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California Early Care and Education Workforce Study

Licensed Child Care Centers

Alameda County 2006

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California Child Care Resource and Referral Network

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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 or the Child Development Corps, 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 Alameda 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. The licensed capacity is based on the

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

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

Alameda County

The second most populous of the Bay Area counties, Alameda County includes such cities as Berkeley, Fremont, Hayward, Livermore, Oakland, and San Leandro. The county's economy is focused on the provision of information, professional, and technical services; manufacturing; and the delivery of health services. Given its central location, it serves as a transportation hub for the region.

In 2004, Alameda County's population of 1,498,000 represented a 3.8-percent increase over the 2000 Census (US Census Bureau, 2000a). The county is projected to increase in population by 13.8 percent between 2000 and 2010, with a 13.5-percent increase in the number of children ages 0-4 (California Department of Finance, 2004).

Population estimates for 2005 describe the county as 34.4 percent White, Non-Hispanic; 25.6 percent Asian; 22.3 percent Hispanic; 13.1 percent Black; 3.1 percent Multiethnic; 0.8 percent Pacific Islander; and 0.7 percent American Indian (California Department of Finance, 2005). At the time of the 2000 Census, 63.7 percent of county households were estimated as speaking English, 12.8 percent Spanish, and 14.5 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 child care and education in Alameda County:

- Median family income in 1999 was \$65,857 (California Department of Finance, 2003).
- In 1999, 11.0 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 \$16,104 (US Department of Housing and Urban Development, 2005).
- At the time of the 2000 Census, 12.6 percent of children 0-5 years of age lived in poverty² (California Child Care Resource and Referral Network, 2003).
- In 2000, 281,523 children under the age of 14 resided in the county, 56.1 percent of whom had both parents or a single head of household in the labor force³ (California Child Care Resource and Referral Network, 2003).
- Among those children were 119,124 children under age six, 51.6 percent of whom had working parents⁴

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).

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

- 20.2 percent of children ages 0-5 resided in a single-parent household⁵ (California Child Care Resource and Referral Network, 2003).

In 2004, 53,959 licensed child care slots were available in Alameda County, 35.7 percent of which were in family child care homes, and 64.3 percent in child care centers (California Child Care Resource and Referral Network, 2005).

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

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 Alameda 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 Alameda 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.ccfca.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 Alameda 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 Alameda County's children and families.

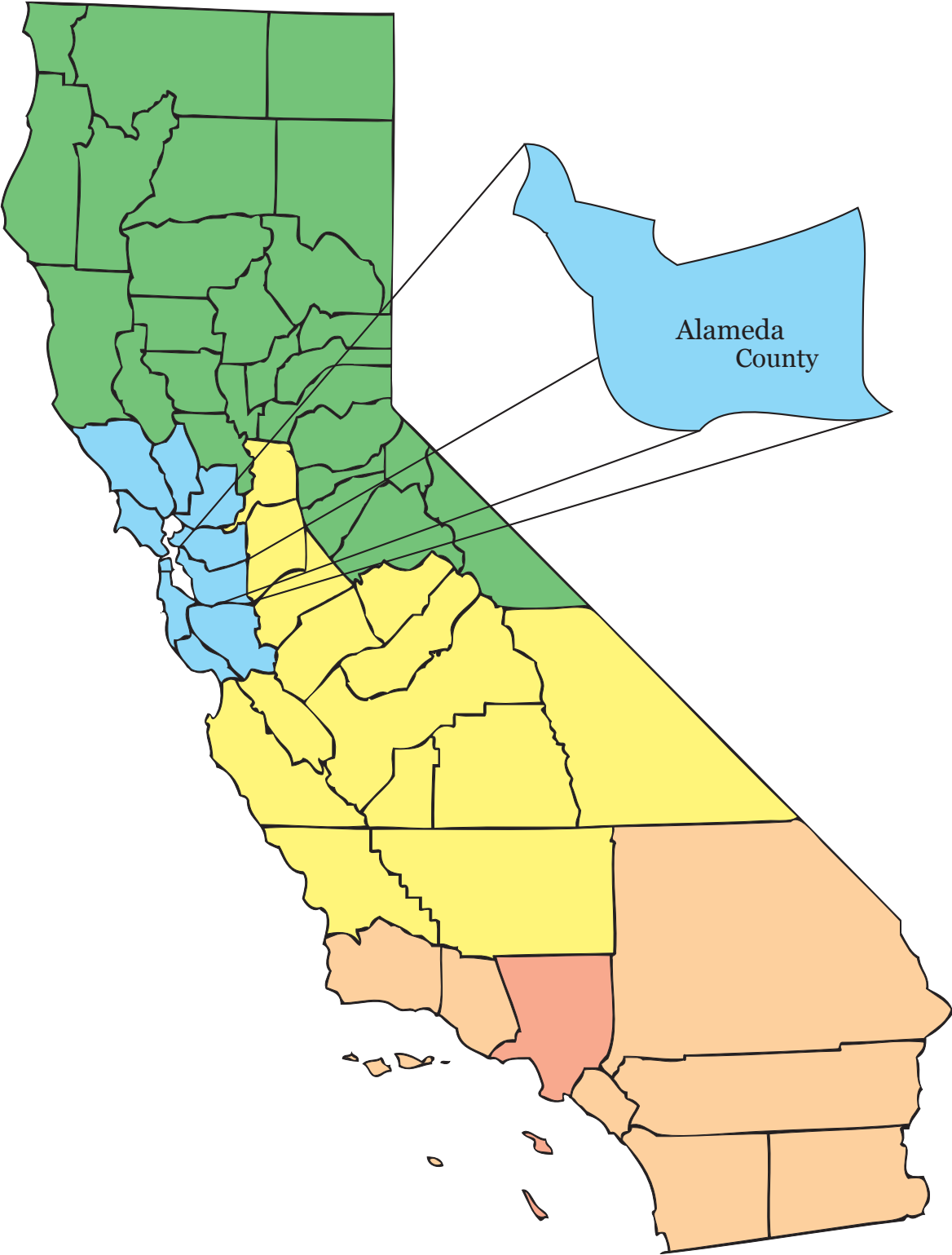
The present report contains the study's findings for licensed child care centers that have infant and/or preschool licenses. Some of these centers have school-age licenses as well. This study, however, does not include data for centers that have a license to serve school-age children only.

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



Study Design

Survey Population and Study Sample

First 5 Alameda County sought countywide information about directors, teachers and assistant teachers employed at licensed child care centers in Alameda County. The survey population included all 484 licensed child care centers serving infants and/or preschoolers that were listed as of January 2004 with the county’s three state-funded child care resource and referral (R&R) agencies: Bananas, 4C’s of Alameda County and Child Care Links. 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 224 completed interviews included 91 interviews conducted in Alameda County as part of the statewide study and 133 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. Less than one percent of eligible centers (0.3 percent) 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:

Table 2.1. Alameda County Sample Composition

	Alameda County licensed centers	Percentage of final sample
Completed interviews: statewide study	91	40.6%
Completed interviews: county study	133	59.4%
Final sample	224	100.0%

- *Demographics*: age, ethnicity, and languages spoken in addition to English;
- *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 the Alameda County Child Development Corps;
- *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 133 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 484 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 348 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 348 center contacts, 8.3 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, 41.7 percent completed the survey. To increase the likelihood of interviewing as many directors as possible, the Network attempted to correct all incorrect phone

Table 2.2. Survey Response Rate of County Sample

	Alameda County number of centers	Percentage of sample	Percentage of eligible
Sample released and dialed	348	100.0%	
Ineligible: out of business	7	2.0%	
Presumed ineligible*	22	6.3%	
Eligible	319	91.7%	100.0%
County surveys completed	133	38.2%	41.7%
No response, presumed eligible**	52	14.9%	16.3%
Refusals	89	25.6%	27.9%
Multi-site refusals***	24	6.9%	7.5%
Respondent not available	16	4.6%	5.0%
Communication barrier	1	0.3%	0.3%
Other reasons for non-completion	4	1.1%	1.3%

* 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=484)	Survey Completed (N=224)
REGULATION		
Licensed for infants	19.8%	23.2%
CDE/Head Start contract	36.2%	25.0%
CITY		
Alameda	5.6%	6.3%
Albany	1.5%	1.3%
Berkeley	12.4%	13.4%
Castro Valley	3.3%	4.9%
Dublin	3.5%	4.0%
Emeryville	1.0%	0.5%
Fremont	12.2%	15.2%
Hayward	7.2%	5.8%
Livermore	5.6%	5.8%
Newark	2.1%	2.2%
Oakland	33.3%	28.1%
Piedmont	0.6%	0.5%
Pleasanton	3.5%	4.5%
San Leandro	3.9%	4.5%
San Lorenzo	1.0%	0.9%
Union City	3.1%	2.2%

numbers and contact all directors with answering machines or voice mails to encourage them to participate in the study.

compared to 36.2 percent of the centers in the universe.¹

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

- 16.3 percent: Answering machine, voice mail or busy signal prevented successful contact;
- 27.9 percent: Refusal;
- 7.5 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;
- 5.0 percent: Respondent not available to complete the survey during the study period;
- 0.3 percent: Communication barriers we were unable to surmount;
- 1.3 percent: Some other reason.

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 and the percentage of centers with a license to serve infants. Contracted centers are somewhat under-represented among the interviewed centers, with 25.0 percent of the interviewed centers having contracts,

⁶ The implications of the under-representation of contracted centers among the interviewed centers are discussed in the Findings section.

Findings

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

In Alameda County, a teacher in a child care center licensed to serve infants and/or preschoolers is more likely to be a woman of color 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 Alameda County, teachers and assistant teachers are more likely to be under age 30 and less likely to be over 50 years of age. About two-fifths of teachers and assistant teachers, and one-third of directors, are able to speak a language other than English fluently, most typically Spanish, followed by Chinese.

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 a teacher who speaks a language other than English.

The typical teacher and assistant teacher have worked in their present jobs for less than five years, while the typical director has been on the job for more than five years. The highest-paid teachers with a BA earn, on average, \$18.05 an hour. The highest-paid assistants can expect to earn \$10.87 an hour, on average, if they work in a center receiving public dollars through vouchers, and \$11.89 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 women⁷ in Alameda County (16.7 percent), teachers (28.4 percent) and assistant teachers (38.7 percent) were more likely to be younger than 30. (See Figure 3.1.)

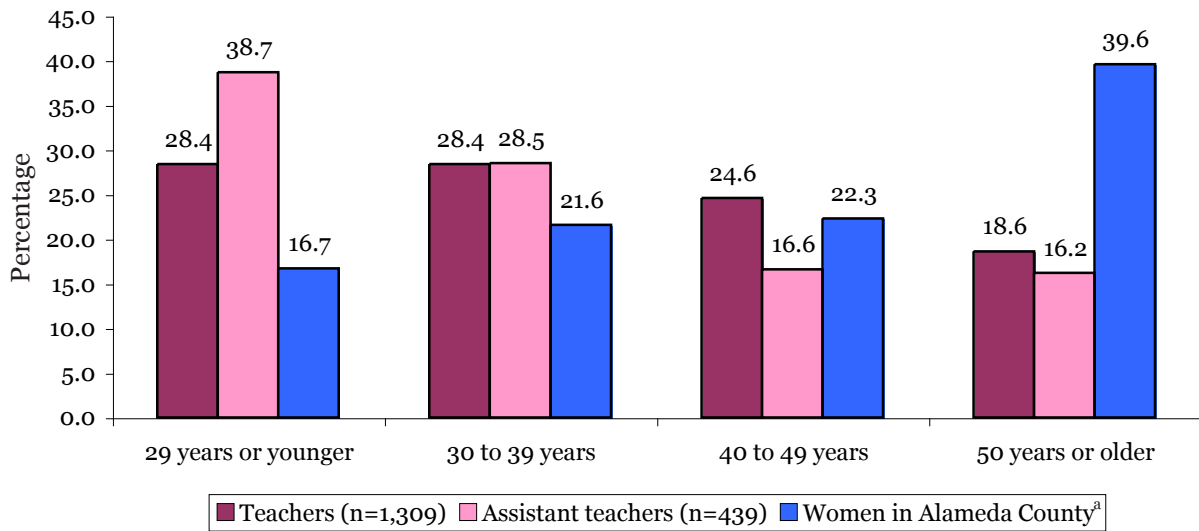
The age distribution of teachers and assistant teachers differed by whether or not centers enrolled infants as well as preschoolers. (See Figure 3.2.) Centers enrolling infants employed a greater proportion of teachers under 30 years old

than centers that did not serve infants. Only 24.4 percent of teachers in centers without infants were under 30, compared to 34.1 percent of teachers in centers serving infants as well as preschoolers. The opposite pattern occurred for assistant teachers. Over 40 percent (44.4 percent) of assistant teachers in centers not serving infants were younger than 30, compared to 30.6 percent in centers serving infants.

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

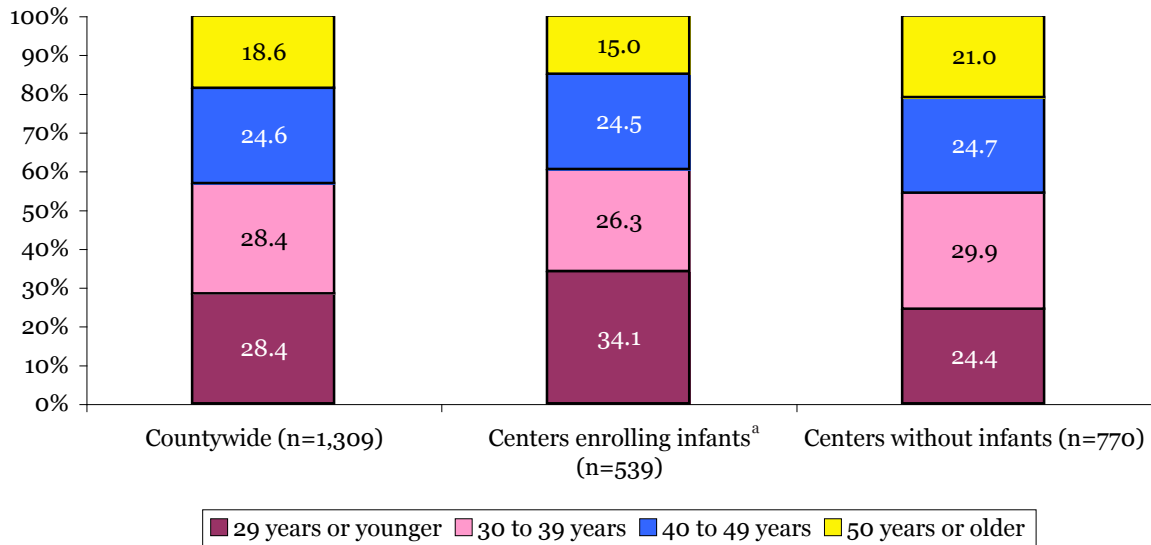
⁷ Previous research has established that the early care and education workforce is predominantly female. In the interest of survey length, therefore, directors were not asked about the gender of teaching staff.

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



^a US Census Bureau (2004).

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*

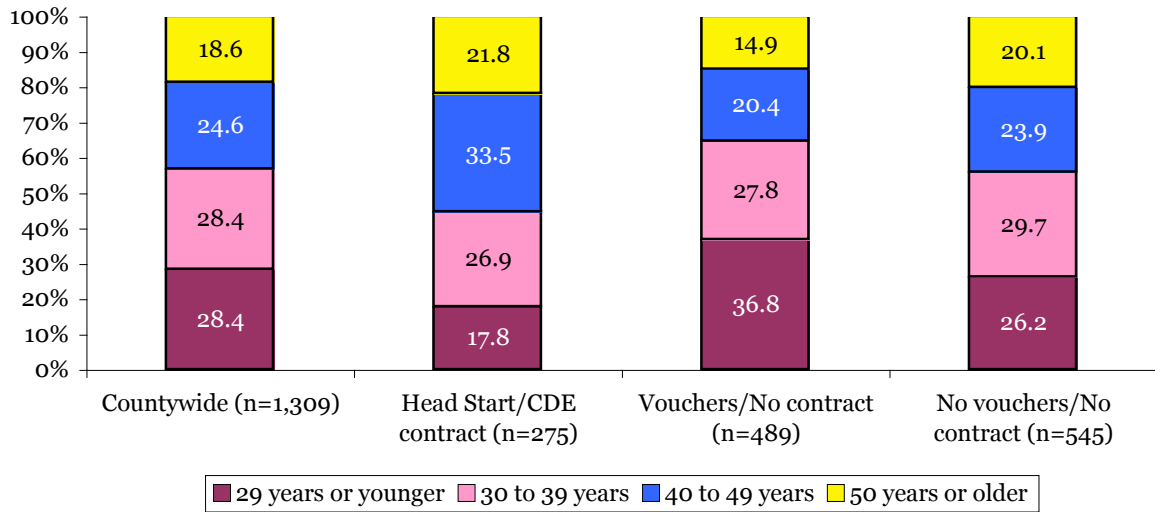


Table 3.1. *Estimated Ethnicity of Teachers, Assistant Teachers and Directors: Countywide*

	Estimated percentage		
	Teachers	Assistant teachers	Directors
White, Non-Hispanic	43.3	37.1	61.5
Latina	17.3	16.3	6.1
African American	14.6	17.4	14.5
Asian/Pacific Islander	17.8	22.1	12.8
American Indian or Alaskan Native	0.3	0.0	0.0
Multiethnic	2.6	1.6	2.2
Other	4.1	5.6	2.8
<i>Total</i>	100.0	100.0	100.0
<i>Number of staff</i>	1,317	448	179

Ethnic Background

We found that 56.7 percent of Alameda County child care teachers were people of color, and 43.3 percent were White, Non-Hispanic. Nearly 18 percent (17.8 percent) were Asian/Pacific Islander, 17.3 percent were Latina, and 14.6 percent were African American. (See Table 3.1.) Among assistant teachers, White, Non-Hispanics represented a plurality (37.1 percent), followed by Asian/Pacific Islanders (22.1 percent). Three-fifths of directors (61.5 percent) were White, Non-Hispanic, and 14.5 percent were African American. As shown in Table 3.1, across all job titles, those identifying themselves as Multiethnic, American Indian/Alaskan Native, or of some other ethnicity were the smallest ethnic groups. Table 3.1 also shows that across job titles, directors were the least ethnically diverse group, and assistant teachers were the most diverse.

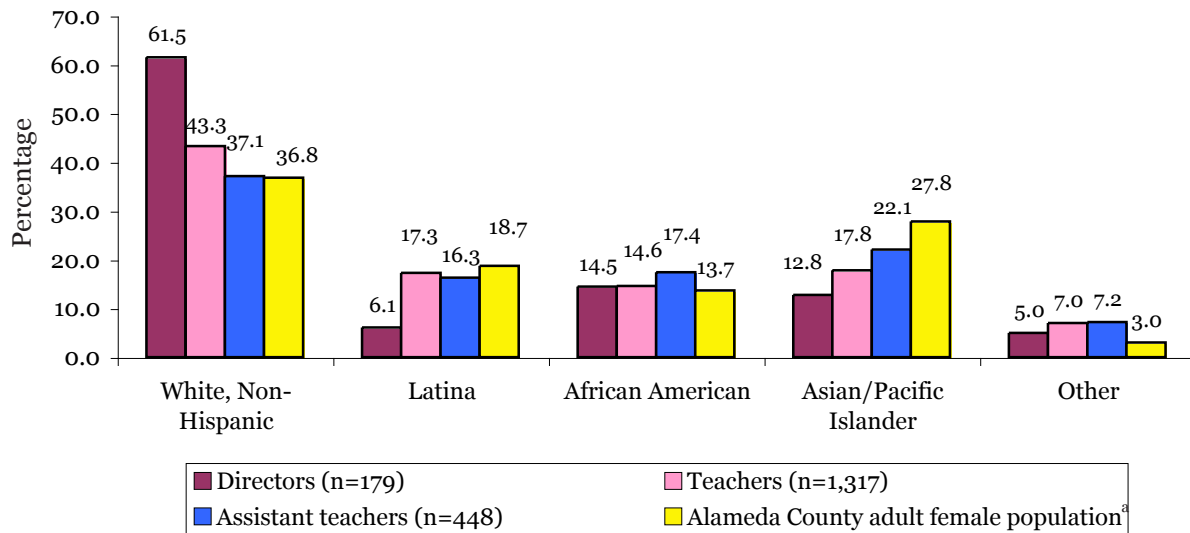
As shown in Figure 3.4, directors in Alameda County child care centers enrolling infants and/or preschoolers were more likely to be White, Non-Hispanic, and less likely to be Latina or Asian/Pacific Islander, than other adult females in the county. Teachers were also more likely to be White, Non-Hispanic, almost equally likely to be Latina and less likely to be Asian/Pacific Islander as their adult female counterparts. Assistant teachers more closely represented the ethnic distribution of the adult female population than teachers. African American teachers, assistant teachers and directors were roughly proportionate to the county's African American adult female population.

Teachers and assistant teachers were more diverse, and more closely reflected the ethnic distribution of children ages birth to five in Alameda 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 Alameda County public schools. (See Figure 3.5.) More than two-thirds of public school K-12 teachers (70.8 percent) were White, Non-Hispanic, compared to 43.3 percent of teachers in child care centers, and 24.9 percent of children ages birth to five (California Department of Education, 2004). Child care center teachers (17.3 percent) and assistant teachers (16.3 percent) were more likely to be Latina than were K-12 teachers (8.7 percent), but were less likely to be Latina than children ages birth to five (31.9 percent). Child care center teachers were also more likely to be Asian/Pacific Islander (17.8 percent) than were K-12 teachers (9.1 percent), but slightly less likely to be Asian/Pacific Islander than children ages birth to five (23.8 percent). Asian/Pacific Islander assistant teachers (22.1 percent) reflected the proportion of Asian/Pacific Islander children birth to five. African-American teachers (14.6 percent) and assistant teachers (17.4 percent) roughly reflected the proportion of African American children birth to five (13.0 percent) in the county.

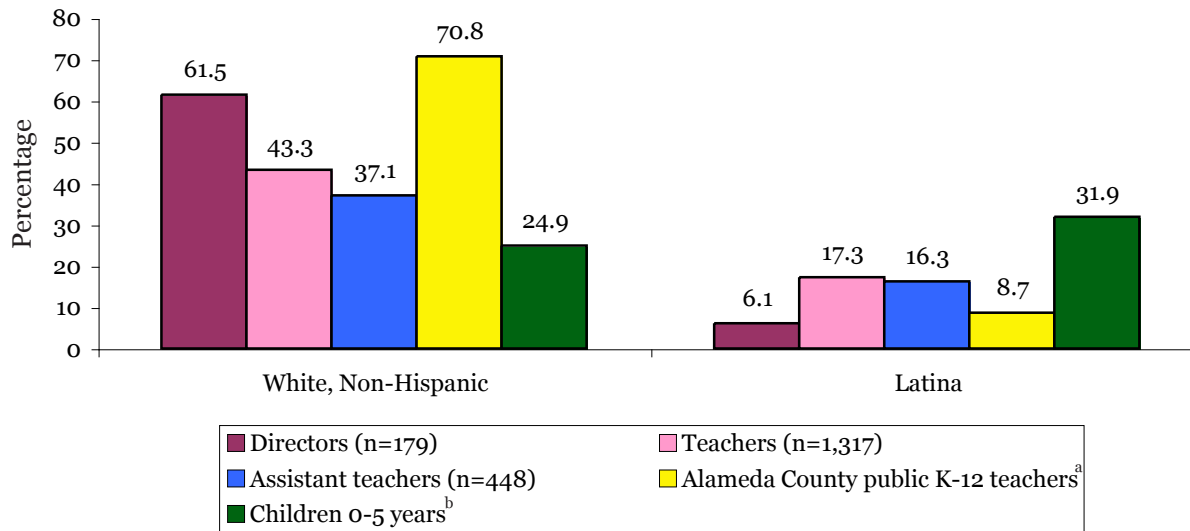
The ethnic composition of the teaching staff also differed by the ages of children enrolled in centers. Centers serving infants reported a higher percentage of Asian/Pacific Islander teachers (22.6 percent) and assistant teachers (28.0 percent) than centers serving only older children (14.5 percent; 18.0 percent). Centers serving infants also reported a higher percentage of African American assistant teachers (22.5 percent) than centers serving only older children (13.9 percent).

Figure 3.4. *Estimated Ethnic Distribution of Teachers, Assistant Teachers and Directors Compared to the Alameda 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 Alameda 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	22.8	38.7	58.0
	Latina	20.3	18.8	14.4
	African American	31.0	14.1	6.6
	Asian/Pacific Islander	21.7	19.8	14.1
	American Indian or Alaskan Native	1.1	0.2	0.0
	Multiethnic	1.4	2.7	3.1
	Other	1.8	5.7	3.8
	<i>Total</i>	100.0	100.0	100.0
	<i>Number of teachers</i>	281	489	547
Assistant teachers	White, Non-Hispanic	13.1	44.9	49.2
	Latina	18.2	16.9	14.5
	African American	33.6	15.3	7.3
	Asian/Pacific Islander	31.4	19.5	17.1
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	1.5	1.7	1.6
	Other	2.2	1.7	10.4
	<i>Total</i>	100.0	100.0	100.0
	<i>Number of assistant teachers</i>	137	118	193
Directors	White, Non-Hispanic	47.5	59.4	71.4
	Latina	10.0	5.8	4.3
	African American	25.0	17.4	5.7
	Asian/Pacific Islander	10.0	13.0	14.3
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	5.0	1.4	1.4
	Other	2.5	2.9	2.9
	<i>Total</i>	100.0	100.0	100.0
	<i>Number of directors</i>	40	69	70

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, assistant teachers, and directors, followed by programs receiving vouchers. Programs receiving no public funds were least likely to employ teachers, assistant teachers or directors of color.

In addition to looking at the percentage of teachers of various ethnicities among types of programs, it is helpful to consider the percentage of centers of a particular type that employ at least one teacher from a particular ethnic group. Depending on their relationship to public subsidy, centers may vary not only in the percentage of their teachers of a particular ethnicity, but also in regard to whether they employ, for example, at least one Latina teacher. We found that a similar proportion of all programs employed at least one Latina and/or Asian/Pacific Islander teacher, while contracted centers were more likely to employ an African American teacher (57.9 percent, SE=6.6) than were programs receiving no public dollars (25.8 percent, SE=4.7).

There were also variations among centers serving infants and those serving only older children. A greater percentage of centers serving infants employed at least one Latina (65.6 percent, SE=6.1) and/or one Asian/Pacific Islander teacher (60.7 percent, SE=6.3) than of centers serving only older children (41.4 percent [SE=3.9] employed at least one Latina; 36.4 percent [SE=3.8] employed at least one Asian/Pacific Islander).

Linguistic Background

We also found that the population of children served by Alameda County's licensed 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 reports that more than one-third (36.4 percent) of kindergarteners attending Alameda County public schools in that year spoke a language other than English and were classified as English Learners. Of the more than 51 different languages spoken by English Learners in Alameda 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

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

	Percentage
Spanish	61.7%
Cantonese	6.9%
Mandarin (Putonghua)	5.0%
Vietnamese	4.6%
Filipino (Pilipino or Tagalog)	3.9%
Punjabi	2.2%
Farsi (Persian)	1.9%
Korean	1.5%
Hindi	1.4%
Arabic	1.2%
Urdu	0.8%
Mien (Yao)	0.6%
Khmer (Cambodian)	0.5%
Japanese	0.5%
Gujarati	0.5%
N	5,691

Source: California Department of Education (2006).

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 other 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 (31.8 percent) of directors, 40.4 percent of teachers, and 43.5 percent of assistants 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 (63.8 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 (75.9 percent) or assistant teacher (70.8 percent) who could. When centers employed at least one teacher or assistant with this language capacity, it was likely that the majority of their teachers (54.8 percent) and assistants (69.8 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:

- Among directors who spoke a language

other than English fluently, 38.6 percent spoke Spanish and 22.8 percent spoke Chinese.

- Among teachers who spoke a language other than English fluently, 43.3 percent spoke Spanish and 20.7 percent spoke Chinese.
- Among assistant teachers who spoke a language other than English fluently, 36.7 percent spoke Spanish and 22.1 percent spoke Chinese.

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 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 assistants in centers serving children of different ages.

As shown in Tables 3.6 and 3.7, the likelihood of employing teachers, assistant teachers or directors who spoke a language other than English did not vary by whether a center had contracts with Head Start or CDE, received no public funds, or received vouchers. Centers that employed at least one director, teacher or assistant teacher with the capacity to communicate in a language other than English did not differ in the percentage of such staff by their subsidy status.

Turnover and Tenure

Center staff stability has been linked

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	75.9 (2.86)
<i>Number of centers</i>	224
Assistant teachers	70.8 (3.80)
<i>Number of centers</i>	144
Directors	36.2 (4.06)
<i>Number of centers</i>	141

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	54.8 (2.23)
<i>Number of centers</i>	170
Assistant teachers	69.8 (2.92)
<i>Number of centers</i>	102

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*	75.9 (2.86)	88.5 (4.09)	71.2 (3.56)	75.4 (5.71)	79.2 (4.63)	73.3 (4.67)
<i>Number of centers</i>	224	61	163	57	77	90
Assistant teachers	70.8 (3.80)	77.3 (6.34)	68.0 (4.68)	77.5 (6.63)	62.5 (7.01)	73.2 (5.94)
<i>Number of centers</i>	144	44	100	40	48	56
Directors	36.2 (4.06)	47.7 (7.56)	30.9 (4.71)	40.0 (8.31)	44.0 (7.04)	26.8 (5.94)
<i>Number of centers</i>	141	44	97	35	50	56

^a Most of these centers also enroll older children.

* $p < .01$, 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	54.8 (2.23)	54.8 (4.07)	54.8 (2.67)	58.4 (4.14)	54.8 (3.78)	52.6 (3.66)
<i>Number of centers</i>	170	54	116	43	61	66
Assistant teachers	69.8 (2.92)	69.6 (4.57)	69.9 (3.73)	68.9 (5.34)	68.6 (4.64)	71.4 (4.97)
<i>Number of centers</i>	102	34	68	31	30	41
Directors	92.2 (2.60)	91.3 (4.00)	92.8 (3.41)	97.6 (2.30)	87.9 (4.83)	93.3 (4.40)
<i>Number of centers</i>	51	21	30	14	22	15

^a Most of these centers also enroll older children.

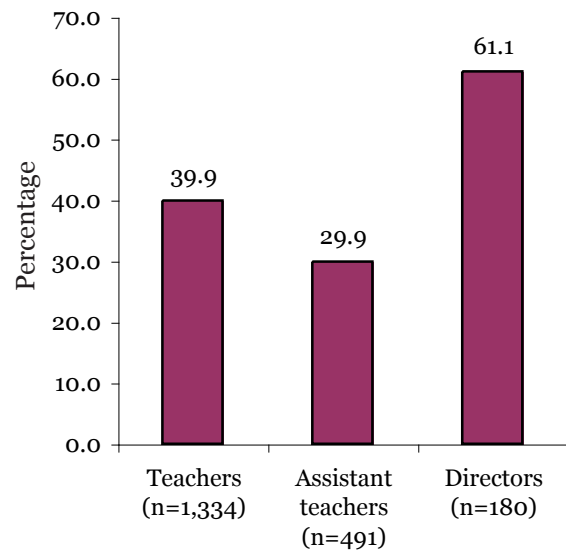
to overall program quality, the ability of a program to improve its quality, and children’s social and verbal development (Whitebook, Howes & Phillips, 1998; Whitebook & Sakai, 2004). Turnover rates provide one important index of center workforce stability; namely, how much change in staffing a center 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, 23.6 percent (SE=2.2) of teachers and 26.5 percent (SE=3.8) of assistant teachers were reported to have done so.

The range of turnover rates varied considerably among centers. About two-fifths of centers (42.4 percent) reported no turnover in the previous 12 months among teachers, and 63.3 percent reported no such turnover among assistant teachers, whereas approximately one-quarter of centers reported turnover rates of 30 percent or more among teachers and 40 percent or more among assistant teachers. About 10 percent of centers reported that two-thirds or more of teachers, and 15 percent of centers reported that two-thirds or more of assistant teachers, had left or stopped working at their centers during the previous 12 months.

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).

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



Director turnover (13.7 percent, SE=2.8) was lower than turnover among teaching staff. The overwhelming majority of centers (84.5 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 more than five years. Among various positions within centers, directors were the most stable group of employees, followed by teachers and assistant teachers. (See Figure 3.6.) Approximately three-fifths of directors (61.1 percent) had been employed for more than five years at their centers, compared to 39.9 percent of teachers and 29.9 percent of assistant teachers. Only 33.5 percent (SE=1.4) of

centers reported employing at least one assistant teacher for more than five years.

While turnover for teachers, assistant teachers and directors did not vary by center characteristics, tenure did vary. (See Tables 3.8 and 3.9.) Staffing among directors was less stable, as measured by tenure, in centers serving infants and preschoolers than in centers not serving infants. The reverse was true for assistant teachers. (See Table 3.10.) Tenure differed among centers with varying relationships to public subsidy; teachers and assistant teachers working in centers receiving vouchers to serve children of low-income families were less stable than those working in centers with Head Start or CDE contracts or in centers receiving no public funds. Directors of contracted centers were less likely than their counterparts in other centers to have been on the job for more than five years. (See Table 3.11.)

Wages

We sought to document the current compensation of teachers and assistant teachers working in Alameda 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. 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 average highest and lowest hourly wages paid to teachers with BA or higher degrees countywide. The lowest countywide wages (\$14.79) were, on average, \$3.26 an hour less than the highest countywide wages (\$18.05).

In addition to average wages, we examined the distribution of wages among highest- and lowest-paid teachers with BA or higher degrees, and among assistant teachers. One-quarter of centers paid their highest-paid degreed teachers \$14.00 per hour or less (about \$29,120 per year), and about one-quarter of centers paid their assistant teachers \$9.25 per hour or less (or \$19,240 per year). Only about 10 percent of centers paid their highest-paid teachers \$25.00 per hour or more (or \$52,000 per year), and only 10 percent of centers paid their highest-paid assistant teachers \$15.00 or more per hour (or \$31,200 per year).

We also examined whether centers serving different groups of children varied in their pay rates. (See Table 3.12.) We found that in centers serving both infants and preschoolers, the lowest-paid teachers with BA or higher degrees, as well as the assistant teachers, earned less on average than their counterparts in centers that did not serve infants. There were no statistically significant differences among centers by subsidy status in the wages of teachers with BA degrees or higher or in

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	23.6 (2.20)	24.7 (3.93)	23.2 (2.65)
<i>Number of centers</i>	223	60	163
Assistant teachers	26.5 (3.79)	30.7 (8.84)	24.7 (3.89)
<i>Number of centers</i>	150	45	105
Directors	13.7 (2.79)	19.1 (5.70)	11.2 (3.12)
<i>Number of centers</i>	142	44	98

^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	23.6 (2.20)	29.4 (5.62)	23.6 (3.48)	19.9 (2.89)
<i>Number of centers</i>	223	57	76	90
Assistant teachers	26.5 (3.79)	22.2 (5.25)	27.1 (7.58)	29.4 (6.51)
<i>Number of centers</i>	150	45	48	57
Directors	13.7 (2.79)	24.1 (7.10)	10.5 (4.05)	9.8 (3.91)
<i>Number of centers</i>	142	36	50	56

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	15.0	15.4	14.7
	1-5 years	45.1	48.5	42.8
	> 5 years	39.9	36.1	42.5
<i>Number of teachers</i>		1,334	538	796
Assistant teachers	< 1 year	33.2	27.7	36.6
	1-5 years	36.9	29.8	41.3
	> 5 years	29.9	42.6	22.1
<i>Number of assistant teachers</i>		491	188	303
Directors	< 1 year	7.2	7.9	6.8
	1-5 years	31.7	41.3	26.5
	> 5 years	61.1	50.8	66.7
<i>Number of directors</i>		180	63	117

^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	15.0	12.5	16.8	14.7
	1-5 years	45.1	38.4	51.1	43.3
	> 5 years	39.9	49.1	32.1	42.0
<i>Number of teachers</i>		1,334	281	489	564
Assistant teachers	< 1 year	33.2	22.0	40.3	38.7
	1-5 years	36.9	37.6	42.0	33.2
	> 5 years	29.9	40.5	17.6	28.1
<i>Number of assistant teachers</i>		491	173	119	199
Directors	< 1 year	7.2	20.0	2.9	4.2
	1-5 years	31.7	37.5	36.2	23.9
	> 5 years	61.1	42.5	60.9	71.8
<i>Number of directors</i>		180	40	69	71

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, highest wage	Centers enrolling infants ^a	18.11 (1.16)	34
	Centers without infants	18.02 (0.54)	76
	Countywide	18.05 (0.51)	110
Teachers with BA or higher degree, lowest wage*	Centers enrolling infants ^a	13.35 (0.48)	33
	Centers without infants	15.40 (0.43)	78
	Countywide	14.79 (0.34)	111
All assistant teachers, highest wage**	Centers enrolling infants ^a	10.69 (0.32)	39
	Centers without infants	11.85 (0.33)	84
	Countywide	11.48 (0.25)	123

^a Most of these centers also enroll older children.

* $p < .01$, Centers without infants > centers enrolling infants.

** $p < .05$, Centers without infants > centers enrolling infants.

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, highest wage	Head Start/CDE contract	16.81 (0.97)	25
	Vouchers/No contract	18.34 (1.11)	32
	No vouchers/No contract	18.46 (0.69)	53
	Countywide	18.05 (0.51)	110
Teachers with BA or higher degree, lowest wage	Head Start/CDE contract	14.91 (0.64)	26
	Vouchers/No contract	13.60 (0.39)	32
	No vouchers/No contract	15.44 (0.59)	53
	Countywide	14.79 (0.34)	111
All assistant teachers, highest wage	Head Start/CDE contract	11.89 (0.51)	35
	Vouchers/No contract	10.87 (0.35)	46
	No vouchers/No contract	11.81 (0.45)	42
	Countywide	11.48 (0.25)	123

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	1,063	2,884	389	4,336
	Percentage	24.5	66.5	9.0	100.0

the wages of assistant teachers. (See Table 3.13.)

Size of the Teacher, Assistant Teacher and Director Workforce in Alameda 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 working in classrooms with children 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 Alameda County’s centers licensed to care for infants and/or preschoolers comprised an estimated 4,336 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 four percent. Because many centers also employ cooks, custodians, social workers, family support workers, educational coordinators and office staff (Brandon et al., 2002), the total early care and education workforce for centers licensed to serve infants and/or preschoolers may approach or even exceed 5854 members.

As shown in Table 3.15, centers enrolling infants as well as preschoolers employed a little more than one-third of all assistant teachers and directors and about two-fifths of the teachers, with the remaining staff employed in centers that did not enroll infants. Centers serving infants as well as preschoolers did not

⁹ Assistant teachers and teachers working with school-age children constituted approximately four 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 3.15. *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
Centers enrolling infants^a	Total number	408	1,164	136
	Percentage	38.4	40.4	35.0
Centers without infants	Total number	654	1,719	253
	Percentage	61.6	59.6	65.0
All centers	Total number	1,062	2,883	389
	Percentage	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
Head Start/ CDE contract	Total number	374	609	86
	Percentage	35.2	21.1	22.2
Vouchers/No contract	Total number	257	1,056	149
	Percentage	24.2	36.6	38.4
No vouchers/No contract	Total number	432	1,218	153
	Percentage	40.6	42.2	39.4
All centers	Total number	1,063	2,883	388
	Percentage	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	1,063	2,884	389	4,336
	Percentage	24.5	66.5	9.0	100.0
Head Start/CDE contract	Total number	374	609	86	1,069
	Percentage	35.0	57.0	8.0	100.0
Vouchers/No contract	Total number	257	1,056	149	1,462
	Percentage	17.6	72.2	10.2	100.0
No vouchers/No contract	Total number	432	1,218	153	1,803
	Percentage	24.0	67.6	8.5	100.0

differ from those not serving infants, however, with respect to the proportion of their staff who were teachers, assistant teachers or directors.

Table 3.16 shows the countywide distribution of teachers, assistant teachers and directors employed across centers based on the centers' subsidy status.¹⁰ More than one-third of all assistant teachers in the county (35.2 percent), but only 21.1 percent of teachers, were employed in centers holding a Head Start or CDE contract. In contrast, 42.2 percent of all teachers in the county and 40.6 percent of all assistant teachers were employed in centers not receiving any public dollars, and 24.2 percent of all assistants and 36.6 percent of all teachers were employed in centers receiving subsidies through vouchers. 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.

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 Alameda County licensed to serve infants and/or preschoolers employed, on average, six teachers, two assistant teachers and one director.¹¹ On average, the vast majority of teachers

(95.4 percent, SE=0.9) and assistant teachers (97.8 percent, SE=0.9) 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 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 of teachers required by licensing in non-contracted programs.

¹¹ Note that 13.8 percent of centers had more than one director, 49.6 percent of centers had one director, and 36.6 percent of centers had no person who served only as an administrative director. In many of the latter centers, the person with director responsibilities was also a teacher.

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

	All staff	Infant/ preschool teaching staff
Assistant teachers	2.3 (2.39)	2.2 (2.39)
Teachers	6.3 (3.41)	6.0 (3.27)
Directors	0.8 (5.05)	

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	3.1 (5.16)	1.7 (2.65)	2.2 (4.38)	2.3 (2.39)
<i>Number of centers</i>	57	77	90	224
Teachers	5.1 (5.43)	6.9 (6.59)	6.5 (5.23)	6.3 (3.41)
<i>Number of centers</i>	57	77	90	224

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

In Alameda County, teachers and assistants care for and educate approximately 30,000 children in centers licensed to serve infants and/or preschoolers. Approximately 90 percent of the children in these centers are not yet in kindergarten, and almost 70 percent are between the ages of three and five. Seven percent are children under age two, about 15 percent are age two, and nine percent are in kindergarten or a higher grade. On average, about five percent of children in these centers are reported by directors to have special needs.

Nearly 60 percent of centers report caring for at least one child who receives public child care assistance. Thirty-four percent of centers receive public dollars in the form of vouchers, and 25 percent 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 25 or fewer children, and 20 percent enrolling 78 children or more.

Number of Children Served

As shown in Table 3.20, licensed child care centers in Alameda County provided services in 2005 to an estimated 26,341 infants and/or preschoolers, not yet in kindergarten. In addition, these centers cared for 2,503 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 Approximately 70 percent (69.1) of these children were preschoolers, ages three to five, 22.3 percent were two years old or younger, and 8.7 percent were in kindergarten or older.

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.

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

	Number enrolled
Under age 2	2,108
Age 2	4,316
Ages 3 to 5, not yet in kindergarten	19,917
Ages 5 or younger, not in kindergarten	26,341
Ages 5 or older, in kindergarten or higher grade	2,503
All ages	28,844

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 (97.3 percent, SE=1.1) reported caring for children between the ages of three and five.
- 9.2 percent (SE=2.0) reported caring for children across the entire age

span from infancy through school age. Centers enrolling at least one subsidized child through a voucher (18.7 percent; SE=4.5) were the most likely to care for children across the age span.

- 37.1 percent (SE=3.2) reported caring for at least one child attending kindergarten or a higher grade.
- 27.2 percent of centers (SE=3.0) enrolled children under age two,¹⁴ and none of the centers enrolled infants exclusively.
- 70.2 percent of centers (SE=3.1) enrolled two-year-old children.

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 fewer than 25 children, and about 20 percent enrolled 78 children or more. As shown in Table 3.23, centers, on average, enrolled 59.7 children across the entire age span and 54.5 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,

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.

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

	Estimated percentage
Under age 2	27.2
<i>Number of centers</i>	224
Age 2	70.2
<i>Number of centers</i>	218
Ages 3-5, not yet in kindergarten	97.3
<i>Number of centers</i>	224
Ages 5 or older, in kindergarten or higher grade	37.1
<i>Number of centers</i>	224

or enrolled at least one child who received a voucher. We estimate that 59.8 percent of centers in Alameda County licensed to serve infants and/or preschoolers enrolled at least one subsidized child. About one-quarter of centers (25.4 percent) held a contract with Head Start or CDE. (See Table 3.24.) Of the centers that did not hold such a contract, 52.1 percent reported enrolling at least one child who received a voucher. These centers represented 34.4 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,

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	16.3 (1.67)
<i>Number of centers</i>	60
Age 2	13.1 (0.90)
<i>Number of centers</i>	153
Ages 3-5, not yet in kindergarten	42.3 (2.21)
<i>Number of centers</i>	218
Ages 5 or older, in kindergarten or higher grade	14.0 (1.76)
<i>Number of centers</i>	83

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

	Estimated percentage (SE)	Number of centers
Head Start or CDE contract	25.4 (2.92)	57
Vouchers/No contract	34.4 (3.18)	77
No vouchers/ No contract	40.2 (3.28)	90

Table 3.23. Estimated Mean Number of Children Served: Countywide

	Estimated mean number of children served (SE)
All ages	59.7 (2.89)
<i>Number of centers</i>	218
Ages 5 or younger, not in kindergarten	54.5 (2.61)
<i>Number of centers</i>	218

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

	Estimated mean percentage (SE)
Children receiving voucher subsidy	14.3 (1.80)
<i>Number of centers</i>	75

how many such children they enrolled. We 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, 14.3 percent of children enrolled in that center received this type of assistance. (See Table 3.25.) In the vast majority of centers, fewer than 25 percent of the children enrolled received vouchers. Approximately three-quarters of centers (76.7 percent) enrolled fewer than 25 percent of children on vouchers, while 94.9 percent of centers enrolled fewer than 50 percent, and 2.6 percent enrolled more than 70 percent. For centers enrolling at least one child receiving a voucher, 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. As shown in Tables 3.26 and 3.27, however, the percentage of centers caring for children of different ages, and the number of children in each age group enrolled, differed by centers' subsidy status. Generally, centers receiving public dollars in the form of vouchers were the most likely to enroll children across the age span.

We estimate that the majority of licensed child care centers in Alameda County (61.7 percent, SE=3.3) were private nonprofit agencies. Public agencies (e.g., school districts) operated 8.6 percent (SE=1.9) of centers, and for-profit agencies constituted 29.7 percent

(SE=3.1) of centers. As shown in Table 3.28, centers that held a Head Start or CDE contract were more likely to be publicly operated were than other types of centers.

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 55.2 percent (SE=3.3) of Alameda County's centers licensed to serve infants and/or preschoolers cared for children with special needs. On average, children with special needs constituted 9.7 percent (SE=1.4) of the child population in centers that enrolled at least one such child. Only one-quarter of all centers reported that six percent or more of their children had special needs, and only one percent of centers reported that children with special needs constituted 50 percent or more of all children enrolled. Centers serving infants were more likely to care for at least one child with special needs than centers not serving infants.

Depending on whether, and through which vehicle, they served subsidized children, centers differed in whether they enrolled any children with special needs, as well as in the percentage of their enrolled children who had special needs. Centers that received public funding to serve children of low-income families through a Head Start or CDE contract were more likely to care for at least one

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	27.2 (2.98)	31.6 (6.17)	33.8 (5.40)	18.9 (4.14)
<i>Number of centers</i>	224	57	77	90
Age 2*	70.2 (3.11)	52.6 (6.63)	85.3 (4.09)	68.6 (5.02)
<i>Number of centers</i>	218	57	75	86
Ages 3-5, not yet in kindergarten**	97.3 (1.08)	93.0 (3.39)	100.0 (0.0)	97.8 (1.56)
<i>Number of centers</i>	224	57	77	90
Ages 5 or older, in kindergarten or higher grade***	37.1 (3.23)	14.0 (4.61)	61.0 (5.57)	31.1 (4.89)
<i>Number of centers</i>	224	57	77	90

* $p < .001$, Vouchers/No contract > Head Start/CDE contract, No vouchers/No contract. No vouchers/No contract > Head Start/CDE contract.

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

*** $p < .001$, Vouchers/No contract > Head Start/CDE contract, No vouchers/No contract. No vouchers/No contract > Head Start/CDE contract.

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	16.3 (1.67)	17.7 (2.59)	16.3 (3.22)	14.6 (2.07)
<i>Number of centers</i>	60	18	26	16
Age 2	13.1 (0.90)	12.9 (2.56)	13.2 (1.55)	13.0 (1.02)
<i>Number of centers</i>	153	30	64	59
Ages 3-5, not yet in kindergarten*	42.3 (2.21)	42.2 (3.23)	35.4 (2.84)	48.4 (4.40)
<i>Number of centers</i>	218	53	77	88
Ages 5 or older, in kindergarten or higher grade**	14.0 (1.76)	30.3 (9.15)	12.6 (2.38)	11.6 (1.57)
<i>Number of centers</i>	83	8	47	28

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

** $p < .01$, Head Start/CDE contract > Vouchers/No contract, No vouchers/No contract.

child with special needs than were centers that did not care for any subsidized children. (See Table 3.29.) Centers with a Head Start or CDE contract reported enrolling a higher 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, as shown in Table 3.30.

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

	Estimated percentage (SE)				Number of centers
	Private nonprofit	Public*	For-profit	Total	
Countywide	61.7 (3.27)	8.6 (1.88)	29.7 (3.07)	100.0	222
Head Start/CDE contract	73.2 (5.93)	26.8 (5.93)	0.0 (0.00)	100.0	56
Vouchers/No contract	52.0 (5.71)	1.3 (1.29)	46.8 (5.70)	100.0	77
No vouchers/No contract	62.9 (5.13)	3.4 (1.92)	33.7 (5.02)	100.0	89

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

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	44.8 (3.35)	31.5 (6.33)	45.5 (5.69)	52.2 (5.28)
At least one child with special needs*	55.2 (3.35)	68.5 (6.33)	54.5 (5.69)	47.8 (5.28)
Total	100.0	100.0	100.0	100.0
Number of centers	221	54	77	90

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

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*	9.7 (1.36)	16.0 (3.87)	7.3 (1.26)	6.5 (1.20)
Number of centers	122	37	42	43

* $p < .01$, Head Start/CDE contract > Vouchers/No contract, No vouchers/No contract.

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

Compared to Alameda County's overall 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 slightly less likely to have completed a four-year or higher college degree, and much less likely to have completed high school only.

One-third of teachers have completed a four-year or graduate degree, and slightly more than 20 percent have completed a two-year degree, typically with an early childhood focus. About one-third of centers, however, do not employ any teachers with a four-year or higher degree.

Assistant teachers in Alameda County are also more likely than the average female in the state 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. Assistant teachers have lower levels of degree attainment than teachers or directors. Approximately 40 percent of assistant teachers have completed from one to 23 college credits related to early childhood development. Only 10.9 percent have completed neither college credits nor a degree related to early childhood.

More than 75 percent of directors have completed a two-year, four-year or higher degree, typically with an early childhood focus. Directors are more than twice as likely as teachers to have completed a four-year or higher degree, and have completed associate degrees at roughly the same rate as teachers.

The majority of degree holders have completed a degree related to early childhood development. About 25 percent of those with BA or higher degrees obtained their degree through a foreign institution.

Across the county, almost 50 percent of teachers and 25 percent of assistant teachers are current participants in the Alameda County Child Development Corps. About 75 percent of centers report employing at least one teacher who is a Corps member, and about one-third report employing at least one assistant teacher who is a Corps member. Within such centers, typically about 60 percent of teachers and assistants are participating.

About 60 percent of all teachers with an AA or higher degree hold a Child Development Permit, and about 60 percent of all directors hold a Site Supervisor Permit. About 16 percent of teachers and about 25 percent 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.

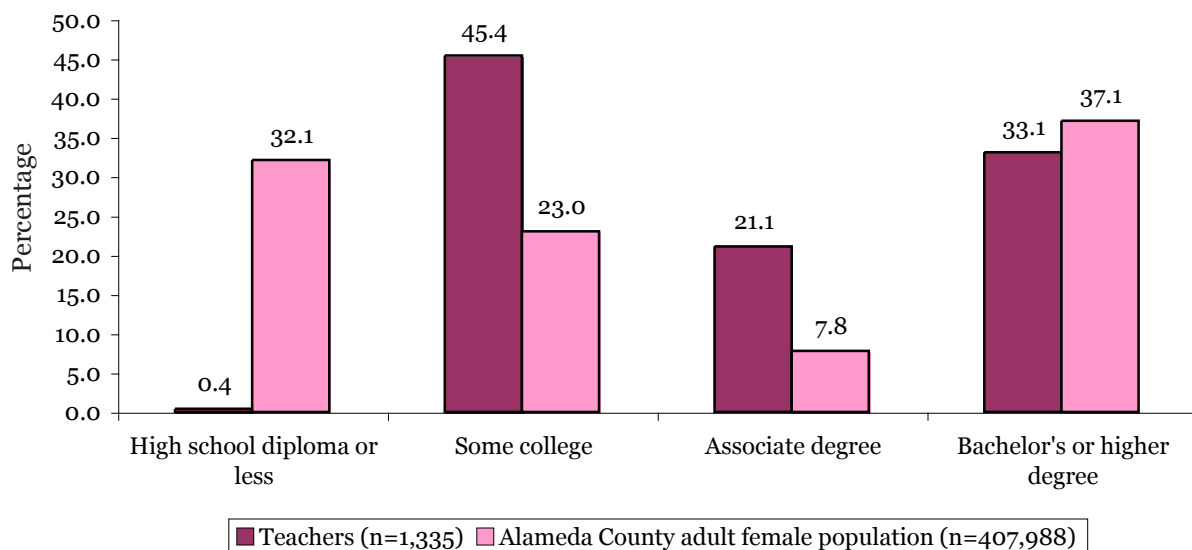
Research has indicated that the presence of better-trained adults enhances the quality of child care services for children (Whitebook & Sakai, 2004; Shonkoff & Phillips, 2000). Because of the critical role that teachers' skill and knowledge play in promoting children's optimal development, considerable effort and investment have been devoted to encouraging and supporting teachers, assistants and directors to pursue professional development through the Child Development Corps 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, Assistant Teachers and Directors

As is true nationally (Herzenberg, Price & Bradley, 2005), we found that center-based teachers in Alameda County typically had completed some college credits, and were more likely than the average adult woman in the county to have done so. As shown in Figure 3.7, virtually all teachers (99.6 percent) had completed some college-level work, compared to 67.9 percent of adult women in Alameda County. Teachers reported a higher completion rate for an associate degree (21.1 percent) than is true for the average adult female in the county (7.8

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



percent). Teachers' completion rates for BA or higher degrees¹⁷ (33.1 percent) nearly matched that of women in the county as a whole (37.1 percent).

Not all centers employed teachers with a four-year or higher degree; such teachers were concentrated in 67.4 percent of centers. In centers that employed at least one teacher with a four-year or higher degree, 51.1 percent of teachers, on average, held such degrees. (See Table 3.31.) Two-fifths of all assistant teachers (42.1 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, 77.3 percent of assistants, on average, had done so.

As shown in Figure 3.8, the vast majority of assistants (89.1 percent) had also completed some college-level work, and they were more likely than the average female in the county to have done so. Assistants had completed two-year degrees at a higher rate (11.6 percent) than the average adult female in Alameda County, but at a lower rate than teachers. Assistants had completed four-year or higher degrees at a lower rate (14.8 percent) than teachers or adult females in the county.

Not all centers employed assistant teachers with AA or higher degrees. Assistants with AA degrees were concentrated in 18.4 percent of centers, and those with BA or higher degrees in 27.0 percent of centers. In centers that employed at least one assistant teacher with an AA or higher degree, an average of 47.4 percent (SE= 5.0) of assistants

held AA degrees, and 60.3 percent (SE=5.0) held BA or higher degrees. (See Table 3.31.) Nearly nine out of ten (88.7 percent) directors had completed an AA or higher degree. Over one-half of directors (69.5 percent) had completed a BA or higher degree, as shown in Figure 3.10. Nearly one-fifth (19.2 percent) had completed an AA degree. Overall, 73.4 percent of centers had at least one director with a BA or higher degree.

Degree Attainment Through a Foreign Institution

Among the 33.1 percent of teachers who had earned a four-year or higher degree, 26.0 percent were reported to have obtained it through a foreign institution. These teachers were concentrated, however, in 41.2 percent of the centers across the county. Among the 26.4 percent of assistants who had earned an AA or higher degree, 29.1 percent had obtained it through a foreign institution, according to director reports. These assistant teachers were concentrated in 41.8 percent of centers.

Over two-thirds (69.5 percent) of directors had obtained four-year or higher degrees. Of these, 11.6 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).

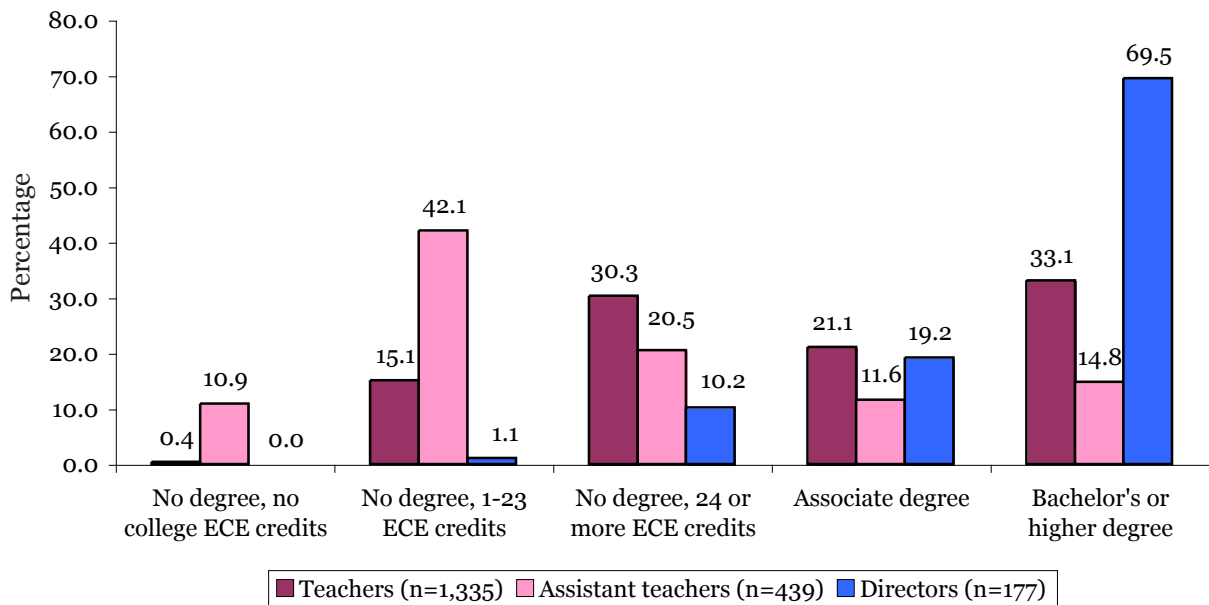
¹⁷ We asked directors whether teachers had obtained four-year or higher degrees, but we did not collect independent information on the percentage of teachers with graduate degrees.

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	44.8 (27.7)	34.4 (1.89)	45.1 (2.21)	40.2 (2.29)	51.1 (2.42)
<i>Number of centers</i>	3	81	142	133	151
Assistant teachers	64.1 (5.73)	77.3 (2.89)	57.7 (5.55)	47.4 (5.02)	60.3 (5.03)
<i>Number of centers</i>	31	85	35	26	38

^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



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:

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. Overall, 33.1 percent of teachers had completed a BA degree or higher, and 21.1 had completed an AA degree. Slightly more than one-half of teachers with a BA or higher degree (58.9 percent) and 75.1 percent of teachers with an AA degree had obtained an early childhood-related degree.

Overall, 26.4 percent of assistant teachers had completed an AA, BA or higher degree. About two-fifths of assistants with an AA or higher degree

(44.3 percent) had obtained a degree with an early childhood focus.

Overall, 69.5 percent of directors had completed a BA degree or higher, and 19.2 percent had completed an AA degree. Nearly three-quarters (73.7 percent) of directors with a BA or higher degree and 85.3 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, 19.1 percent had earned a four-year degree or higher with an early childhood focus, and 15.4 percent had earned an AA degree with an early childhood focus. Among directors across all levels of educational attainment, 50.0 percent had earned a four-year degree or higher, and 16.1 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.

Slightly less than one-half of all teachers across the county (45.4 percent) had completed such college credits but had not completed a degree. Thirty (30.3) percent of teachers had completed 24 or more credits, and 15.1 percent had completed from one to 23 credits, of early childhood-related coursework. Less than one percent of all teachers had completed neither a college degree

nor any college credits related to early childhood. Most assistant teachers (73.6 percent) had not completed a two-year or higher degree, but most had completed at least some college credits related to early childhood. Directors reported that 42.1 percent of assistant teachers had completed from one to 23 credits, 20.5 percent had completed 24 or more credits, and only 10.9 percent had completed neither credits nor a degree. Directors followed a similar pattern to teachers, with most of those without degrees having completed 24 or more early childhood-related credits. Only about one-tenth (11.3 percent) of directors across the county had not completed a degree. Ten (10.2) percent of directors had completed 24 or more credits, 1.1 percent had completed less than 24 credits, and none had completed neither a degree nor 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 Child Development Corps, 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.

The Child Development Corps

We asked directors whether they were familiar with the Child Development Corps, and 85.4 percent of them were. We then asked whether their teachers or assistant teachers were currently Corps members; 44.8 percent of teachers and 24.0 percent of assistant teachers were. More than three-quarters of centers (78.4 percent) reported employing at least one teacher who was a Corps member, and 30.6 percent of centers reported employing at least one assistant teacher who was a Corps member. In centers that employed at least one Corps member, the majority of teachers (59.6 percent, SE=2.6) and assistants (65.3 percent, SE=5.0) appeared to be members.

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 required of participants in the Alameda County Child Development Corps. We asked directors what percentage of their teachers and assistant teachers with two- or four-year degrees also held a permit.

More than one-half (59.5 percent) of all teachers with a BA or higher degree, and two-thirds (67.3 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, 62.5 percent held a permit. More than one-third (37.7 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; 65.0 percent of directors with a BA or higher degree, and 41.2 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, 16.9 percent held a California teaching credential, and 4.3 percent held a credential from another state. Among all teachers in the county (including those with BA or higher degrees, or with lower levels of educational attainment), 5.9 percent held a California teaching credential. Among all directors who had earned a BA or higher degree, 26.4 percent held a California teaching credential and 8.4 percent 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 by the ages of children served. Centers that enroll both infants and preschoolers report a somewhat lower percentage of teachers with BA or higher degrees than those enrolling preschoolers but no infants.

Educational attainment also varies by centers' relationship to public subsidy. Centers receiving no public dollars report a slightly higher percentage of teachers who have completed a BA or higher degree, while contracted centers report a higher percentage of directors who have obtained a BA or higher degree. Teachers in contracted centers are also the most likely to hold a Child Development Permit.

Educational attainment varies by age among teachers, but not among assistant teachers. Teachers with bachelor's or higher degrees are older, on average, than those with less education. Teachers' educational attainment also varies by ethnicity and language: among those with bachelor's or higher degrees, compared to the ethnic distribution among the teacher population as a whole, White, Non-Hispanic and Asian/Pacific Islander teachers are over-represented, and African American and Latina teachers are under-represented. About 46 percent of Asian/Pacific Islander, 38 percent of White, Non-Hispanic, 18 percent of African American and 15 percent of Latina teachers have completed a BA or higher degree. Latina teachers have attained BA or higher degrees at slightly higher rates than their counterparts in the overall county population, while White, Non-Hispanic teachers are less likely to have earned a BA than White, Non-Hispanic Alameda County adults. African American and Asian/Pacific Islander teachers have attained BA or higher degrees at similar rates to their counterparts in the overall county population.

With respect to linguistic capacity, teachers with AA degrees, on average, are slightly more likely than either teachers with BA or higher degrees, or teachers with no degrees, to have the capacity to communicate with children in a language other than English. Among assistant teachers, those with AA or higher degrees were somewhat less likely than assistant teachers with no degrees, but more likely than teachers across educational levels, to speak a language other than English fluently.

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 Alameda 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 received 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 or assistant teachers working in publicly funded 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 their teachers and assistants from those that enrolled both infants and

preschoolers.¹⁹

As shown in Table 3.32, centers that enrolled infants reported a somewhat lower percentage of teachers with BA or higher degrees, and a somewhat higher percentage of teachers with one to 23, or 24 or more early childhood-related college credits. Centers serving infants also reported a lower percentage of assistants with 24 or more credits related to early childhood development. Centers that enrolled infants reported a higher percentage of directors who had obtained BA or higher degrees.

We also examined the extent to which focused education related to early childhood development and certification varied between the teaching staff in centers serving infants and preschoolers and those not serving infants. Centers not serving infants were more likely to employ teachers with AA degrees related to early childhood development (82.4 percent, SE=4.2) than were centers serving infants and preschoolers (64.3 percent, SE=7.4). There were no differences, on average, between these centers with respect to the percentage of centers employing at least one teacher with a BA or higher degree related to early childhood development or a California teaching credential, or the percentage of such teachers employed in these centers. These centers did differ, however, in terms of whether they employed at least one teacher with a BA or higher degree and a Child Development Permit, with centers serving infants more likely (88.1 percent, SE=5.0) than those

¹⁹ Because there were so few programs licensed to serve infants exclusively, we could not compare those 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					Total	Number of staff
		Bachelor's degree or higher	Associate degree	24 or more ECE credits	1-23 ECE credits	No degree, no ECE credits		
Teachers	Centers enrolling infants ^a	28.9	20.6	32.7	17.6	0.2	100.0	539
	Centers without infants	35.9	21.5	28.8	13.4	0.4	100.0	796
	All centers	33.1	21.1	30.3	15.1	0.4	100.0	1,335
Assistant teachers	Centers enrolling infants ^a	14.0	14.4	11.6	46.0	14.0	100.0	180
	Centers without infants	15.4	9.7	26.6	39.4	8.9	100.0	259
	All centers	14.8	11.6	20.5	42.1	10.9	100.0	439
Directors	Centers enrolling infants ^a	74.6	15.9	9.5	0.0	0.0	100.0	63
	Centers without infants	66.6	21.1	10.5	1.8	0.0	100.0	114
	All centers	69.5	19.2	10.2	1.1	0.0	100.0	177

^aMost of these centers also enroll older children.

not serving infants (73.1 percent, SE=4.6) to employ at least one such teacher.

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 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 and 3.10, centers receiving no public dollars reported a slightly higher percentage of teachers who had obtained 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 directors with a BA or higher degree than centers receiving public dollars through a voucher or those receiving no public dollars. With respect to assistants, those in centers receiving no public dollars reported higher levels of education than their counterparts in other types of centers, as shown in Figure 3.11.

There were no differences among centers with varying relationships to public subsidy with respect to the extent to which teachers had degrees related to early childhood development or to the percentage of centers employing at least one teacher with a BA or higher degree and a California teaching credential. Centers holding a contract with CDE or Head Start employed the highest percentage of teachers with Child Development Permits, as shown in Table 3.33. Centers holding a contract with CDE or Head Start were more likely to employ at least one assistant teacher with an AA or higher degree who held a Child Development Permit (69.2 percent, SE=1.3) than centers receiving vouchers (15.8 percent, SE=8.4) or centers receiving no public dollars (13.0 percent, SE=7.1).

Overall Educational Attainment, by Teacher and Assistant Teacher Demographic Characteristics

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

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

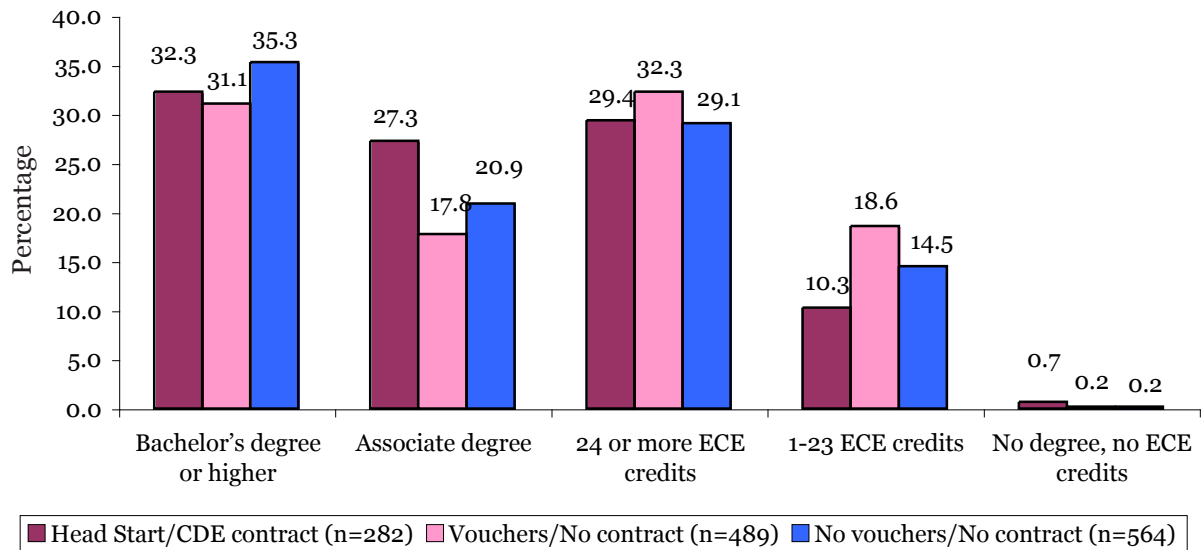


Figure 3.10. *Estimated Educational Attainment of Directors, By Centers' Relationship to Public Subsidy: Countywide*

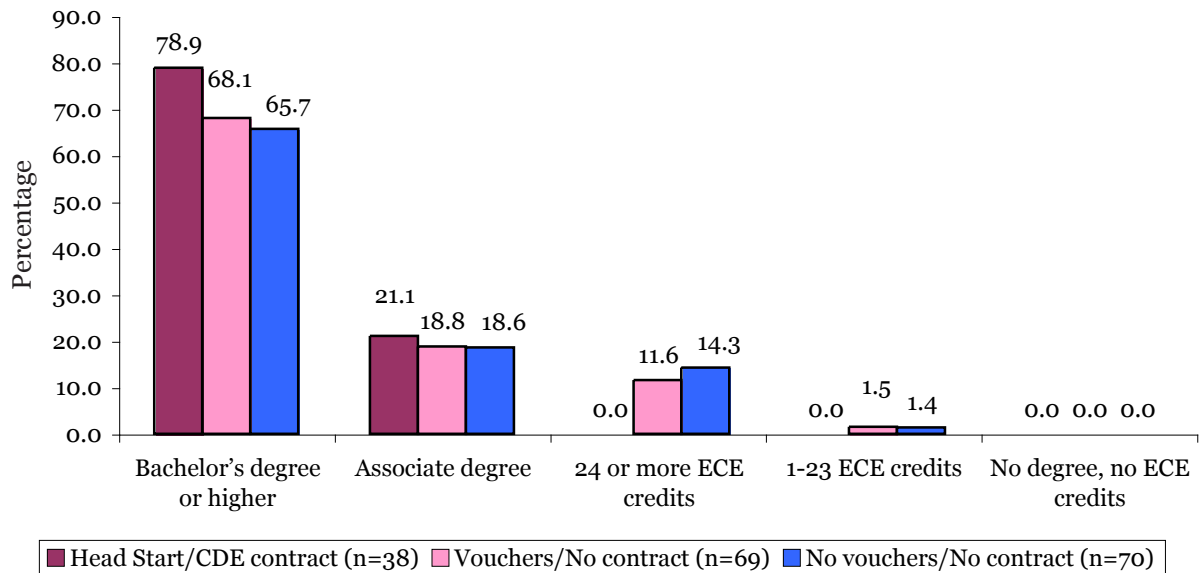


Figure 3.11. *Estimated Educational Attainment of Assistant Teachers, By Centers' Relationship to Public Subsidy: Countywide*

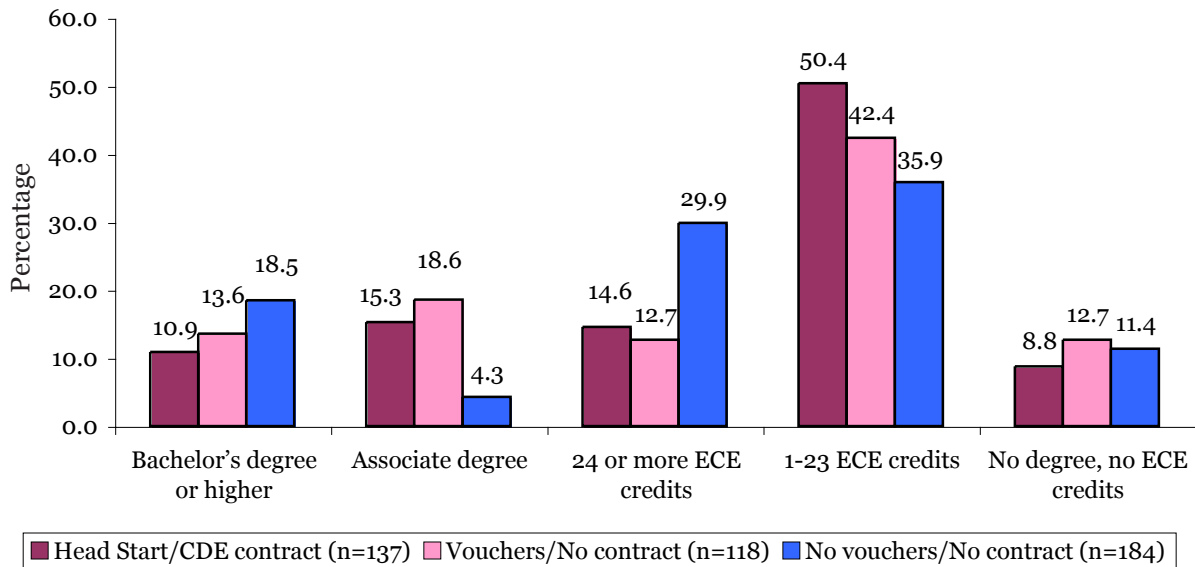


Table 3.33. *Estimated Mean Percentage of Teachers with Child Development Permits In Centers Employing at Least One Such Teacher: Countywide, and By Centers' Relationship to Public Subsidy*

	Estimated average percentage (SE)	
	Teachers with a bachelor's or higher degree*	Teachers with an associate degree**
Head Start/CDE contract	96.0 (2.09)	96.5 (2.73)
<i>Number of centers</i>	42	32
Vouchers/No contract	73.9 (5.30)	89.4 (3.87)
<i>Number of centers</i>	29	29
No vouchers/No contract	79.5 (3.82)	82.1 (3.83)
<i>Number of centers</i>	42	37
Countywide	84.2 (2.29)	90.0 (2.14)
<i>Number of centers</i>	113	98

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

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

ethnicity and language background.

1) Overall Educational Attainment, by Age

Two intertwined concerns arise with regard to the 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 3.34, teachers with BA or higher degrees were older, on average, than teachers with less education. In particular, nearly one-third of such teachers (30.5 percent) were age 50 or older, compared to 14.1 percent of teachers with AA degrees, and 12.2 percent of teachers with no degrees. Among assistant teachers, a higher percentage of those with no degrees were 29 years old or younger (42.6 percent) than those with AA or higher degrees (28.7 percent). Similar patterns were identified across centers serving children of different ages and centers 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 Alameda County's adult population.

Combined, these analyses provide a picture of how well teachers and assistant teachers of various ethnic groups are represented at different educational levels, how this distribution reflects 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 3.35, White, Non-Hispanic teachers comprised 43.3 percent of all teachers, and they comprised 50.0 percent of teachers with a BA or higher degree. Latinas comprised 17.3 percent of all teachers, but only 7.9 percent of teachers with a BA or higher degree. African American teachers comprised 14.6 percent of all teachers, and 7.9 percent of teachers with a BA or higher degree. Although Asian/Pacific Islanders constituted only 17.8 percent of all teachers, they comprised 25.0 percent of those who reported a BA or higher degree as their highest level of educational attainment. A similar pattern was found among assistant teachers.

In determining the distribution of educational attainment (as represented by completion of degrees) within various

Table 3.34. 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	28.4	22.5	24.6	34.3
30 to 39 years old	28.4	26.1	26.1	31.1
40 to 49 years old	24.6	20.9	35.2	22.4
50 years and older	18.6	30.5	14.1	12.2
<i>Total</i>	100.0	100.0	100.0	100.0
<i>Number of staff</i>	1,309	426	276	607

Table 3.35. 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	43.3	50	44.5	38.0	37.0	40.5	35.8
Latina	17.3	7.9	18.9	23.2	16.3	10.7	18.3
African American	14.6	7.9	18.9	17.3	17.4	10.7	19.9
Asian/Pacific Islander	17.8	25.0	15.3	14.0	22.1	31.4	18.7
American Indian or Alaskan Native	0.3	0.2	0.0	0.5	0.0	0.0	0.0
Multiethnic	2.6	2.0	1.4	3.6	1.6	0.9	1.8
Other	4.1	7.0	1.0	3.4	5.6	5.8	5.5
<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Number of staff</i>	1,317	428	281	608	448	121	327

ethnic groups, we found that 37.5 percent of White, Non-Hispanic, 17.7 percent of African American, 14.9 percent of Latina, and 45.5 percent of Asian/Pacific Islander teachers had completed a four-year degree or higher. (See Table 3.36.) Among assistant teachers, 38.4 percent of Asian/Pacific Islanders, 29.5 percent of White, Non-Hispanics, 17.8 percent of Latinas, and 16.7 percent of African Americans had completed a four-year degree or higher.

Next, we sought to determine the ethnic distribution of teachers at different levels of education, as compared to Alameda County's overall adult population. For example, were Latina teachers more or less likely than other Latino adults in Alameda County to have achieved a BA degree? To make this comparison, we examined data from the 2000 U.S. Census on Alameda County adults' attainment of BA or higher degrees. Latina teachers had attained BA or higher degrees at higher rates than their counterparts in the overall county population (all Latino adults, 12.7 percent). African American and Asian/Pacific Islander teachers had attained BA or higher degrees at about the same rate as those of their counterparts in the overall county population (all African American adults, 18.8 percent; all Asian/Pacific Islander adults, 45.3 percent). White, Non-Hispanic teachers, however, were less likely to have earned a BA than White, Non-Hispanic Alameda County adults (42.7 percent).

3) Overall Educational Attainment, by Language

Since many of Alameda 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 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, 40.8 percent of teachers and 44.2 percent of assistant teachers had such a capacity. Teachers with AA degrees were slightly less likely than either teachers with BA or higher degrees or teachers with no degrees to have this capacity, as shown

in Table 3.37. 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 (48.3 percent) were somewhat more likely than those with no degree (42.7 percent) to speak a language other than English fluently.

Table 3.37 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 at all educational levels than centers not serving infants, most notably teachers with AA degrees. Centers receiving vouchers employed a higher percentage of teachers with BA or higher degrees who could communicate fluently with children and families in a language other than English than centers holding contracts with Head Start or CDE or those receiving no public funding. However, centers holding contracts employed a higher percentage of teachers with AA degrees or no degrees who spoke a language other than English fluently, compared to centers receiving vouchers or those receiving no public dollars. Contracted programs employed a higher percentage of assistant teachers at all education levels (49.6 percent) who spoke a language other than English fluently than did centers receiving vouchers (39.8 percent) or those receiving no public dollars (42.9).

Table 3.36. Estimated Percentage of Teachers with a Bachelor’s Degree or Higher, Associate Degree, or No Degree, By Ethnicity: Countywide

	Estimated percentage				Number of teachers
	Bachelor's or higher degree	Associate degree	No degree	Total	
White, Non-Hispanic	37.5	22	40.5	100.0	570
Latina	14.9	23.2	61.3	100.0	228
African American	17.7	27.6	54.7	100.0	192
Asian/Pacific Islander	45.5	18.3	36.2	100.0	235

Table 3.37. 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	43.9	36.5	40.3
<i>Number of teachers</i>	442	282	600
Centers Enrolling Infants ^a	50.6	38.7	49.4
<i>Number of teachers</i>	156	111	261
Centers without Infants	40.2	35.1	33.6
<i>Number of teachers</i>	286	171	114
Head Start/CDE contract	39.6	41.6	46.5
<i>Number of teachers</i>	91	77	339
Vouchers/No contract	61.2	35.6	38.1
<i>Number of teachers</i>	153	87	239
No vouchers/No contract	32.7	33.9	40.1
<i>Number of teachers</i>	199	118	247

^aMost 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 two-fifths of centers employ teachers who have participated in non-credit training focused on dual language learning in young children, and slightly less than one-third employ teachers who have completed college coursework in that subject, despite the growing numbers of young children in Alameda County who speak a language other than English in their homes. Centers that report that at least one of their teachers has participated in credit-bearing courses related to dual language learning report somewhat higher overall levels of education among their teachers. Centers with at least one teacher who has participated in training or college courses related to dual language learning also employ a higher percentage of teachers who speak a language other than or in addition to English.

Many more teachers have participated in professional development related to working with children with special needs. Three-quarters of centers report that at least one of their teachers has participated in non-credit training, and slightly more than two-thirds 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 higher levels of teacher professional development related to working with such children. Centers that hold a contract with Head Start or CDE also employ a higher percentage of teachers with relevant professional development.

As Alameda 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'²⁰professional preparation related to dual language learners and/or children with special needs.

Preparation to Work with Young Children Acquiring a Second Language

In 2005, more than one-third of children entering public kindergarten in Alameda 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

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.

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.

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 teachers in Alameda 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. Most had not: directors reported that, on average, only 26.1 percent of teachers had received non-credit training, and only 16.0 percent had completed college coursework, focused on dual language learning in young children. (See Table 3.38.) We estimate that 61.1 percent of centers had no teachers with non-credit training, and 69.3 percent had no teachers who had taken college courses related to dual language learning in children. (See Table 3.39.)

There were no differences between centers serving infants and those serving

older children with respect to teacher professional preparation related to working with dual language learners.

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 one-half of teachers, on average, had participated in non-credit training related to dual language learning in young children. Centers receiving no public dollars or those receiving vouchers for at least one child reported that fewer teachers 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 3.40, there were no differences in teacher educational levels between centers reporting that at least one of their teachers had non-credit training in dual language learning children and centers reporting no such teachers. Centers with at least one teacher with credit-bearing courses related to dual language learning children, however, reported a higher percentage, on average, of teachers with a BA or higher degree (41.0 percent) than centers with no such teachers (31.1 percent).

Centers with teachers who had participated in training or coursework related to dual language learning also reported a higher average percentage of teachers who spoke a language other than or in addition to English. In

Table 3.38. 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	26.1 (2.74)
<i>Number of centers</i>	203
College credits	16.0 (2.15)
<i>Number of centers</i>	199

Table 3.39. 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	38.9 (3.43)
<i>Number of centers</i>	203
At least one teacher with college credits	30.7 (3.28)
<i>Number of centers</i>	199

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

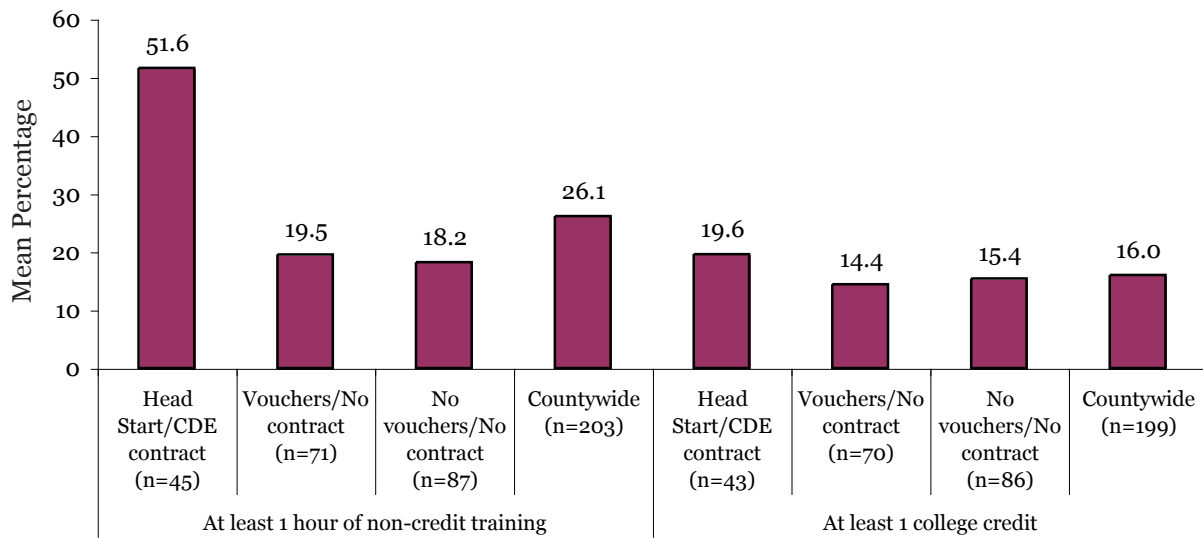


Table 3.40. Estimated Mean Percentage of Teachers with Associate or Higher Degrees in Centers with and without Teachers with Non-Credit Training and/or College Credits Related to Dual Language Learning Children: Countywide

	Mean percentage (SE)	
	Teachers with an associate degree	Teachers with a bachelor's degree or higher*
No teachers with non-credit training	22.4 (2.49)	31.9 (2.96)
<i>Number of centers</i>	124	124
At least one teacher with non-credit training	24.3 (2.96)	37.1 (3.84)
<i>Number of centers</i>	79	79
No teachers with college credits	21.6 (2.24)	31.1 (2.79)
<i>Number of centers</i>	138	138
At least one teacher with college credits	25.8 (3.56)	41.0 (4.39)
<i>Number of centers</i>	61	61

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

centers with at least one teacher who had participated in non-credit training, 50.6 percent (SE=3.9) of teachers spoke a language other than English, compared to 36.8 percent (SE=3.0) of teachers in centers without teachers with this training. Similarly, 52.6 percent (SE=4.5) of teachers spoke a language other than English in centers with teachers who had participated in credit-bearing training related to dual language learning, compared to 36.8 percent (SE=2.8) of teachers in centers without teachers with this education.

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

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).

Table 3.41. *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	75.4 (3.06)
<i>Number of centers</i>	199
At least one teacher with college credit	70.7 (3.24)
<i>Number of centers</i>	198

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.

Overall Levels of Special Needs-Related Training and Courses

Three-quarters (75.4 percent) of centers reported that at least one of their

teachers had participated in non-credit training related to children with special needs. Fewer centers (70.7 percent) reported that at least one of their teachers had participated in college credit-bearing courses on children with special needs. (See Table 3.41.) As shown in Table 3.42, on average, centers reported that 53.1 of their teachers had participated in non-credit training and 33.8 percent in college courses related to children with special needs.

The average percentage of teachers who had participated in professional development related to special needs varied by center relationship to public subsidy, and by the average educational background of teaching staff. As shown in Table 3.42, centers that held a contract with Head Start or CDE reported that 73.6 percent of their teachers, on average, had participated in non-credit special needs training, compared to 44.7 percent of teachers in centers receiving vouchers and 48.0 percent of teachers in centers with no public funding.

Centers that reported at least one teacher with non-credit training related to children with special needs also reported a higher percentage of teachers with an AA degree, as shown in Table 3.43. Centers with at least one teacher who had participated in non-credit training related to children with special needs reported that 27.2 percent of their teachers had an AA degree, compared to 14.6 percent of teachers in centers that did not have any teachers with non-credit, special needs training.

The average percentage of teachers who had participated in non-credit training related to children with special needs varied by whether centers served infants or only older children. In centers

currently enrolling infants, 65.0 percent (SE=5.0) of teachers had participated in non-credit training related to special needs, compared to 48.6 (SE=3.5) percent of teachers in centers enrolling only older children.

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

Overall, 55.2 percent of centers (SE=3.3) reported caring for at least one child with special needs. As shown in Tables 3.44 and 3.45, centers caring for at least one such child employed a higher percentage of teachers who had participated in non-credit or credit-bearing special needs training than did centers caring for no such children. Among centers with at least one child with special needs, 65.2 percent of teachers had participated in relevant non-credit training, whereas only 35.8 percent of teachers had received such non-credit training in centers with no such children. Similarly, centers that enrolled at least one child with special needs also reported higher average percentages of teachers (39.0 percent) who had completed college credits related to children with special needs than did centers that did not enroll any such children (27.1 percent).

Table 3.42. 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 contract	Vouchers/No contract	No vouchers/No contract
Non-credit training*	53.1 (2.91)	73.6 (5.57)	44.7 (4.89)	48.0 (4.32)
<i>Number of centers</i>	199	48	67	84
College credits	33.8 (2.31)	40.1 (5.18)	34.9 (3.77)	29.8 (3.51)
<i>Number of centers</i>	198	43	74	81

* $p < .001$, Head Start/CDE contract > Vouchers/No contract, No vouchers/No contract.

Table 3.43. 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	<i>Number of centers</i>
No teachers with non-credit training	14.6 (3.85)	32.1 (5.30)	49
At least one teacher with non-credit training	27.2 (2.29)	34.6 (2.61)	150
No teachers with college credits	19.8 (3.53)	36.5 (5.01)	58
At least one teacher with college credits	24.7 (2.37)	33.5 (2.69)	140

* $p < .01$, Center with no teachers with non-credit training < centers with at least one teacher with non-credit training.

Table 3.44. 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	35.8 (4.57)
At least one child with special needs*	65.2 (3.38)
<i>Number of centers</i>	196

* $p < .001$, Centers that care for at least one child with special needs > Centers with no children with special needs.

Table 3.45. 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	27.1 (3.28)
At least one child with special needs*	39.0 (3.18)
<i>Number of centers</i>	195

* $p < .05$, Centers that care for at least one child with special needs > Centers with no children with special needs.

Discussion

This report provides the latest comprehensive profile of Alameda 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 Alameda County's licensed child care centers?
2. What are the characteristics of children in Alameda 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 Alameda 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 Alameda County's licensed child care centers?

In Alameda County, a teacher in a child care center licensed to serve infants and/or preschoolers is more likely to be a woman of color 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 Alameda County, teachers and assistant teachers are more likely to be under age 30 and less likely to be over 50 years of age. About two-fifths of teachers and assistant teachers, and one-third of directors, are able to speak a language other than English fluently, most typically Spanish, followed by Chinese.

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 a teacher who speaks a language other than English.

The typical teacher and assistant teacher have worked in their present jobs for less than five years, while the typical director has been on the job for more than five years. The highest-paid teachers with a BA earn, on average, \$18.05 an hour. The highest-paid assistants can expect to earn \$10.87 an hour, on average, if they work in a center receiving public dollars through vouchers, and \$11.89 an hour in a center holding a contract with Head Start or CDE.

Alameda County's early care and education (ECE) workforce is much more ethnically and linguistically diverse than its teachers of Grades K-12. Slightly more than two-thirds of the county's K-12 teachers, but less than one-half of its child care center teachers, are White, Non-Hispanic. Child care center teachers and assistant teachers also more closely match the diversity of children in the county. This richness of linguistic and cultural diversity provides a promising foundation on which to revamp and expand services for Alameda 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, most child care center directors

are White, Non-Hispanic, whereas the majority of teachers and assistant teachers are women of color. For example, 6.1 percent of directors, 17.3 percent of teachers and 16.3 percent of assistant teachers are Latinas. Similarly, about two-fifths of teachers and assistant teachers can communicate with children in a language other than English, whereas only one-third of directors report such linguistic skills.

In light of the continuing efforts to upgrade the knowledge and skills of Alameda 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.

Another comparison with the K-12 teacher workforce reveals serious instability of staffing in Alameda County's child care centers. Twice as many teachers in child care centers (22 percent in the state, 24 percent in Alameda County) as California public school K-12 teachers (11 percent in California) leave their jobs each year (Alliance for Excellent Education, 2005). Although many centers reported no turnover among teaching staff during the last year, a sizeable portion reported that about one-third of their teachers and two-fifths of their assistant teachers had left their jobs. Only about two-fifths of teachers, 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. The highest-paid teachers in this study with BA or higher degrees earned, on average, \$18.05 per hour, or \$37,544 per year, compared to a mean annual salary for Alameda County K-12 teachers of \$60,114, typically distributed over a shorter work year (California Department of Education,

2005). 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 Alameda County child care centers licensed to serve infants and/or preschoolers?

In Alameda County, teachers and assistants care for and educate approximately 30,000 children in centers licensed to serve infants and/or preschoolers. Approximately 90 percent of the children in these centers are not yet in kindergarten, and almost 70 percent are between the ages of three and five. Seven percent are children under age two, about 15 percent are age two, and nine percent are in kindergarten or a higher grade. On average, about five percent of children in these centers are reported by directors to have special needs.

Nearly 60 percent of centers report caring for at least one child who receives public child care assistance. Thirty-four percent of centers receive public dollars in the form of vouchers, and 25 percent 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 25 or fewer children, and 20 percent enrolling 78 children or more.

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 six teachers and two assistant teachers, one-quarter of centers are very small businesses and about ten percent are organizations approaching the size of many 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, assistant teachers, and directors in Alameda County's child care centers?

Compared to Alameda County's overall 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 slightly less likely to have completed a four-year or higher college degree, and much less likely to have completed high school only.

One-third of teachers have completed a four-year or graduate degree, and slightly more than 20 percent have completed a two-year degree, typically with an early childhood focus. About one-third of centers, however, do not employ any teachers with a four-year or higher degree.

Assistant teachers in Alameda County are also more likely than the average female in the state 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. Assistant teachers have lower levels of degree attainment than teachers or directors. Approximately 40 percent of assistant teachers have completed from one to 23 college credits related to early childhood development. Only 10.9 percent have completed neither college credits nor a degree related to early childhood.

More than 75 percent of directors have completed a two-year, four-year or higher degree, typically with an early childhood focus. Directors are more than twice as likely as teachers to have completed a four-year or higher degree, and have completed associate degrees at roughly the same rate as teachers.

The majority of degree holders have completed a degree related to early childhood development. About 25 percent of those with BA or higher degrees obtained their degree through a foreign institution.

Across the county, almost 50 percent of teachers and 25 percent of assistant teachers are current participants in the Alameda County Child Development Corps. About 75 percent of centers report employing at least one teacher who is a Corps member, and about one-third report employing at least one assistant teacher who is a Corps member. Within such centers, typically about 60 percent of teachers and assistants are participating.

About 60 percent of all teachers with an AA or higher degree hold a Child Development Permit, and about 60 percent of all directors hold a Site Supervisor Permit. About 16 percent of teachers and about 25 percent 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 and directors in Alameda County child care centers have obtained levels of education that match or exceed the average Alameda County adult female, challenging the stereotype that those who work with young children are minimally educated. Assistant teachers have attended college at higher rates, but have completed BA or higher degrees at lower rates, than the state'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. In addition, we found that educational attainment and professional preparation of ECE staff varied by type of program. Approximately one-third of teachers in Alameda County child care centers held a bachelor's or higher degree, yet these teachers were not evenly distributed across the county. With respect to proposed increases in educational requirements for teachers in publicly funded preschool programs, some ECE teachers may find such new requirements within reach or may have already met them, while others may find it unrealistic to pursue this new opportunity.

As for participation in professional development activities, our findings reveal further variation among centers. It is encouraging that about three-quarters of centers reported that at least one teacher was participating in the Alameda County Child Development Corps, and that within these centers, a sizeable portion of staff were Corps participants, suggesting that many centers were engaged in upgrading the education and training of their staff. Participation among assistant teachers was notably lower. Efforts to extend such programs to more assistant teachers are worthy of attention.

With respect to certification, the efforts of the Child Development Corps to increase the percentage of teachers and assistant teachers with Child Development Permit holders have helped to boost the rate of certification among the early care and education workforce. Reflecting the current regulatory environment, however, this rate of certification among the early care and education workforce 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 by the ages of children served. Centers that enroll both infants and preschoolers report a somewhat lower percentage of teachers with BA or higher degrees than those enrolling preschoolers but no infants.

Educational attainment also varies by centers' relationship to public subsidy. Centers receiving no public dollars report a slightly higher percentage of teachers who have completed a BA or higher degree, while contracted centers report a higher percentage of directors who have obtained a BA or higher degree. Teachers in contracted centers are also the most likely to hold a Child Development Permit.

Educational attainment varies by age among teachers, but not among assistant teachers. Teachers with bachelor's or higher degrees are older, on average, than those with less education. Teachers' educational attainment also varies by ethnicity and language: among those with bachelor's or higher degrees, compared to the ethnic distribution among the teacher population as a whole, White, Non-Hispanic and Asian/Pacific Islander teachers are over-represented, and African American and Latina teachers are under-represented. About 46 percent of Asian/Pacific Islander, 38 percent of White, Non-Hispanic, 18 percent of African American and 15 percent of Latina teachers have completed a BA or higher degree. Latina teachers have attained BA or higher degrees at slightly higher rates than their counterparts in the overall county population, while White, Non-Hispanic teachers are less likely to have earned a BA than White, Non-Hispanic Alameda County adults. African American and Asian/Pacific Islander teachers have attained BA or higher degrees at similar rates to their counterparts in the overall county population.

With respect to linguistic capacity, teachers with AA degrees, on average, are slightly more likely than either teachers with BA or higher degrees, or teachers with no degrees, to have the capacity to communicate with children in a language other than English. Among assistant teachers, those with AA or higher degrees were somewhat less likely than assistant teachers with no degrees, but more likely than teachers across educational levels, to speak a language other than English fluently.

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 classrooms.

While a sizeable portion of teachers and assistants working in centers were found to be relatively young when compared to the average adult female in the state, 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 BA and higher degrees were 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, Alameda County also needs a strategy to recruit college graduates 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, Asian/Pacific Islander, African American and Latina teachers demonstrated very different patterns. Asian/Pacific Islanders comprised a higher proportion of teachers with college degrees than of teachers as a whole. African Americans and Latinas were under-represented among BA or higher degree holders, but proportionately represented among those with AA degrees. Latina teachers were over-represented among those with no degrees. Many in the community 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.

On a more promising note, it is important to recognize that early care and education appears to be a field of opportunity to some extent for teachers of color. Latina teachers had attained BA or higher degrees at higher rates, and African American, and Asian/Pacific Islander had attained BA or higher degrees at similar rates than their counterparts in the overall county population. In contrast,

White, Non-Hispanic teachers were less likely to have earned a BA than White, Non-Hispanic Alameda County adults. What is not possible to determine from these data is whether this is a reflection of limited opportunities in other fields or a choice on the part of these teachers. It is also particularly striking that assistant teachers 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 many 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 two-fifths of centers employ teachers who have participated in non-credit training focused on dual language learning in young children, and slightly less than one-third employ teachers who have completed college coursework in that subject, despite the growing numbers of young children in Alameda County who speak a language other than English in their homes. Centers that report that at least one of their teachers has participated in credit-bearing courses related to dual language learning report somewhat higher overall levels of education among their teachers. Centers with at least one teacher who has participated in training or college courses related to dual language learning also employ a higher percentage of teachers who speak a language other than or in addition to English.

Many more teachers have participated in professional development related to working with children with special needs. Three-quarters of centers report that at least one of their teachers has participated in non-credit training, and slightly more than two-thirds 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 higher levels of teacher professional development related to working with such children. Centers that hold a contract with Head Start or CDE also employ a higher percentage of teachers with relevant professional development.

Our data show that the vast majority of child care center teachers in Alameda County have not engaged in either non-credit or credit-bearing training 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 state 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 Alameda 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 Alameda 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 Alameda County's young children.

Appendix A: Additional Tables

Table A1. Estimated Age Distribution of Assistant Teachers, Countywide and By Ages of Children Served

	Estimated percentage		
	Countywide	Centers enrolling infants ^a	Centers without infants
29 years or younger	38.7	30.6	44.4
30 to 39 years	28.5	25.6	30.5
40 to 49 years	16.6	22.8	12.4
50 years or older	16.2	21.1	12.7
<i>Total</i>	100.0	100.0	100.0

^aMost of these centers also enroll older children.

Table A2. Estimated Age Distribution 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	38.7	23.9	52.5	41.0
30 to 39 years	28.5	25.4	19.5	36.6
40 to 49 years	16.6	23.9	16.9	10.9
50 years or older	16.2	26.8	11.0	11.5
<i>Total</i>	100.0	100.0	100.0	100.0
<i>Number of assistant teachers</i>	439	138	118	183

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

	Estimated percentage			
	All centers	Centers enrolling infants ^a	Centers without infants	
Teachers	White, Non-Hispanic	43.3	36.5	47.9
	Latina	17.3	18.6	16.5
	African American	14.6	14.5	14.7
	Asian/Pacific Islander	17.8	22.6	14.5
	American Indian or Alaskan Native	0.3	0.4	0.3
	Multiethnic	2.6	3.9	1.7
	Other	4.1	3.5	4.5
	<i>Total</i>	100.0	100.0	100.0
	<i>Number of teachers</i>	1,317	539	778
	Assistant teachers	White, Non-Hispanic	37.1	24.2
Latina		16.3	15.9	16.5
African American		17.4	22.5	13.9
Asian/Pacific Islander		22.1	28	18
American Indian or Alaskan Native		0.0	0.0	0.0
Multiethnic		1.6	2.2	1.1
Other		5.6	7.1	4.5
<i>Total</i>		100.0	100.0	100.0
<i>Number of assistant teachers</i>		448	182	266
Directors		White, Non-Hispanic	61.5	60.3
	Latina	6.1	6.3	6
	African American	14.5	14.3	14.7
	Asian/Pacific Islander	12.8	12.7	12.9
	American Indian or Alaskan Native	0.0	0.0	0.0
	Multiethnic	2.2	1.6	2.6
	Other	2.8	4.8	1.7
	<i>Total</i>	100.0	100.0	100.0
	<i>Number of directors</i>	179	63	116

^aMost 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	44.8 (3.35)	30.0 (5.93)	50.3 (3.95)
At least one child with special needs*	55.2 (3.35)	70.0 (5.93)	49.7 (3.95)
<i>Total</i>	100.0	100.0	100.0
<i>Number of centers</i>	221	60	161

^aMost of these centers also enroll older children.

* $p < .01$, Centers enrolling infants > Centers without infants.

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	38.7	28.7	42.6
30 to 39 years old	28.5	32.8	26.8
40-49 years old	16.6	25.4	13.2
50 years and older	16.2	13.1	17.4
<i>Total</i>	100.0	100.0	100.0
<i>Number of staff</i>	439	122	317

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	34.2	32.7	31.6	36	30.5	24.5	33.1
	30 to 39 years old	26.3	27.6	18.0	29.1	25.6	28.4	24.4
	40 to 49 years old	24.5	19.2	36.9	22.4	22.8	37.7	16.5
	50 years and older	15	20.5	13.5	12.5	21.1	9.4	26.0
	<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Number of staff</i>	539	156	111	272	180	53	127
Centers without infants	Under 30 years old	24.4	16.7	20	32.8	44.4	31.9	48.9
	30 to 39 years old	29.9	25.2	31.5	32.8	30.5	36.3	28.4
	40 to 49 years old	24.7	21.8	33.9	22.4	12.4	15.9	11.1
	50 years and older	21.0	36.3	14.6	12	12.7	15.9	11.6
	<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Number of staff</i>	770	270	165	335	259	69	190
Head Start/CDE contract	Under 30 years old	17.8	11.1	12.5	26.5	23.9	21.6	24.8
	30 to 39 years old	26.9	22.2	27.8	30.1	25.4	32.4	22.8
	40 to 49 years old	33.5	28.9	44.4	30.1	23.9	35.2	19.8
	50 years and older	21.8	37.8	15.3	13.3	26.8	10.8	32.6
	<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Number of staff</i>	275	90	72	113	138	37	101

^aMost 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	36.8	33.6	34.5	37.4	52.5	34.2	61.3
	30 to 39 years old	27.8	26.3	23	31.5	19.5	26.4	16.3
	40 to 49 years old	20.4	16.4	32.2	19.5	17.0	28.9	11.2
	50 years and older	15.0	23.7	10.3	11.6	11.0	10.5	11.2
	<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Number of staff</i>	489	152	87	241	118	38	80
No vouchers/ No contract	Under 30 years old	26.2	19	24.8	32.4	41.0	29.8	44.8
	30 to 39 years old	29.7	27.7	27.4	32.4	36.6	38.3	36
	40 to 49 years old	23.9	20.7	31.6	22.5	10.9	14.9	9.6
	50 years and older	20.2	32.6	16.2	12.7	11.5	17.0	9.6
	<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Number of staff</i>	545	184	117	244	183	47	136

^aMost 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	26.1 (2.74)	28.9 (5.28)	25.0 (3.22)
<i>Number of centers</i>	203	56	147
At least one college credit	16.0 (2.15)	13.8 (3.57)	16.8 (2.64)
<i>Number of centers</i>	199	56	143

^aMost 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 Alameda 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 others 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 Alameda County was 484. We completed interviews with 224 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:
 $484/224=2.16$.
2. Multiply the sums of children in each age group in the sample, by the multiplier (2.16) 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 (2.16) to calculate the estimated total number of center staff in each job category.

References

- Alliance for Excellent Education (2005). *Teacher attrition: A costly loss to the nation and for the states. Issue Brief, August 2005*. Washington, DC: Alliance for Excellent Education.
- Barnett, W.S. (2003). *Better teachers, better preschools: Student achievement linked to teacher qualifications*. *Preschool Policy Matters* (2), March 2003. New Brunswick, NJ: National Institute for Early Education Research.
- Bellm, D., Whitebook, M., Cohen, A., & Stevenson, C. (2004). *Teacher credentialing in early care and education: Prospects for universal preschool in California, and lessons from other states*. Berkeley, CA: Center for the Study of Child Care Employment, University of California at Berkeley.
- Calderon, M. (2005). *Achieving a high-quality preschool teacher corps: A focus on California*. Washington, DC: National Council of La Raza.
- California Child Care Resource and Referral Network (2003). *The 2003 California Child Care Portfolio*. San Francisco: California Child Care Resource and Referral Network.
- California Child Care Resource & Referral Network (2005). *2005 California Child Care Portfolio*. San Francisco: California Child Care Resource and Referral Network.
- California Department of Education (2004). *Number of staff by ethnicity, 2003-04*. Data retrieved June 16, 2005, from <http://data1.cde.ca.gov/dataquest/>.
- California Department of Education (2005). *Selected certificated salaries and related statistics, 2004-05*. Sacramento, CA: California Department of Education.
- California Department of Education (2006). *Number of English learners by language, 2004-05*. Data retrieved July 27, 2005, from <http://data1.cde.ca.gov/dataquest/>.
- California Department of Finance (2003a). *California Statistical Abstract, 2003*. Retrieved January 1, 2005, http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS
- California Department of Finance (2003b). *California Statistical Abstract, 2003*. Retrieved January 13, 2005, http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS.
- California Department of Finance (2004a). *2000-2003. Population 2000-2050. Population projections with age, sex, and race/ethnic detail, May 2004*. <http://www.dhs.ca.gov/hisp/chs/ohir/tables/datafiles/vsofca/0116.xls>.

- California Department of Finance (2004b). *Population projections by race/ethnicity, gender and age for California and its counties, 2000-2050*. Data retrieved July 19, 2005, from http://www.dof.ca.gov/HTML/DEMOGRAP/DRU_Publications/Projections/P3/P3.htm.
- California Department of Finance (2005). *Race/ethnic population with age and sex detail, 2000-2050. 2005 estimates, both genders, all ages*. Data retrieved January 19, 2005, from http://www.dof.ca.gov/html/Demograph/DRU_datafiles/Race/RaceData/2000-2050/.
- Center for the Child Care Workforce (2001). *Family child care provider income and working conditions survey*. Washington, DC: Center for the Child Care Workforce.
- Child Care Law Center (2005). *Applying the Individuals with Disabilities Education Act*. In *Preschools Legal Update*, Summer 2005. San Francisco: Child Care Law Center.
- Galinsky, E., Howes, C., Kontos, S., & Shinn, M. (1994). *The study of children in family child care and relative care: Highlights of findings*. New York: Families and Work Institute.
- Garcia, E.E. (2005). *Teaching and learning in two languages: Bilingualism and schooling in the United States*. New York: Teachers College Press.
- Gormley, W., Gayer, T., Phillips, D., & Dawson, B. (2004). *The effects of Oklahoma's Pre-K Program on school readiness*. Washington, DC: Georgetown University Public Policy Institute.
- Helburn, S.W., Ed. (1995). *Cost, quality and child outcomes in child care centers*. Technical report. Denver: University of Colorado, Center for Research in Economic and Social Policy.
- Henry, G.T., Gordon, C.S., Henderson, L.W., & Ponder, B.D. (2003). *Georgia Pre-K Longitudinal Study: Final report 1996-2001*. Atlanta, GA: Andrew Young School of Policy Studies, Georgia State University.
- Herzenberg, S., Price, M., & Bradley, D. (2005). *Losing ground in early childhood education: Declining workforce qualifications in an expanding industry, 1979-2004*. Washington, DC: Economic Policy Institute.
- Hill, L.E., Johnson, H.P., & Tafoya, S.M. (2004). *California's multiracial population*. San Francisco: Public Policy Institute of California.

- National Economic Development and Law Center (2001). *The economic impact of the child care industry in California*. Oakland, CA: NEDLC.
- Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2001). *Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Center Program: Executive summary*. Madison, WI: Waisman Center, University of Wisconsin. <http://www.waisman.wisc.edu/cls/cbaexecsum4.html>.
- Sakai, L.M., & Whitebook, M. (2003). *Evaluating the Early Childhood Environment Rating Scale (ECERS): Assessing differences between the first and revised editions*. *Early Childhood Research Quality* 18(4), 427-445.
- Schulman, K. (2005). *Overlooked benefits of prekindergarten*. New Brunswick, NJ: National Institute for Early Education Research.
- Schulman, K. & Barnett, W.S. (2005). *The benefits of prekindergarten for middle-income children*. New Brunswick, NJ: National Institute for Early Education Research.
- Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool Study through age 40*. Ypsilanti, MI: High/Scope Press.
- Shonkoff, J.P., & Phillips, D.A., Eds. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- U.S. Census Bureau (2000a). *Census 2000 Summary File 1*. Data retrieved January 21, 2005, from <http://factfinder.census.gov/servlet>.
- U.S. Census Bureau (2000b). *Census 2000 Summary File 4*. Data retrieved March 3, 2005, from <http://factfinder.census.gov/servlet>.
- U.S. Census Bureau (2004). *American Community Survey*. Table S0101. Age and sex. Washington, DC: U.S. Census Bureau. <http://factfinder.census.gov/>.
- U.S. Department of Housing and Urban Development (2005). Data retrieved July 1, 2005, from http://www.huduser.org/datasets/FMR/FMR2005R/Revised_FY2005_CntLevel.Xls.
- Whitebook, M. (2003). *Early education quality: Higher teacher qualifications for better learning environments. A review of the literature*. Berkeley, CA: Center for the Study of Child Care Employment, University of California at Berkeley.

- Whitebook, M., Bellm, D., Lee, Y., & Sakai, L. (2005). *Time to revamp and expand: Early childhood teacher preparation programs in California's institutions of higher education*. Berkeley, CA: Center for the Study of Child Care Employment, University of California at Berkeley.
- Whitebook, M., Howes, C., & Phillips, D.A. (1990). *The National Child Care Staffing Study. Final report: Who cares? Child care teachers and the quality of care in America*. Washington, DC: Center for the Child Care Workforce.
- Whitebook, M., Howes, C., & Phillips, D.A. (1998). *Worthy work, unlivable wages: The National Child Care Staffing Study, 1988-1997*. Washington, DC: Center for the Child Care Workforce.
- Whitebook, M., & Sakai, L. (1995). *The potential of mentoring: An assessment of the California Early Childhood Mentor Teacher Program*. Washington, DC: Center for the Child Care Workforce.
- Whitebook, M., & Sakai, L. (2004). *Improving and sustaining center quality: The role of NAEYC accreditation and staff stability*. *Early Education and Development* 15(3).
- Whitebook, M., Kipnis, F., Sakai, L., Voisin, I., & Young, M. (2002). *California child care workforce study: Family child care providers and assistants in Alameda, Kern, Monterey, San Benito, San Francisco, San Mateo, Santa Clara and Santa Cruz counties*. Washington, DC: Center for the Child Care Workforce.
- Whitebook, M., Sakai, L., Gerber, E., & Howes, C. (2001). *Then & now: Changes in child care staffing, 1994-2000*. Washington, DC: Center for the Child Care Workforce.
- Wong-Fillmore, L., & Snow, S.E. (1999). *What educators – especially teachers – need to know about language: The bare minimum*. Santa Barbara: Language Minority Research Institute.
- Zaslow, M., & Martinez-Beck, I., Eds. (2005). *Critical issues in early childhood professional development*. Baltimore: Paul H. Brookes Publishing.