3 percent) had completed one to 23 college credits related to early childhood development. In centers employing at least one assistant who had completed one to 23 credits, 69.2 percent of assistants, on average, had done so.

As shown in Figure 3.8, the vast majority of assistants (93.3 percent) had also completed some college-level work, and they were more likely than the average adult female in the county to have done so. Assistants had completed two-year degrees at a higher rate (26.7 percent) than the average adult female in Merced County, but at a lower rate than teachers. Assistants had completed four-year or higher degrees at a lower rate (2.7 percent) than teachers or adult females in the county. Nine out of ten directors had completed an AA or higher degree. Nearly one-half of directors (45.2 percent) had completed a BA or higher degree, and even more (48.4 percent) had completed an AA degree, as shown in Figure 3.8. Overall, 48.1 percent of centers had at least one director with a BA or higher degree.

Degree Attainment Through a Foreign Institution

Among the 4.4 percent of teachers who had earned a four-year or higher degree, only 16.7 percent were reported to have obtained it through a foreign institution. Among the 37.0 percent of teachers who had earned a two-year degree, none had obtained it through a foreign institution. Nearly one-half (45.2 percent) of directors had obtained four-year or higher degrees. Of these, 7.1 percent had obtained their degrees through a foreign institution.

Education, Training and Certification Related to Early Childhood Development

Research findings on the contribution of education and training to teaching staff competence and sensitivity suggest that formal higher education with a specific focus in early care and education leads to more effective care and teaching with children (Barnett, 2003; Whitebook, 2003; Zaslow & Martinez-Beck, 2005). Thus, another important aspect of professional preparation is the extent to which teachers and assistants have received training, completed coursework, or participated in activities specifically focused on issues related to early childhood development. Research also suggests the important contribution played by director education and stability to overall center quality (Whitebook & Sakai, 2004; Helburn, 1995). To acquire a picture of the professional preparation of teachers, assistants and directors, we asked directors whether they or their teaching staff:

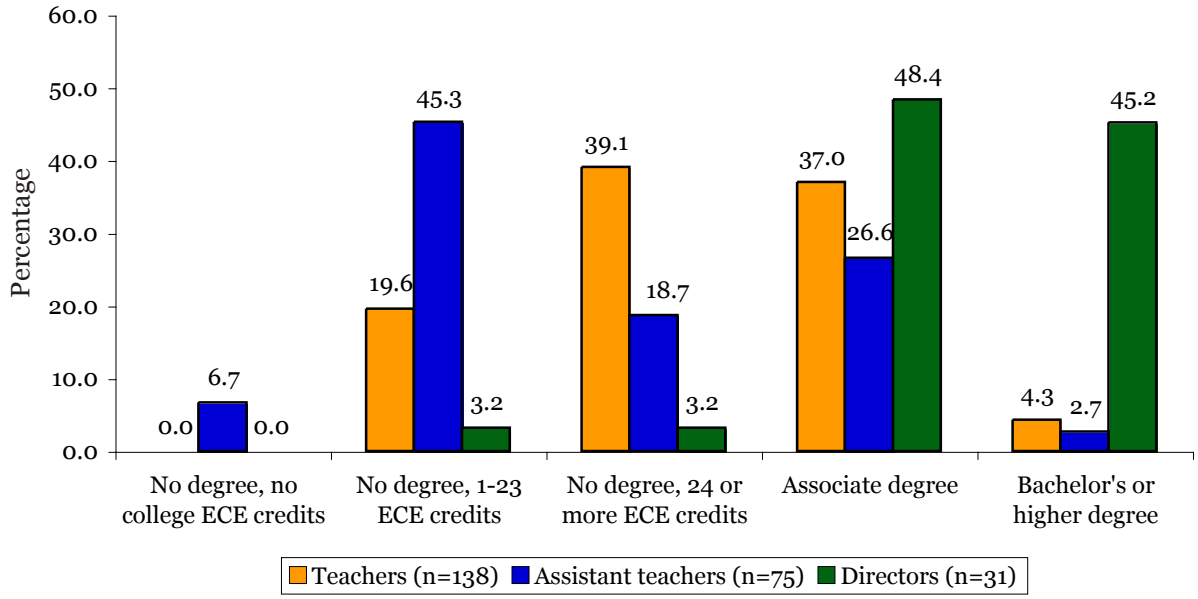
17 We asked directors whether teachers had obtained four-year or higher degrees, but we did not collect independent information on the percentage of teachers with graduate degrees.

Table 3.31. *Estimated Mean Percentage of Teachers and Assistant Teachers Employed in Centers, By Educational Level:*[a] *Countywide*

	Estimated mean percentage (SE)				
	No degree, no college ECE credits	No degree, 1-23 ECE credits	No degree, 24 or more ECE credits	Associate degree	Bachelor's or higher degree
Teachers	0.0 (0.00)	39.4 (5.29)	52.7 (5.43)	53.5 (6.82)	38.2 (13.63)
Number of centers	0	11	20	24	6
Assistant teachers	40.4 (19.94)	69.2 (8.42)	55.8 (11.02)	60.6 (12.72)	50.0
Number of centers	4	16	10	7	1

[a] Includes only centers with at least one staff member with that level of education.

Figure 3.8. *Estimated Educational Attainment of Center Infant and/or Preschool Teachers, Assistant Teachers and Directors: Countywide*



1. had completed a two-year or four-year degree related to early childhood development;
2. had taken college courses related to early childhood development if they had not completed a two-year or four-year degree; and/or
3. had participated in a professional development program or obtained a professional credential.

1) Degrees Related to Early Childhood Development

We examined the percentage of teachers, assistant teachers and directors with AA and BA degrees whose degree was related to early childhood development, and whether those with an AA or BA degree were more likely to have completed such a degree.

Overall, only 4.4 percent of teachers had completed a BA degree or higher, and 37.0 percent had completed an AA degree. One-fifth of teachers with a BA or higher degree (20.0 percent) and 84.3 percent of teachers with an AA degree had obtained an early childhood-related degree.

Overall, 26.6 percent of assistant teachers had completed an AA, BA or higher degree. More than three-quarters of assistants with an AA or higher degree (84.6 percent) had obtained a degree with an early childhood focus.

Overall, 45.2 percent of directors had completed a BA degree or higher, and 48.4 percent had completed an AA degree. About three-fifths (61.5 percent) of directors with a BA or higher degree and 96.9 percent of directors with an AA degree had obtained a degree related to early childhood.

Among infant and preschool teachers across all levels of educational attainment, less than one percent had earned a four-year degree or higher with an early childhood focus, and 30.3 percent had earned an AA degree with an early childhood focus. Among directors across all levels of educational attainment, 25.8 percent had earned a four-year degree or higher, and 48.9 percent had earned an AA degree, with an early childhood focus.

2) College Credits Related to Early Childhood Development

We were interested in knowing the extent to which teachers, assistant teachers and directors who had not completed degrees had participated in specialized early childhood-related education, and thus examined what percentage had completed from one to 23, or 24 or more, early childhood-related college credits.

More than one-half of all teachers across the county (58.7 percent) had completed such college credits but had not completed a degree. Thirty-nine (39.1) percent of teachers had completed 24 or more credits, and 19.6 percent had completed from one to 23 credits, of early childhood-related coursework. No teachers had completed neither a college degree nor any college credits related to early childhood.

Most assistant teachers (70.7 percent) had not completed a two-year or higher degree, but most had completed at least some college credits related to early childhood (64.0 percent). Directors reported that 45.3 percent of assistant teachers had completed from one to 23 credits, 18.7 percent had completed 24 or more credits, and only 6.7 percent had completed neither credits nor a degree.

Only 6.4 percent of directors across the county had not completed a degree. Less than five percent of directors had completed 24 or more credits (3.2 percent) and 3.2 percent had completed less than 24 credits. All had completed either a degree or college credits related to early childhood.

3) Participation in Professional Development Activities or Certification

Another measure of professional preparation is involvement with professional development activities and/or certification processes. We asked directors:

- whether they had heard of the CARES program, and whether their teachers or assistants currently participated in it;
- whether they or their teachers held a Child Development Permit issued by the California Commission on Teacher Credentialing; and
- whether they or their teachers held a Teacher Credential issued by the California Commission on Teacher Credentialing and/or by an equivalent agency in another state.

CARES

We asked directors whether they were familiar with CARES, and 28.1 percent of them were. This group of directors then reported that 54.5 percent of their teachers and 24.0 percent of their assistant teachers were currently CARES participants. Of the five centers that employed a director who had heard of CARES, three employed at least one teacher who was a CARES participant, and two centers employed at least one assistant who was a CARES participant.

Child Development Permits

The California Commission on Teacher Credentialing issues Child Development Permits for teachers, assistant teachers and directors that reflect different levels of education and specialized training. These permits are required in programs holding contracts with the California Department of Education (CDE), and are increasingly required of participants in CARES programs. We asked directors what percentage of their teachers and assistant teachers with two- or four-year degrees also held a permit.

One-third (33.3 percent) of all teachers with a BA or higher degree, and 70.6 percent of teachers with an AA degree, held a Child Development Permit, according to directors' reports. Among all teachers with an AA or higher degree, 66.6 percent held a permit. More than four-fifths (81.8 percent) of assistant teachers with an AA or higher degree held a permit. We did not collect information about permits for non-degreed teachers.

Directors were asked whether they held a Site Supervisor Permit intended for program or site directors; 46.2 percent of directors with a BA or higher degree, and 73.3 percent of directors with an AA degree, did so.

Teaching Credentials

A teaching credential, in contrast to a Child Development Permit, requires the holder to have completed a BA degree at a minimum, and typically the equivalent of a fifth year of college coursework. We asked whether directors or teachers who had completed a BA or higher degree held a teaching credential issued by the State of

California or another state.[18]

Among all teachers who had earned a BA or higher degree, none held a California teaching credential, or a credential from another state. Among all directors who had earned a BA or higher degree, 46.2 percent held a California teaching credential and none held one from another state.

18 See Bellm, Whitebook, Cohen & Stevenson (2004) for a description of the credentialing options in California related to early care and education. For this question, we did not ask respondents to specify the type of credential that teachers or directors held; thus, their answers could include early childhood-related or K-12 credentials. While the Standard Early Childhood Credential is no longer issued, the credential is still honored, though not required as a condition of employment, in most, if not all, settings.

How do levels of overall educational attainment, and professional preparation related to early childhood development, vary among teachers, assistant teachers and directors employed in centers licensed to serve infants and/or preschoolers?

Levels of education among teachers, assistant teachers and directors vary to some extent by ages of children served. Compared to centers enrolling preschoolers only, centers that enroll both infants and preschoolers report a somewhat lower percentage of teachers with BA or higher degrees, but a similar percentage of teachers with AA degrees.

Educational attainment also varies by centers' relationship to public subsidy. Centers receiving no public dollars report a slightly higher percentage of teachers with a BA or higher degree than centers receiving public dollars through vouchers or a contract. Contracted centers report a higher percentage of teachers with an AA degree, and centers receiving vouchers report a higher percentage of directors with a BA or higher degree than contracted centers or those receiving no public dollars. Assistant teachers in contracted centers report higher levels of education than their counterparts in other types of centers.

Educational attainment varies among teachers and assistants with different demographic characteristics. Teachers with bachelor's or higher degrees are older, on average, than those with less education, whereas assistant teachers with two year or higher degrees are younger than those without degrees. Teachers' educational attainment also varies by ethnicity and language: less than five percent of teachers in Merced County have attained a BA or higher degree, and two-thirds of those teachers are White, Non-Hispanic. Among teachers with AA degrees, White, Non-Hispanic teachers are represented proportionately to the ethnic distribution of the teacher population as a whole, while Latinas are under-represented. Slightly more than one-third of White, Non-Hispanic teachers have attained an AA or higher degree, compared to about one-quarter of Latinas. White, Non-Hispanic and Latina teachers are less likely to have earned a BA or higher degree than their counterparts in the overall county population.

With respect to linguistic capacity, teachers with no degrees, on average, are more likely than either teachers with BA or higher degrees, or teachers with AA degrees, to have the capacity to communicate with children in a language other than English. Assistant teachers with an AA or higher degree are less likely to speak a language other than English fluently than those with no degree.

In the previous section, we described the educational attainment and early childhood-related professional development of center-based teachers, assistants and directors employed in centers licensed to serve infants and/or preschoolers across Merced County as a whole. Here, we explore differences within the workforce along these dimensions based on:

- the ages of children enrolled in centers,
- whether centers receive public dollars to care for children of low-income families,
- teaching staff compensation and turnover in centers, and
- such teacher, assistant teacher and director demographic characteristics as age, ethnicity and language background.

Overall Educational Attainment and Professional Certification, by Ages of Children Served

Because of proposed increases in qualifications for teachers working in publicly funded preschool programs targeting four-year-old children, there is considerable interest in whether teachers who currently work with preschoolers differ in educational attainment from those working with younger children. We examined whether centers that enrolled only preschoolers varied in the overall educational level of teachers and assistants from those that enrolled both infants and preschoolers.[19]

Compared to centers enrolling preschoolers only, centers that enrolled both infants and preschoolers reported a somewhat lower percentage of teachers with BA or higher degrees, but a similar percentage of teachers with AA degrees, as shown in Table 3.32. Centers serving infants also reported a higher percentage of directors with a four-year or higher degree. Assistants' educational attainment varied little by whether centers enrolled infants or not.

Overall Educational Attainment, and Early Childhood-Related Training, by Centers' Relationship to Public Funding

Research suggests that children of low-income families derive greater benefit from higher-quality early care and education programs than do children of middle- and upper-income families (Helburn, 1995). Studies have found programs rated higher in quality to be staffed by teachers and assistant teachers with higher levels of education, and with training specifically focused on early childhood (Helburn, 1995; Galinsky, Howes, Kontos & Shinn, 1994; Whitebook, Howes & Phillips, 1990; Whitebook & Sakai, 1995).

In California, staff in centers receiving public dollars to serve children of low-income families are required to meet different standards, depending on whether their center holds a contract with Head Start or the California Department of Education (CDE), or receives vouchers for children of low-income families. In centers holding contracts, instructional and administrative staff are required to meet higher educational standards than those in centers receiving public dollars through vouchers. Staff working in centers receiving vouchers are not required to

19 Because so few programs are licensed to serve infants exclusively, we could not compare such programs to those that serve preschoolers exclusively. Also, because of the complexity of staffing patterns as well as limitations on the length of the survey, we were not able to ask directors to report separately on the characteristics of teachers working exclusively with younger children and those working with older children.

Table 3.32. *Estimated Educational Attainment of Teachers, Assistant Teachers and Directors, By Ages of Enrolled Children: Countywide*

		Estimated percentage					
		Bachelor's degree or higher	Associate degree	24 or more ECE credits	1-23 ECE credits	No degree, no ECE credits	*Number of staff*
Teachers	Centers enrolling infants[a]	0.0	36.2	44.9	18.8	0.0	69
	Centers without infants	8.7	37.7	33.3	20.3	0.0	69
	All centers	4.3	37.0	39.1	19.6	0.0	138
Assistant teachers	Centers enrolling infants[a]	0.0	33.3	22.2	44.5	0.0	27
	Centers without infants	4.2	22.9	16.7	45.8	10.4	48
	All centers	2.7	26.6	18.7	45.3	6.7	75
Directors	Centers enrolling infants[a]	50.0	50.0	0.0	0.0	0.0	10
	Centers without infants	42.9	47.6	4.8	4.8	0.0	21
	All centers	45.2	48.4	3.2	3.2	0.0	31

[a] Most of these centers also enroll older children.

meet any additional qualifications beyond what is required for centers receiving no public dollars. Although some centers may set qualifications at a higher level, centers receiving vouchers and centers receiving no public dollars are only required by law to meet the standards mandated by Community Care Licensing.

We found that teachers' educational attainment varied by centers' relationship to public subsidy. As shown in Figures 3.9, 3.10 and 3.11, centers receiving no public dollars reported a slightly higher percentage of teachers with a BA or higher degree than centers receiving public dollars through vouchers or a contract. Contracted centers reported a higher percentage of teachers with an AA degree, and centers receiving vouchers reported a higher percentage of directors with a BA or higher degree than centers receiving no public dollars or contracted centers. Assistant teachers in contracted centers reported higher levels of education than their counterparts in other types of centers.

Overall Educational Attainment, by Teacher and Assistant Demographic Characteristics

Among teachers and assistant teachers with different levels of education, we examined such characteristics as age, ethnicity and language background.

1) Overall Educational Attainment, by Age

Two intertwined concerns arise with regard to age distribution among teachers and assistants with different levels of educational attainment:

- Is the field attracting younger people to its ranks?
- Are new recruits more or less educated and trained than older, more tenured members of the workforce?

Recent research has documented an alarming national trend of educational decline among the early care and education workforce, with particular concern that the most educated segment of the workforce is approaching retirement at a time when proposed qualifications for teachers are increasing (Herzenberg, Price & Bradley, 2005). As shown in Table 3.33, teachers with BA or higher degrees were older, on average, than teachers with less education. In particular, nearly one-quarter of such teachers (25.0 percent) were age 50 or older, compared to 15.7 percent of teachers with AA degrees, and 5.2 percent of teachers with no degrees. Among assistant teachers, those with an AA or higher degree were more likely to be younger than 30 years old and less likely to be over 50 years old than those with no degrees. Similar patterns were identified among centers serving children of different ages or with varying relationships to public subsidy.

2) Overall Educational Attainment, by Ethnicity

We examined teacher and assistant teacher ethnicity and educational background along three dimensions:

1. the ethnic distribution of teachers and assistants across different levels of formal education;
2. the distribution of educational attainment within various ethnic groups, and
3. the ethnic distribution of teachers and assistant teachers at different levels of education, compared to that of Merced County's adult population.

Figure 3.9. *Estimated Educational Attainment of Teachers, By Centers' Relationship to Public Subsidy: Countywide*

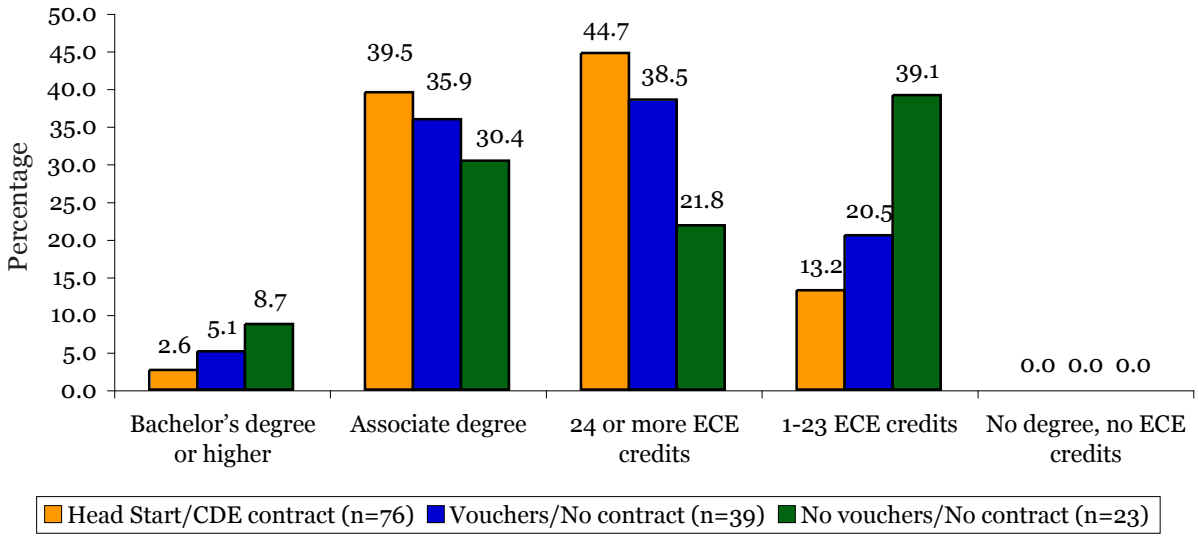


Figure 3.10. *Estimated Educational Attainment of Directors, By Centers' Relationship to Public Subsidy: Countywide*

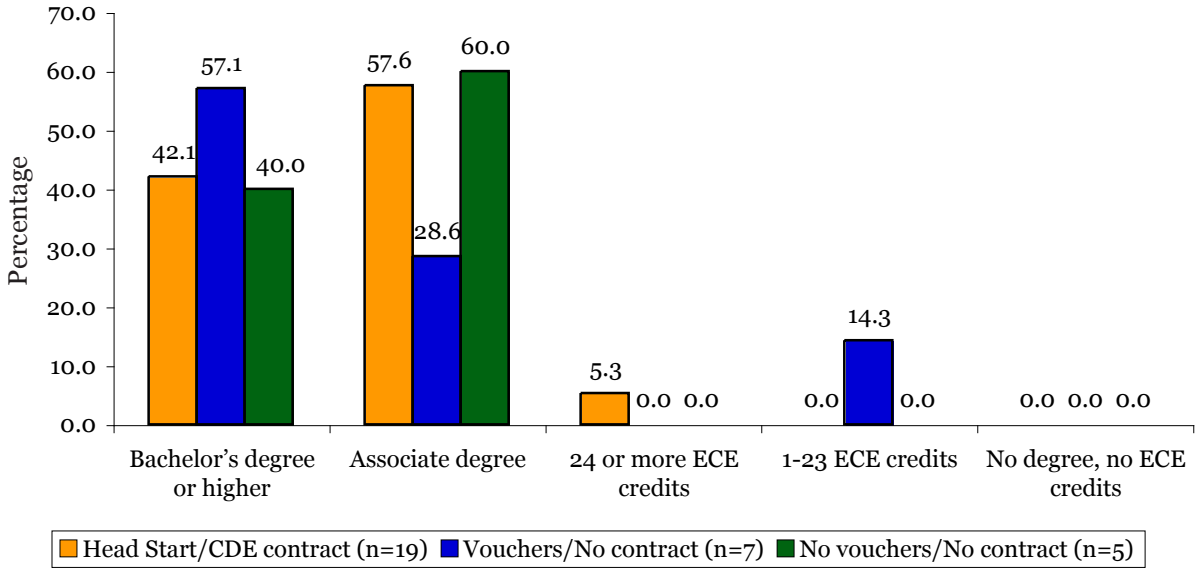
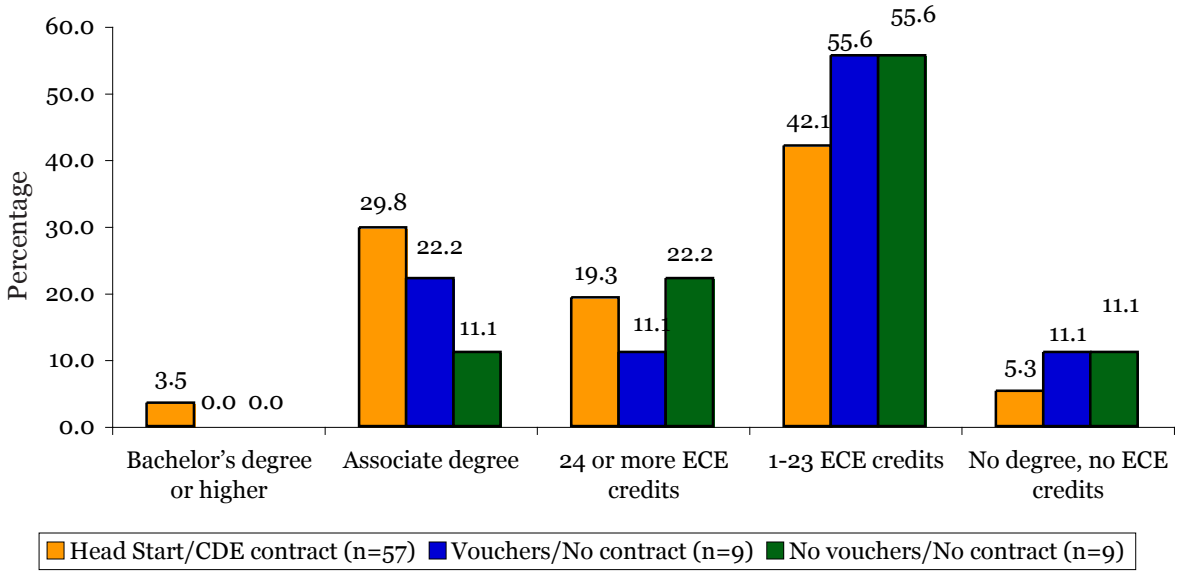


Figure 3.11. *Estimated Educational Attainment of Assistant Teachers, By Centers' Relationship to Public Subsidy: Countywide*



Combined, these analyses provide a picture of how well teachers of various ethnicities were represented at different educational levels, how this distribution reflected general trends in the population, and where supports and incentives might be directed toward particular ethnic groups in order to boost their educational attainment.

The ethnic distribution of teachers and assistant teachers varied across levels of educational attainment, as shown in Table 3.34. White, Non-Hispanic teachers comprised 35.1 percent of all teachers, and 66.6 percent of teachers with BA or higher degrees. Latinas comprised 51.5 percent of all teachers, but none of the teachers with BA or higher degrees. African American teachers comprised 5.2 percent of all teachers, but more than three times as many of the teachers with BA or higher degrees (16.7 percent). No Asian/Pacific Islander teachers, who comprised 2.2 percent of all teachers, had obtained a BA or higher degree. Among teachers with AA degrees, White, Non-Hispanic teachers were represented proportionately to the ethnic distribution of the teacher population as a whole, while Latinas were under-represented. As shown in Table 3.34, a similar pattern was found among assistant teachers.

As for the distribution of educational attainment (as represented by completion of degrees) among various ethnic groups, slightly more than one-third of White, Non-Hispanic teachers had attained an AA or higher degree, compared to about one-quarter of Latinas, as shown in Table 3.35. Among assistant teachers, 54.5 percent of White, Non-Hispanics and 20.5 percent of Latinias had completed a two-year or higher degree.

Next, we sought to determine the ethnic distribution of teachers at different levels of education, as compared to Merced County's overall adult population. For example, were Latina teachers more or less likely than other Latino adults in the county to have achieved a BA degree? To make this comparison, we examined 2000 U.S. Census data on Merced County adults' attainment of BA or higher degrees. No Latina or Asian/Pacific Islander teachers had attained BA or higher degrees, compared to 3.5 percent of all Latina adults and 13.2 of all Asian/Pacific Islander adults in the county. White, Non-Hispanic teachers (8.5 percent) had attained BA or higher degrees at a lower rate than other White, Non-Hispanic Merced County adults (17.0 percent). Only African American teachers (14.3 percent) had attained a BA or higher degree at a rate similar to their counterparts in the county as a whole (all African American adults, 11.1 percent). Given the small number of adults in the county who had earned BA or higher degrees, however, these results should be interpreted with caution.

3) Overall Educational Attainment, by Language

Since many of Merced County's young children speak a first language other than English, and many have parents with limited English proficiency, there is understandable concern about the ability of the early care and education workforce to communicate well with children and their adult family members, and to create learning environments for children that build upon their first language as a foundation for successful mastery of English (Garcia, 2005; Sakai & Whitebook, 2003; Wong-Fillmore & Snow, 1999). Because of the commonly shared goal among policy

Table 3.33. *Estimated Percentage of Teachers, By Age and Educational Attainment: Countywide*

	Estimated percentage			
	All teachers	Teachers with bachelor's or higher degree	Teachers with associate degree	Teachers with no degree
Under 30 years old	28.7	25.0	21.6	33.8
30 to 39 years old	37.5	25.0	37.2	38.9
40 to 49 years old	23.5	25.0	25.5	22.1
50 years and older	10.3	25.0	15.7	5.2
Total	100.0	100.0	100.0	100.0
Number of staff	136	8	51	77

Table 3.34. *Estimated Percentage of Teachers and Assistant Teachers, By Ethnicity and Educational Attainment: Countywide*

	Estimated percentage						
	All teachers	Teachers with bachelor's or higher degree	Teachers with associate degree	Teachers with no degree	All assistant teachers	Assistant teachers with associate or higher degree	Assistant teachers with no degree
White, Non-Hispanic	35.1	66.6	36.7	31.6	30.1	54.5	19.6
Latina	51.5	0.0	38.8	63.3	60.3	40.9	68.6
African American	5.2	16.7	10.2	1.3	2.7	0.0	4.0
Asian/Pacific Islander	2.2	0.0	4.1	1.3	2.7	4.6	2.0
American Indian or Alaskan Native	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiethnic	3.0	0.0	8.2	0.0	4.2	0.0	5.8
Other	3.0	16.7	2.0	2.5	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of teachers	134	6	49	79	73	22	51

makers and advocates to build not only a more educated but an ethnically and linguistically diverse early care and education workforce (Calderon, 2005), it is important to understand how language capacity varies among teachers and assistant teachers with different levels of educational attainment, in order to design and target professional development resources.

The following is an analysis of educational attainment by language, but it is important to note that language ability was reported by directors, rather than independently verified; we also were unable to determine whether teachers and assistants who spoke a language besides English fluently were also fluent in English. Finally, this study does not permit us to assess whether or not there was a linguistic match between teaching staff and the children they served.

Our analyses focused on the percentage of teachers and assistants at different educational levels who had the director-reported capacity to communicate with children in a language other than English. Across all educational levels, 52.9 percent of teachers and 58.7 percent of assistant teachers had such a capacity. Teachers with AA degrees were somewhat more likely than teachers with BA or higher degrees, and less likely than teachers with no degrees, to have this linguistic capacity, as shown in Table 3.36. We do not know, however, which teachers at any educational level were bilingual, and which spoke a language other than English fluently but were limited in their English skills.

Among assistant teachers, those with an AA or higher degree (50.0 percent) were less likely than those with no degree (62.6 percent) to speak a language other than English fluently.

Table 3.36 also shows the percentage of teachers at various educational levels, by center type, with this director-reported linguistic capacity. Centers serving infants and preschoolers employed a higher percentage of such teachers with AA degrees or no degrees than centers not serving infants. Centers holding a contract with Head Start or CDE employed a higher percentage of teachers who could communicate fluently with children and families in a language other than English than did centers receiving vouchers or no public funding. In contracted programs, the most notable difference from other types of centers was among teachers without degrees, followed by teachers with AA degrees.

Table 3.35. *Estimated Percentage of Teachers with a Bachelor's Degree or Higher, Associate Degree, or No Degree, By Ethnicity: Countywide*

	Estimated percentage				
	Bachelor's or higher degree	Associate degree	No degree	*Total*	*Number of teachers*
White, Non-Hispanic	8.5	38.3	53.2	100.0	47
Latina	0.0	27.5	72.5	100.0	69
African American	14.3	71.4	14.3	100.0	7
Asian/Pacific Islander	0.0	66.7	33.3	100.0	3

Table 3.36. *Estimated Percentage of Teachers at Different Levels of Educational Attainment Who Speak A Language Other Than English Fluently: Countywide, By Ages of Enrolled Children, and By Centers' Relationship to Public Subsidy*

	Estimated percentage (SE)		
	Teachers with bachelor's degree or higher	Teachers with an associate degree	Teachers with no degree
Countywide	16.7	37.3	65.4
Number of teachers	6	51	81
Centers Enrolling Infants[a]	0.0	44.0	77.3
Number of teachers	0	25	44
Centers without Infants	16.7	33.7	57.4
Number of teachers	6	26	37
Head Start/CDE contract	50.0	50.0	81.8
Number of teachers	2	30	44
Vouchers/No contract	0.0	7.1	43.5
Number of teachers	2	14	23
No vouchers/No contract	0.0	42.9	50.0
Number of teachers	2	7	14

[a] Most of these centers also enroll older children.

How well prepared are center-based teaching staff to care for and educate children who are dual language learners or have special needs?

Only about one-half of centers employ teachers who have participated in non-credit training focused on dual language learning in young children, and only about one-quarter of centers employ teachers who have completed college coursework in that subject, despite the growing numbers of young children in Merced County who speak a language other than English in their homes. Centers that report that at least one of their teachers has participated in non-credit training related to dual language learning report somewhat higher overall levels of education among their teachers.

Many more teachers have participated in professional development related to working with children with special needs. Two-thirds of centers report that at least one of their teachers has participated in non-credit training, and about three-fifths report that at least one teacher has completed college credits, related to children with special needs. Centers that report caring for at least one child with special needs also report a higher percentage of teachers with non-credit training to work with children with special needs.

As Merced County considers how best to prepare its workforce to meet the needs of its young children, particular concern centers on two groups of children:

- the growing number who are dual language learners, many of them from immigrant families; and
- the growing number who have been identified as having special developmental needs.

A pressing question is whether the current early care and education workforce has sufficient skill and knowledge to meet the needs of these children. While it was beyond the scope of this study to assess the overall knowledge and competencies of center-based teaching staff, our interview did allow some initial exploration of teachers' professional preparation related to dual language learners and/or children with special needs.[20]

Preparation to Work with Young Children Acquiring a Second Language

In 2005, nearly one-half of children entering public kindergarten in Merced County were estimated to be dual language learners (California Department of Education, 2005). According to recent projections of the growth of this segment of California's population over the next several decades (Hill, Johnson & Tafoya, 2004), it is likely that soon the majority of young children receiving early care and education services in the state will be dual language learners and/or living in families in which some or all of the adults do not speak English.

20 Directors were asked the number of teachers in their centers who had participated in credit-bearing coursework or non-credit training focused on working with children who were dual language learners and/or those with special needs. Because of concern about the length of the survey, these questions were not asked with respect to directors or assistants.

In this survey, we were able only to investigate which languages teachers spoke, not the languages spoken by children in their care. We know, however, from anecdotal reports that a sizeable portion of center teachers in Merced County either care for children for whom English is a second language or will likely be called upon to do so over the course of their careers. We also know from a recent survey of early childhood teacher preparation programs in California institutions of higher education (Whitebook, Bellm, Lee & Sakai, 2005) that only one-quarter of these programs require a course focused on second-language acquisition in young children, suggesting that exposure to professional development around these issues through college courses is limited.

Our goal was to ascertain the extent to which teachers had received any training focused on this topic, by asking directors whether their teachers had participated in relevant credit-bearing courses and/or non-credit training. Directors reported that, on average, 49.0 percent of teachers had received non-credit training, but only 16.8 percent had completed college coursework, focused on dual language learning in young children. (See Table 3.37.) We estimate that 46.4 percent of centers had no teachers with non-credit training, and 71.4 percent had no teachers who had taken college courses, related to dual language learning in children. (See Table 3.38.)

There were some differences between centers serving infants and those serving older children with respect to teacher professional preparation related to working with dual language learners. Centers serving infants reported that 75.3 percent (SE=14.4) of their teachers had participated in non-credit training, while centers serving only older children reported that 36.6 percent (SE=10.8) of their teachers had such training.

The average percentage of teachers who had participated in professional development related to dual language learning varied by the centers' relationship to public subsidies. As shown in Figure 3.12, centers operating under a contract with Head Start or the California Department of Education reported that about three-quarters of the teachers, on average, had participated in non-credit training. Centers receiving no public dollars or those receiving vouchers for at least one child reported a smaller percentage of teachers who had participated in such professional development.

We next examined whether centers employing at least one teacher with either non-credit training or college credits related to dual language learning in children varied with respect to the percentage of teachers with AA or higher degrees. As shown in Table 3.39, there were some differences: centers that had at least one teacher with non-credit training reported a higher average percentage of teachers with an AA degree (53.4 percent) than centers reporting no teachers with non-credit training (26.2 percent).

Centers with at least one teacher who had participated in training or coursework related to dual language learning did not differ from centers with no such teachers with respect to the average percentage of teachers who spoke a language other than English.

Table 3.37. *Estimated Mean Percentage of Teachers with At Least One Hour of Non-Credit Training and/or One College Credit Related to Dual Language Learning Children: Countywide*

	Estimated percentage (SE)
Non-credit training	49.0 (9.20)
Number of centers	28
College credits	16.8 (6.19)
Number of centers	28

Table 3.38. *Estimated Percentage of Centers Employing at Least One Teacher With Non-Credit Training and/or College Credits Related to Dual Language Learning Children: Countywide*

	Estimated percentage (SE)
At least one teacher with non-credit training	53.6 (9.60)
Number of centers	28
At least one teacher with college credits	28.6 (8.69)
Number of centers	28

Figure 3.12. *Estimated Mean Percentage of Teachers with Non-Credit Training and/or College Credits Related to Dual Language Learning Children: Countywide, and by Centers' Relationship to Public Subsidy*

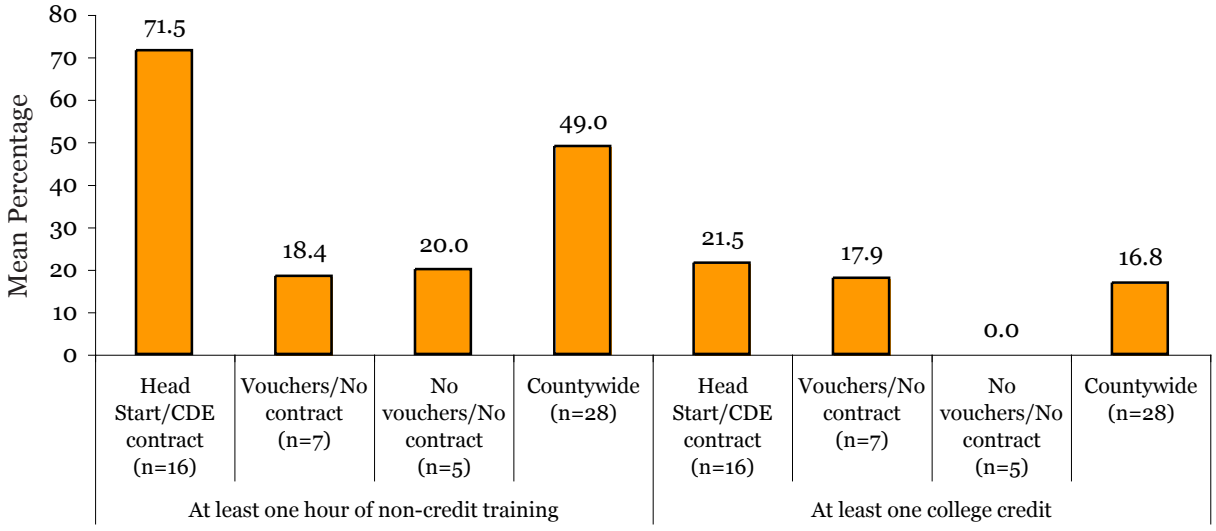


Table 3.39. *Estimated Mean Percentage of Teachers with Associate or Higher Degrees in Centers with and without Teachers with Non-Credit Training and/or College Credits Related to Dual Language Learning Children: Countywide*

	Mean percentage (SE)	
	Teachers with an associate degree*	Teachers with a bachelor's degree or higher**
No teachers with non-credit training	26.2 (6.83)	9.9 (4.41)
Number of centers	13	13
At least one teacher with non-credit training	53.4 (10.60)	6.7 (6.67)
Number of centers	15	15
No teachers with college credits	34.8 (7.84)	11.5 (5.55)
Number of centers	20	20
At least one teacher with college credits	63.9 (14.09)	0.0 (0.0)
Number of centers	8	8

*$p < .05$, Centers with at least one teacher with non-credit training > centers with no teachers with non-credit training.
**$p < .05$, Centers with at least one teacher with college credtis < centers with no teachers with college credits.

Preparation to Work with Young Children With Special Needs

Over the last 30 years, the deepening understanding of and ability to identify developmental challenges, coupled with changes in federal law,[21] have led to the increased involvement of early childhood settings in providing services to children with special physical and developmental needs and/or disabilities (Shonkoff & Phillips, 2000). Recognizing that the early care and education workforce was being increasingly called upon to provide such services, the California Legislature passed SB 1703 in 2000, supporting local child care resource and referral programs and child care planning councils in providing training related to children with special needs. This funding was renewed in 2005.

For this study, we were interested in determining whether center teachers had received professional preparation related to children with special needs. Specifically, we determined:

1. whether or not centers employed any teachers who had participated in special needs-related training or college courses,
2. the average percentage of teachers in centers who had participated in special needs-related training or college courses, and
3. whether centers that reported caring for at least one child with special needs employed a higher percentage of teachers who had participated in relevant education and training.

Table 3.40. *Estimated Percentage of Centers Employing at Least One Teacher with Non-Credit Training and/or College Credits Related to Children with Special Needs: Countywide*

	Estimated percentage (SE)
At least one teacher with non-credit training	66.7
Number of centers	32
At least one teacher with college credit	62.5
Number of centers	32

Overall Levels of Special Needs-Related Training and Courses

Two-thirds (66.7 percent) of centers reported that at least one of their teachers had participated in non-credit training related to children with special needs. A slightly smaller percentage of centers (62.5 percent) reported that at least one of their teachers had participated in college credit-bearing courses on children with special needs. (See Table 3.40.) As shown in Table 3.41, on average, centers reported that 58.5 percent of their teachers had participated in non-credit training and 41.8 percent in college courses related to children with special needs.

As shown in Table 3.41, the average percentage of teachers who had participated in training related to

21 Two federal laws in particular have contributed to the inclusion of children with special needs in early childhood programs. The American with Disabilities Act (ADA), a federal civil rights law passed in 1990, prohibits discrimination by child care centers and family child care providers against individuals with disabilities. The ADA requires centers to assess, on a case-by-case basis, what a child with a disability requires in order to be fully integrated into a program, and whether reasonable accommodation can be made to allow this to happen. In addition, the Individuals with Disabilities Education Act, passed in 1975 and reauthorized in 2004, requires public schools to meet the educational needs of children as young as three with disabilities, guarantees early intervention services to infants and toddlers up to age three in their "natural environments," and addresses the transition of infants and toddlers from early intervention services to preschool programs. California's equivalent law, the Early Intervention Services Act, is also known as Early Start (Child Care Law Center, 2005).

children with special needs varied by centers' relationship to public subsidy. Centers with a Head Start or CDE contract employed more teachers who had participated in special needs-related training than did centers receiving vouchers or receiving no subsidy.

Centers that reported at least one teacher with college credits related to children with special needs also reported somewhat higher educational levels among their teachers, as shown in Table 3.42. Centers employing at least one teacher who had participated in such credit-bearing courses reported a higher average percentage of teachers who had completed an AA (52.3 percent) than centers that did not employ a teacher with this education (21.9 percent).

The average percentage of teachers who had participated in training or college credits related to children with special needs did not vary by whether centers served infants or only older children.

Special Needs-Related Credits and Training, by Number of Children with Special Needs Served

Overall, 51.6 percent of centers (SE=9.1) reported caring for at least one child with special needs. As shown in Table 3.43, centers caring for at least one child with special needs employed a higher percentage of teachers who had participated in non-credit special needs training than centers caring for no such children. Among centers that had at least one child with special needs in their care, 80.0 percent of teachers had participated in relevant non-credit training, whereas only 27.3 percent of teachers in centers serving no such children had received such non-credit training. As shown in Table 3.44, there were no statistically significant differences between centers with and without children with special needs in the average percentage of teachers who had participated in relevant credit-bearing courses.

Table 3.41. *Estimated Mean Percentage of Teachers with Non-Credit Training and/or College Credits Related to Children with Special Needs: Countywide, and by Centers' Relationship to Public Subsidy*

	Estimated mean percentage (SE)			
	Countywide	Head start/CDE	Vouchers/ No contract	No vouchers/ No contract
Non-credit training*	58.5 (8.83)	65.0 (10.88)	37.5 (20.16)	62.5 (23.94)
Number of centers	27	17	6	4
College credits	41.8 (8.52)	46.4 (10.59)	25.6 (15.82)	50.0 (28.87)
Number of centers	24	14	6	4

*$p < .05$, Head Start/CDE> Vouchers/No contract, No vouchers/No contract.

Table 3.42. *Estimated Mean Percentage of Teachers with AA or Higher Degrees, in Centers with and without Teachers with Special Needs-Related Non-Credit Training and/or College Credits: Countywide*

	Mean percentage (SE)		
	Teachers with AA Degree*	Teachers with a BA or higher degree	*Number of centers*
No teachers with non-credit training	25.3 (11.18)	7.4 (4.04)	9
At least one teacher with non-credit training	53.9 (8.79)	9.0 (6.05)	18
No teachers with college credits	21.9 (7.54)	12.5 (6.05)	9
At least one teacher with college credits	52.3 (9.99)	6.7 (6.00)	15

*$p < .05$, Centers with at least one teacher with college credits > centers with no teachers with college credits.

Table 3.43. *Estimated Mean Percentage of Teachers with Non-Credit Training Related to Children with Special Needs, by Number of Enrolled Children with Special Needs: Countywide*

	Estimated mean percentage (SE)
No children with special needs	27.3 (14.08)
At least one child with special needs*	80.0 (7.84)
Number of centers	27

* p < .01, Centers with at least one child with special needs > centers with no children with special needs.

Table 3.44. *Estimated Mean Percentage of Teachers with College Credits Related to Children with Special Needs, by Number of Enrolled Children with Special Needs: Countywide*

	Estimated mean percentage (SE)
No children with special needs	48.9 (15.11)
At least one child with special needs	36.7 (10.13)
Number of centers	24

Discussion

This report provides the latest comprehensive profile of Merced County's center-based early care and education workforce. Here, we briefly comment on the findings we consider most relevant to current efforts to design and improve policies that impact the quality and availability of services for young children prior to kindergarten.

Our study has sought to answer five overarching questions:

1. Who are the teachers, assistant teachers and directors in Merced County's licensed child care centers?
2. What are the characteristics of children in Merced County child care centers licensed to serve infants and/or preschoolers?
3. What is the level of educational attainment and early childhood development-related training among teachers, assistants, and directors in Merced County's child care centers?
4. How do levels of overall educational attainment, and professional preparation related to early childhood development, vary among teachers, assistant teachers and directors employed in centers licensed to serve infants and/or preschoolers?
5. How well prepared are teachers to care for and educate children who are dual language learners or have special needs?

1) Who are the teachers, assistant teachers and directors in Merced County's licensed child care centers?

In Merced County, a teacher in a child care center licensed to serve infants and/or preschoolers is more likely to be Latina than she is to be White, Non-Hispanic. Teachers and assistant teachers are more diverse than directors, and more closely reflect the ethnic distribution of children ages birth to five in the county. In addition, teachers are more ethnically diverse than K-12 teachers. Compared to women in Merced County, teachers and assistant teachers are more likely to be under age 30 and less likely to be over 50 years of age. More than one-half of teachers and assistant teachers, and one-third of directors, are able to speak a language other than English fluently, most typically Spanish.

These demographic profiles vary, however, by such center characteristics as age group of children served. For example, centers serving infants are more likely to employ an assistant teacher who speaks a language other than English.

More than one-half of teachers and directors have worked in their present jobs for five years or less, while two-thirds of assistant teachers have been on the job for five years or less. Teachers with a BA earn, on average, $14.96 an hour. The highest-paid assistants can expect to earn $8.40 an hour, on average, if they work in a center receiving public dollars through vouchers, and $9.54 an hour in a center holding a contract with Head Start or CDE.

Merced County's early care and education (ECE) workforce is much more ethnically and linguistically diverse than its teachers of Grades K-12. Approximately three-quarters of the county's K-12 teachers, but only about one-third of its child care center teachers, are White, Non-Hispanic. Child care center teachers also more closely match the diversity of children in the county, and assistant teachers are even more diverse. This richness of linguistic and cultural diversity provides a promising foundation on which to revamp and expand services for Merced County's young children.

But this comparison with the K-12 workforce can also obscure the stratification by ethnicity that does exist in the ECE workforce. Our data reveal substantial divisions by ethnicity and language that require attention. Stated simply, slightly more than one-half of child care center directors were White, Non-Hispanic, whereas most assistant teachers were women of color. For example, 34.5 percent of directors, 51.5 percent of teachers and 60.3 percent of assistant teachers were Latinas. Similarly, more than one-half of assistant teachers and teachers were able to communicate with children in a language other than English, whereas only about one-third of directors reported such linguistic skills.

In light of the continuing efforts to upgrade the knowledge and skills of Merced County's early care and education workforce – in particular, the proposed increase in educational standards for teachers in publicly funded preschool – the challenge will be to intentionally maintain and expand this workforce diversity. This can only be done by

investing in a range of appropriate supports that will truly allow people from a wide spectrum of cultural, educational and financial backgrounds to access professional development opportunities. A proactive strategy will be essential, including scholarships, tutoring, conveniently scheduled and located classes, and resources for students learning English as a second language. The goal must extend beyond building a diverse workforce to ensuring that such diversity is well distributed across all positions and all types of child care centers.

This study demonstrates a lack of staff stability in Merced County's child care centers. While, on average, 14.0 percent of teachers and 17.5 percent of assistant teachers had left their jobs in the past year, one-quarter of directors (25.9 percent) had done so. Although many centers reported no turnover among teaching staff during the last year, a sizeable portion reported that about one-quarter of their teachers and one-half of their assistant teachers had left their jobs. Only about two-fifths of teachers and directors and one-third of assistant teachers had been working in their centers for five years or more.

Given the documented relationship between turnover and program quality, the persistence of high turnover in the ECE field, often linked with poor compensation, is of serious concern. Teachers with BA or higher degrees earned, on average, $14.96 per hour, or $31,117 per year, compared to a mean annual salary for Merced County elementary school teachers of $59,541 (California Department of Education, 2005), typically distributed over a shorter work year. Should publicly funded preschool positions become available, at pay levels comparable to those of K-12 teachers, it is likely that many in the ECE workforce will seek these new opportunities. While this will likely create some disruption, comparable wages carry the possibility of a more stable teacher workforce, at least among teachers of four-year-olds. It is less clear what impact this shift could have on other staff positions – notably assistant teachers, teachers of younger children, and even directors – absent some equivalent overall increase in ECE workforce compensation.

2) What are the characteristics of children in Merced County child care centers licensed to serve infants and/or preschoolers?

In Merced County, teachers and assistants care for and educate approximately 4,600 children in centers licensed to serve infants and/or preschoolers. Almost 90 percent of the children in these centers are not yet in kindergarten, and about 63 percent are between the ages of three and five. Eleven percent are children under age two, about 13 percent are age two, and 13 percent are in kindergarten or a higher grade. On average, approximately four percent of the children enrolled in these centers are reported by directors to have special needs.

More than 80 percent of centers report caring for at least one child who receives public child care assistance. Twenty-eight percent of centers receive public dollars in the form of vouchers, and about one-half of centers receive public dollars through a contract with Head Start or the California Department of Education, to cover the cost of care for the subsidized children they serve. Centers vary considerably in size, with about 20 percent enrolling 31 or fewer children and 20 percent enrolling over 80 children.

Our study provides a picture of the size and organization of centers licensed to serve children birth to five, as well as the children attending these centers in terms of age, special needs, and whether their families receive public subsidies to cover the cost of their care.

With respect to center size and organization, licensed child care centers serving children prior to kindergarten are notably diverse. While the majority of centers are operated on a nonprofit basis, a sizeable portion are publicly operated or organized as for-profit businesses. Although centers, on average, serve about 55 children birth to five years old and employ about five teachers and three assistant teachers, one-quarter of centers are small businesses, and 10 percent are organizations approaching the size of small elementary schools. On the one hand, this variety speaks to the richness of options available to families, as well as varied opportunities for those seeking to work in or operate child care centers. Yet this diversity also helps to explain the challenge in reaching consensus about workforce standards, or employee benefits such as health insurance, retirement assistance or professional development, all of which may have different implications depending on a center's size and organization.

With respect to age, the standard practice among centers statewide is to care for children between the ages of two and five. Centers care for more children in the two-to-five age range than under age two, largely because of differing staffing requirements (and associated costs) for serving infants and toddlers. The child composition and financial stability of centers may shift if more spaces become available for four-year-olds through publicly funded preschool.

For many years in California, only centers contracting with CDE or Head Start received public dollars to cover the cost of serving subsidized children. But over the last two decades, public dollars have become available to both for-profit

and nonprofit centers, as well as licensed and license-exempt home-based case. Remarkably, more centers now receive public dollars in the form of vouchers than through contracts. The question arises whether public dollars are being used to provide high-quality services to young children, since centers (and homes) accepting voucher recipients are not required to meet any standards beyond basic licensing requirements, widely acknowledged as minimal at best. Of additional concern is the fact that many contracted centers are reimbursed at a lower rate per child than centers receiving public dollars through vouchers, despite the fact (discussed more fully below) that contracted centers on average employ staff with higher levels of education and more early childhood professional preparation.

While an assessment of quality was beyond the scope of this study, our findings do point to the potential leverage for improving quality that could be linked to the voucher system, since it currently touches such a high proportion of licensed centers in the state. Given the documented benefits to young children from low-income families who attend a high-quality early childhood program (Helburn, 1995), it is fitting to explore how public dollars could be used to upgrade these settings as a way to narrow the achievement gap between children of low-income families and those from better-off families.

Further discussion of children with special needs can be found below, under question 5.

3) What is the level of educational attainment and early childhood development-related training among teachers, assistants, and directors in Merced County's child care centers?

Compared to Merced County's overall adult female population, teachers working in centers enrolling infants and/or preschoolers are more likely to have attended college and/or completed a two-year degree. They are somewhat less likely to have completed a four-year or higher college degree, and much less likely to have completed high school only.

Less than five percent of teachers have completed a four-year or graduate degree, but more than one-third have completed a two-year degree, typically with an early childhood focus. Eighty percent of centers do not employ any teachers with a four-year or higher degree, but do employ at least one teacher with an AA degree. Assistant teachers in Merced County are also more likely than the average female in the county to have attended college and/or completed a two-year degree, but they are less likely to have obtained a four-year or higher degree, or to report high school as their highest level of education. Assistant teachers have somewhat lower levels of degree attainment than teachers. Nearly one-half of assistant teachers have completed from one to 23 college credits related to early childhood development. Only seven percent have completed neither college credits nor a degree related to early childhood.

Nine out of ten directors have completed a two-year, four-year or higher degree, typically with an early childhood focus. Directors are ten times more likely than teachers to have completed a four-year or higher degree. They have also completed associate degrees at higher rates than teachers.

The overwhelming majority of AA degree holders have completed a degree related to early childhood development, compared to only one in five BA degree-holders. About fifteen percent of teachers or directors with BA or higher degrees obtained their degree through a foreign institution.

Across the county, slightly more than one-quarter of directors have heard of the CARES program, and only a few report employing at least one teacher or assistant who is a CARES participant.

Two-thirds of all teachers with an AA or higher degree hold a Child Development Permit, and over one-half of all directors hold a Site Supervisor Permit. No teachers, but almost one-half of directors with a BA or higher degree have a teaching credential (as opposed to a Child Development Permit) issued by the California Commission on Teacher Credentialing.

People hold conflicting images of the educational and professional preparation of the licensed center-based workforce. Some see center teachers and assistants as a group with limited college-level experience or training, and others point to the increasing numbers of teachers with relatively high levels of educational attainment and involvement in early childhood-related training. As a group, teachers in Merced County child care centers have attended college and completed two-year, but not four-year, degrees at rates that exceed the average Merced County adult female, challenging the stereotype that those who work with young children are minimally educated. Assistant teachers have also attended college at higher rates, but have completed BA or higher degrees at lower rates, than the county's adult female population. Educational levels for center directors exceed those of the county's adult female population. Our data suggest that these conflicting public images of the ECE workforce do, however, partly reflect the complex reality that two different sets of standards govern staff qualifications in California child care centers, with more stringent requirements set for staff working in state-contracted programs.

As for participation in professional development activities, it is notable that only about one-quarter of Merced County directors had heard of the CARES program, and only a few reported employing at least one teacher or assistant who was a CARES participant, suggesting that efforts to extend such programs are worthy of attention.

With respect to certification, the low number of Child Development Permit holders in the center-based ECE workforce reflects California's current regulatory environment, which only requires permits for staff in contracted programs. The reported rates of permit holders would be even lower were it not for CARES, which in recent years has begun requiring participants to acquire Child Development Permits. This rate of certification is in stark contrast to K-12 teachers, who are required to become credentialed in order to work in the public schools. As discussions move forward concerning higher educational qualifications for teachers in publicly funded preschool programs, including a credential or other certification, it is now an opportune time to address the larger issue of California's overall lack of uniform requirements for the ECE teaching workforce.

4) How do levels of overall educational attainment, and professional preparation related to early childhood development, vary among teachers, assistant teachers and directors employed in centers licensed to serve infants and/or preschoolers?

Levels of education among teachers, assistant teachers and directors vary to some extent by ages of children served. Compared to centers enrolling preschoolers only, centers that enroll both infants and preschoolers report a somewhat lower percentage of teachers with BA or higher degrees, but a similar percentage of teachers with AA degrees.

Educational attainment also varies by centers' relationship to public subsidy. Centers receiving no public dollars report a slightly higher percentage of teachers with a BA or higher degree than centers receiving public dollars through vouchers or a contract. Contracted centers report a higher percentage of teachers with an AA degree, and centers receiving vouchers report a higher percentage of directors with a BA or higher degree than contracted centers or those receiving no public dollars. Assistant teachers in contracted centers report higher levels of education than their counterparts in other types of centers.

Educational attainment varies among teachers and assistants with different demographic characteristics. Teachers with bachelor's or higher degrees are older, on average, than those with less education, whereas assistant teachers with two year or higher degrees are younger than those without degrees. Teachers' educational attainment also varies by ethnicity and language: less than five percent of teachers in Merced County have attained a BA or higher degree, and two-thirds of those teachers are White, Non-Hispanic. Among teachers with AA degrees, White, Non-Hispanic teachers are represented proportionately to the ethnic distribution of the teacher population as a whole, while Latinas are under-represented. Slightly more than one-third of White, Non-Hispanic teachers have attained an AA or higher degree, compared to about one-quarter of Latinas. White, Non-Hispanic and Latina teachers are less likely to have earned a BA or higher degree than their counterparts in the overall county population.

With respect to linguistic capacity, teachers with no degrees, on average, are more likely than either teachers with BA or higher degrees, or teachers with AA degrees, to have the capacity to communicate with children in a language other than English. Assistant teachers with an AA or higher degree are less likely to speak a language other than English fluently than those with no degree.

A well-trained, culturally diverse and competent workforce serving young children, wherever they live in the state and whatever their family income, is the stated goal of many who are involved in efforts to improve and expand early care and education services. By examining how the educational and professional preparation of the current workforce varies along several dimensions, these data point to the need for a differential strategy for targeting professional development resources for the current and emerging workforce if this goal is to be met.

Generally, our findings confirm that most centers serve children under age four, and thus they underscore how important it is for early childhood-related training to focus on infants, toddlers and young preschoolers as well as four-year-olds. At the same time – since many centers, whether they choose to become publicly funded preschool sites or not, are likely to continue caring for four-year-olds as well as younger children for much of the day – it is important that training opportunities be made available to all who work with children prior to kindergarten, not just those serving as teachers and instructional aides in publicly funded preschool classrooms.

Another area of inequity with regard to teacher background documented in this study concerns variation among centers with varying relationships to public subsidy. The fact that teacher educational levels in centers receiving vouchers were somewhat lower than those in contracted centers reflects current regulations, but nonetheless raises concern about the overall quality of education and care that children, particularly children of low-income families, receive in such centers. It also points to the greater challenge these programs would face in meeting higher educational standards in order to become part of a publicly funded preschool system.

While a sizeable portion of teachers and assistants working in centers were found to be younger than the average adult female in the county, this study confirmed the troubling finding from previous studies that the most educated segment of the center teacher workforce is older than the teacher population as a whole (Herzenberg, Price & Bradley, 2005). Teachers with AA and higher degrees were somewhat more likely to be over age 50 and approaching retirement at a time when the demand is rising for teachers with such qualifications. This suggests that in addition to assisting current members of the workforce in achieving college degrees, Merced County also needs a plan to recruit younger graduates with AA and BA degrees to early childhood teaching positions, which should include a strategy to improve compensation, in order to make such employment more attractive to well-educated young candidates.

With regard to educational attainment by ethnicity, Latinas were under-represented among degree holders and over-represented among those with no degrees. Many communities recognize this phenomenon and are engaged in efforts to make college more accessible to Latina teachers, in part by providing entry-level early childhood courses in Spanish, and intentionally using early childhood-related content as a vehicle for helping Spanish speakers build the English skills necessary to complete college degrees. It is also important to consider that teachers and assistants with the lowest levels of

educational attainment were the most linguistically diverse segment of the ECE workforce, pointing to the need for greater attention to this population in terms of access to higher education and professional development.

Our finding that some degree holders had obtained their degrees from a foreign institution also shows the importance of providing resources for transcript translation and review. This may enable teachers who seek certification to reduce the likelihood of having to repeat classes, which is now common for foreign degree holders.

5) How well prepared are teachers to care for and educate children who are dual language learners or have special needs?

Only about one-half of centers employ teachers who have participated in non-credit training focused on dual language learning in young children, and only about one-quarter of centers employ teachers who have completed college coursework in that subject, despite the growing numbers of young children in Merced County who speak a language other than English in their homes. Centers that report that at least one of their teachers has participated in non-credit training related to dual language learning report somewhat higher overall levels of education among their teachers.

Many more teachers have participated in professional development related to working with children with special needs. Two-thirds of centers report that at least one of their teachers has participated in non-credit training, and about three-fifths report that at least one teacher has completed college credits, related to children with special needs. Centers that report caring for at least one child with special needs also report a higher percentage of teachers with non-credit training to work with children with special needs.

Our data show that only about one-half of child care center teachers in Merced County have engaged in non-credit training, and even fewer have completed college credits, related to dual language learning. This is largely because such training and coursework are not generally available, reflecting the need to update the courses of study at our training institutions, both college- and community-based, and to expand the pool of instructors who are knowledgeable about this subject (Whitebook, Bellm, Lee & Sakai, 2005).

By contrast, many more teachers in the county have received training or college coursework related to serving children with special needs. This is a reflection of an intentional strategy, supported by resources through SB 1703, to make such training available. The passage in 2005 of SB 640, extending this training program conducted by local R&Rs and other agencies, has the potential to reach even more of the center-based ECE workforce with important information related to children with special needs. A similar effort around dual language learning is much needed. Additionally, more advanced coursework and training in these subjects must be offered if we hope to build an early care and education workforce that is well prepared to meet the diverse needs of Merced County's young children.

* * * * *

In the last five years, with the availability of more resources for children ages 0 to 5 flowing through local and state First 5 Commissions and other sources, there has been a concerted effort to expand professional development opportunities for the early care and education workforce, and to make these offerings more relevant and accessible. In the process of expanding resources, however, many of the limitations of the state's current professional development infrastructure have become more visible.

Now, as Merced County and various counties embark on creating publicly funded preschool programs, there is an opportunity to develop comprehensive state and local plans for professional development that are inclusive of teachers and assistant teachers in a variety of settings, whether they work primarily with four-year-olds or with younger and older children. As their foundation, such plans should reflect the latest information about what practitioners need to know and do in order to help children realize their potential.

Policy issues to be considered include: the challenges of operating a program with multiple funding streams and different qualifications and pay scales for teachers working with children of different ages; the impact on the supply of care for infants, toddlers and three-year-olds if centers choose to serve four-year-olds exclusively; the extent of career opportunities for teachers and assistants who meet publicly funded preschool standards; and the availability of educational and quality improvement pathways for teaching staff who work in programs that do not become either public preschool sites or affiliated extended-day services. The data reported here do not address these scenarios directly, but provide a baseline description of the current landscape that can help frame additional research.

This study has provided a snapshot of the center-based early care and education workforce in 2005, capturing current strengths and areas in need of improvement. It is to be hoped that future assessments will document great strides toward creating an even more diverse, culturally competent workforce, well prepared to meet the needs of Merced County's young children.

Appendix A: Additional Tables

Table A1. *Estimated Age Range of Assistant Teachers: Countywide, and By Ages of Children Served*

	Estimated percentage		
	Countywide	Center enrolling infants[a]	Centers without infants
29 years or younger	32.9	40.7	28.6
30 to 39 years	34.2	37.0	32.7
40 to 49 years	17.1	18.5	16.3
50 years or older	15.8	3.7	22.4
Total	100.0	100.0	100.0
Number of assistant teachers	76	27	49

[a] Most of these centers also enroll older children.

Table A2. *Estimated Age Range of Assistant Teachers: Countywide, and By Centers' Relationship to Public Subsidy*

	Estimated percentage			
	Countywide	Head Start/ CDE contract	Vouchers/ No contract	No vouchers/ No contract
29 years or younger	32.9	29.8	77.8	10.0
30 to 39 years	34.2	42.1	11.1	10.0
40 to 49 years	17.1	19.3	11.1	10.0
50 years or older	15.8	8.8	0.0	70.0
Total	100.0	100.0	100.0	100.0
Number of assistant teachers	76	57	9	10

Table A3: *Estimated Ethnicity of Teachers, Assistant Teachers and Directors, Countywide, and By Ages of Children Served*

		Estimated percentage		
		All centers	Center enrolling infants[a]	Centers without infants
Teachers	White, Non-Hispanic	35.1	26.1	44.6
	Latina	51.5	63.8	38.5
	African American	5.2	2.9	7.7
	Asian/Pacific Islander	2.2	1.4	3.1
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	3.0	2.9	3.1
	Other	3.0	2.9	3.1
	Total	100.0	100.0	100.0
	Number of teachers	134	69	65
Assistant teachers	White, Non-Hispanic	30.1	25.9	32.6
	Latina	60.3	66.7	56.5
	African American	2.7	0.0	4.3
	Asian/Pacific Islander	2.7	3.7	2.2
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	4.1	3.7	4.3
	Other	0.0	0.0	0.0
	Total	100.0	100.0	100.0
	Number of assistant teachers	73	27	46
Directors	White, Non-Hispanic	51.7	50.0	52.6
	Latina	34.5	50.0	26.3
	African American	0.0	0.0	0.0
	Asian/Pacific Islander	6.9	0.0	10.5
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	3.4	0.0	5.3
	Other	3.4	0.0	5.3
	Total	100.0	100.0	100.0
	Number of directors	29	10	19

*Most of these centers also enroll older children.

Table A4. *Estimated Percentage of Centers Caring for At Least One Child with Special Needs, By Ages of Children Served*

	Estimated percentage (SE)		
	Countywide	Centers enrolling infants[a]	Centers without infants
No children with special needs	48.4 (9.12)	30.0 (14.73)	57.1 (10.98)
At least one child with special needs	51.6 (9.12)	70.0 (14.73)	42.9 (10.98)
Total	100.0	100.0	100.0
Number of centers	31	10	21

[a] Most of these centers also enroll older children.

Table A5. *Estimated Percentage of Assistant Teachers, By Age and Educational Attainment: Countywide*

	Estimated percentage		
	All assistant teachers	Assistant teachers with associate or higher degree	Assistant teachers with no degree
Under 30 years old	32.9	40.9	29.6
30 to 39 years old	34.2	27.3	37.0
40-49 years old	17.1	27.3	13.0
50 years and older	15.8	4.5	20.4
Total	100.0	100.0	100.0
Number of staff	76	22	54

Table A6. *Estimated Percentage of Teachers and Assistant Teachers, by Age and Educational Attainment, Ages of Children Enrolled and Centers' Relationship to Public Subsidy*

		Estimated percentage						
		All teachers	Teachers with bachelor's or higher degree	Teachers with associate degree	Teachers with no degree	All assistant teachers	Assistant teachers with associate or higher degree	Assistant teachers with no degree
Centers enrolling infants[a]	Under 30 years old	29.0	0.0	24.0	31.8	40.8	11.1	55.6
	30 to 39 years old	50.7	0.0	36.0	59.1	37.0	33.3	38.9
	40 to 49 years old	13.0	0.0	20.0	9.1	18.5	44.5	5.5
	50 years and older	7.3	0.0	20.0	0.0	3.7	11.1	0.0
	Total	100.0	0.0	100.0	100.0	100.0	100.0	100.0
	Number of staff	69	0	25	44	27	9	18
Centers without infants	Under 30 years old	28.4	25.0	19.2	36.4	28.6	61.5	16.7
	30 to 39 years old	23.9	25.0	38.5	12.1	32.7	23.1	36.1
	40 to 49 years old	34.3	25.0	30.8	39.4	16.3	15.4	16.7
	50 years and older	13.4	25.0	30.8	39.4	16.3	15.4	16.7
	Total	13.4	25.0	11.5	12.1	22.4	0.0	30.5
	Number of staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Head Start/ CDE contract	Under 30 years old	67	8	26	33	49	13	36
	30 to 39 years old	25.0	0.0	26.6	25.0	29.8	31.6	29.0
	40 to 49 years old	50.0	100.0	40.0	55.0	42.1	31.6	47.3
	50 years and older	18.1	0.0	16.7	20.0	19.3	31.6	13.2
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number of staff	72	2	30	40	57	19	38

[a] Most of these centers also enroll older children.

Table A6. *Estimated Percentage of Teachers and Assistant Teachers, by Age and Educational Attainment, Ages of Children Enrolled and Centers' Relationship to Public Subsidy*

		Estimated percentage						
		All teachers	Teachers with bachelor's or higher degree	Teachers with associate degree	Teachers with no degree	All assistant teachers	Assistant teachers with associate or higher degree	Assistant teachers with no degree
Vouchers/ No contract	Under 30 years old	41.5	50.0	14.3	56.5	77.8	100.0	71.4
	30 to 39 years old	24.4	0.0	35.7	21.7	11.1	0.0	14.3
	40 to 49 years old	24.4	25.0	35.7	17.4	11.1	0.0	14.3
	50 years and older	9.7	25.0	14.3	4.4	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number of staff	41	4	14	23	9	2	7
No vouchers/ No contract	Under 30 years old	17.4	0.0	14.3	21.4	10.0	100.0	0.0
	30 to 39 years old	21.8	0.0	28.6	21.4	10.0	0.0	11.1
	40 to 49 years old	39.0	50.0	42.8	35.8	10.0	0.0	11.1
	50 years and older	21.8	50.0	14.3	21.4	70.0	0.0	77.8
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number of staff	23	2	7	14	10	1	9

[a] Most of these centers also enroll older children.

Table A7. *Estimated Mean Percentage of Teachers with Non-Credit Training and/or College Credits Related to Dual Language Learning Children, Countywide, and by Ages of Children Served*

	Estimated mean percentage per center (SE)		
	Countywide	Centers enrolling infants[a]	Centers without infants
At least one hour of non-credit training	49.0	75.3	36.6
	(9.20)	(14.44)	(10.79)
Number of centers	28	9	19
At least one college credit	16.8	24.3	13.8
	(6.19)	(12.68)	(7.14)
Number of centers	28	8	20

[a] Most of these centers also enroll older children.

Appendix B:

Methodology for Estimating the Number of Children Served and the Size of the Licensed Child Care Center Workforce

In Merced County, we attempted to interview all the licensed child care centers serving infants and/or preschoolers. As anticipated, we were unable to do so, since some centers were out of business and other could not or chose not to complete an interview. Our sample of interviewed centers gives us sound information about the percentages of the center population with specific characteristics. To obtain actual numbers, however, such as the number of children served in licensed centers and the size of the center workforce, it was necessary to compute estimates from the sample of interviewed centers.

The total universe of licensed child care centers serving infants and/or preschoolers in Merced County was 73. We completed interviews with 32 of these centers. To calculate the number of children served and the size of the workforce, we used the following methodology:

1. Calculate a ratio to create a multiplier for the sample to the universe: 73/32=2.3.
2. Multiply the sums of children in each age group in the sample, by the multiplier (2.3) to calculate the estimated total number of children served in each age group.
3. Multiple the sums of directors, teachers, and assistant teachers in the sample by the multiplier (2.3) to calculate the estimated total number of center staff in each job category.

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