



Stability of Teaching Staff in LAUP Programs

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Background

The high rate of teacher turnover in the early care and education field continues to be a concern. High turnover creates unstable environments for children, families, teachers, and directors. High turnover rates in the early care and education workforce are well documented. Annual turnover rates among teachers are between 25%-40% throughout the U.S. (Center for the Child Care Workforce, 2004). In California, turnover rates were 22% for teachers and 26% for assistant teachers at child care centers. These are similar to turnover rates in Los Angeles County, where teacher turnover was 23% and assistant teacher turnover was 24% (Whitebook et al., 2006). These turnover rates exceed those of California public school K-12 teachers, who have a turnover rate of 17%. Although K-12 teachers have lower turnover rates than the ECE field, the rates are still a source of great concern due to their effects on finances and quality of teaching (Alliance for Excellent Education, 2005).

High turnover rates among early care and education teaching staff have been linked to poor program quality and adverse effects on children's social-emotional, cognitive and language development (Cassidy et al., 2011; Helburn, 1995; Whitebook, Howes, & Phillips, 1990; Whitebook, Sakai, & Howes, 1997). One study found that NAEYC-accredited programs had less turnover as compared to non-accredited programs. Of the accredited programs, those with good or better environmental quality (as defined by a score of 5 or higher on the Early Childhood Environmental Rating Scale (ECERS)) had lower levels of staff turnover than accredited programs with adequate quality (ECERS scores ranging from 3 to 5) (Whitebook et al., 1997). Similarly, the Cost, Quality and Child Outcomes in Child Care Centers study (Helburn, 1995) showed a link between quality and staff turnover. Centers with lower annual turnover rates (10% or less) had significantly higher measures of quality that included structure (e.g., ratios, group size, teacher education and training) and process variables (e.g., teacher-child interactions) than those with high turnover. Children at these higher-quality programs, which were linked to lower turnover, had more advanced social behavior, language, and pre-math skills. In the National Child Care Staffing Study (Whitebook et al., 1990), child care centers with higher turnover had classrooms with less developmentally appropriate environments and activities, and teaching staff that were less sensitive and appropriate in their interactions with children. These attributes were correlated with lower scores for children's vocabulary development, demonstrating the link between high turnover rates and poor child outcomes.

However, the link between teacher turnover and child outcomes is complex. Centers with high turnover and poor child outcomes also have higher ratios and less educated teachers, and are generally defined as poor quality programs, making it difficult to attribute poor child outcomes solely to teacher turnover (DeVita, Twombly, & Montilla, 2002). In fact, some of these characteristics may be connected to the reasons for turnover. Studies have found that highly skilled teachers were more likely to leave their jobs if they worked in environments with less stability of highly trained co-workers, had a change in director, worked with a greater percentage of teaching staff that lacked a bachelor's degree and specialized training in ECE, and/or earned lower wages (Whitebook, Sakai, Gerber, & Howes, 2001; Whitebook & Sakai, 2003).

Inadequate compensation in ECE is often cited as a reason for high turnover (Helburn, 1995; Whitebook et al., 1990; Whitebook, Sakai, Gerber, & Howes, 2001). Lower wages alone make directors more likely to leave (Whitebook & Sakai, 2003). However, among teachers, the stability and quality of the teaching staff can also influence highly trained teachers to stay at their jobs. In centers where highly trained staff worked with other highly trained teachers who stayed at their jobs, they themselves were more likely to stay at their jobs (Whitebook, Sakai, Gerber, & Howes, 2001; Whitebook & Sakai, 2003). A lack of qualified teaching staff, along with instability of staff, makes a demanding teaching job even more difficult and stressful.

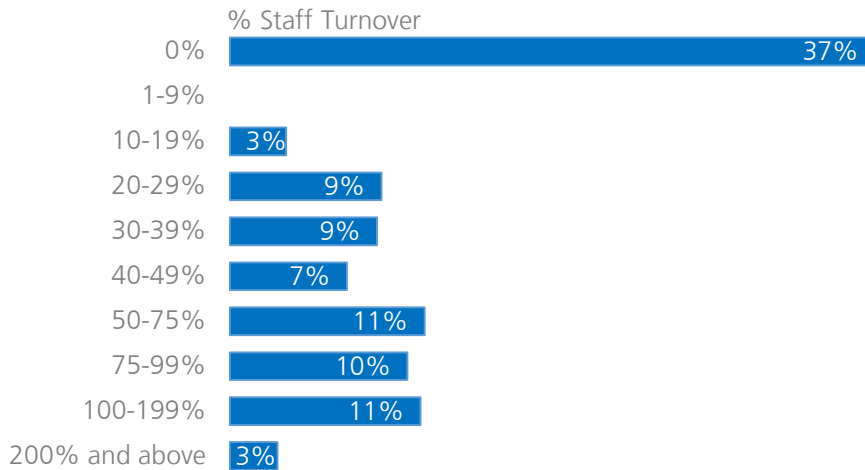
Overall, the literature demonstrates that turnover rates in ECE tend to be high, and that turnover, quality, and child outcomes are closely tied. LAUP's mission is to provide access to quality ECE programs in order to give children a strong foundation that ensures positive outcomes.

Given these links and LAUP's mission, it is important to understand the turnover and retention rates among LAUP providers. The focus of this study is to examine turnover rates and retention rates, and to determine how they may be linked to program quality among LAUP providers.

Teacher turnover rates varied greatly among the LAUP programs.

Each year, 36% to 39% of programs had no LAUP staff turnover, while less than 11-17% of programs had extremely high staff turnover rates well above 100%. Turnover is calculated by dividing the number of staff who leave the LAUP program during a fiscal year by the average number of staff in the LAUP program. The figure below shows the unweighted average of program-level turnover rates for FY 2011-2014. (See Appendix B, Tables 1-3, for details of program-level turnover rates and factors predicting turnover.)

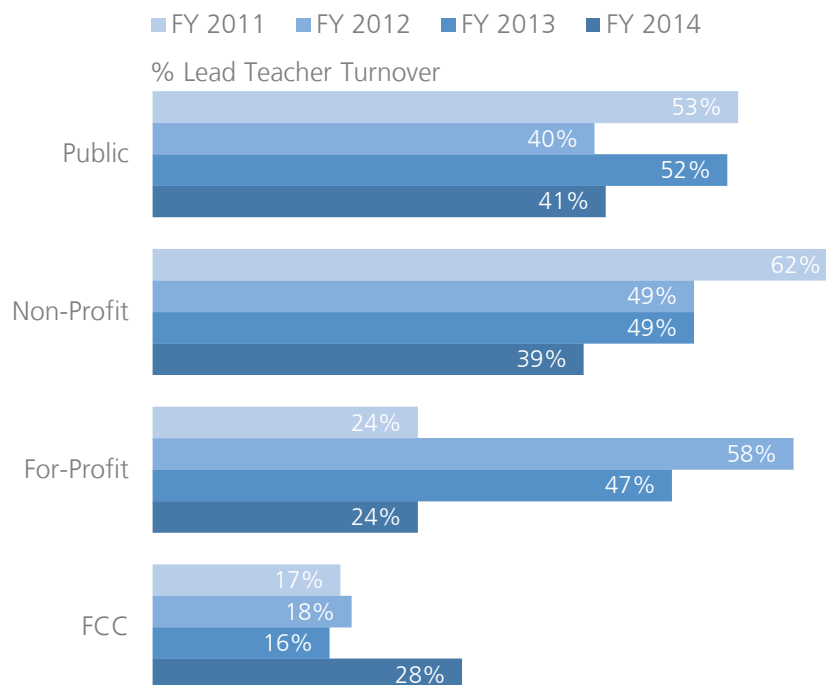
Figure 1. Average Program Level LAUP Staff Turnover Rates, FY 2011-2014



Turnover and retention also varied by the type of organization running the LAUP program.

The following figure shows teacher turnover rates by organization type. Family child care homes (FCCs) have the lowest teacher turnover rates each year. For Fiscal Years 2012, 2013, and 2014, average teacher turnover rates for FCCs were lower than the county (23%) and state (22%) averages among lead teachers at center-based programs. Teacher turnover for other types of organizations varied from year to year.

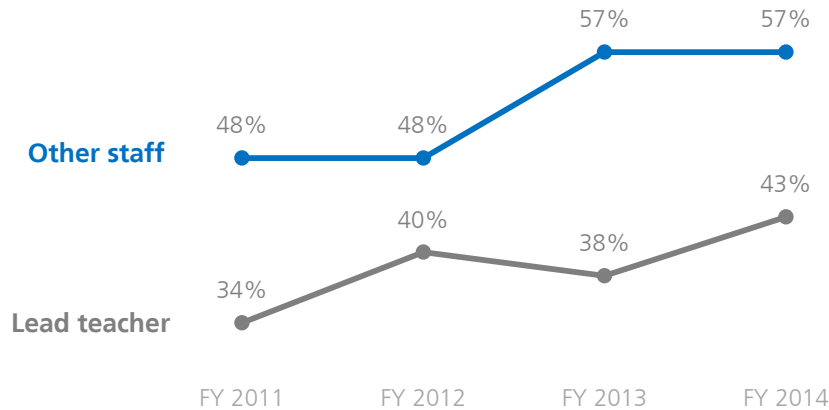
Figure 2. Lead Teacher Turnover by Organization Type



The average turnover rates for lead teachers in each fiscal year were higher than the rates for LA County (23%) and California (22%).

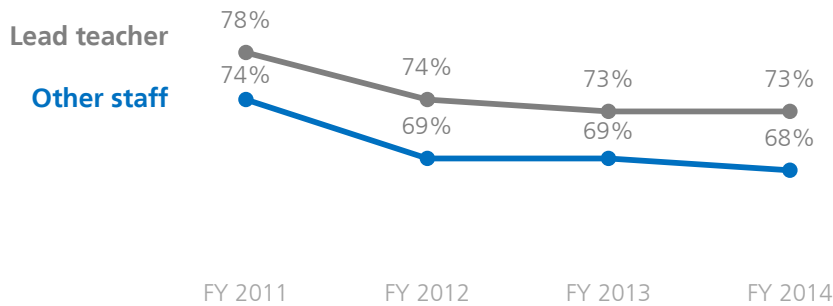
Turnover among lead teachers in LAUP programs was somewhat lower than turnover for other staff, which included assistant teachers and directors. From 2011 to 2014, turnover rates increased by 9% for both lead teachers and other staff.

Figure 3. Average Turnover by Staff Position



Retention rates for lead teachers were slightly higher than for other staff. Rates decreased from FY 2011 to FY 2012, but showed almost no change thereafter.

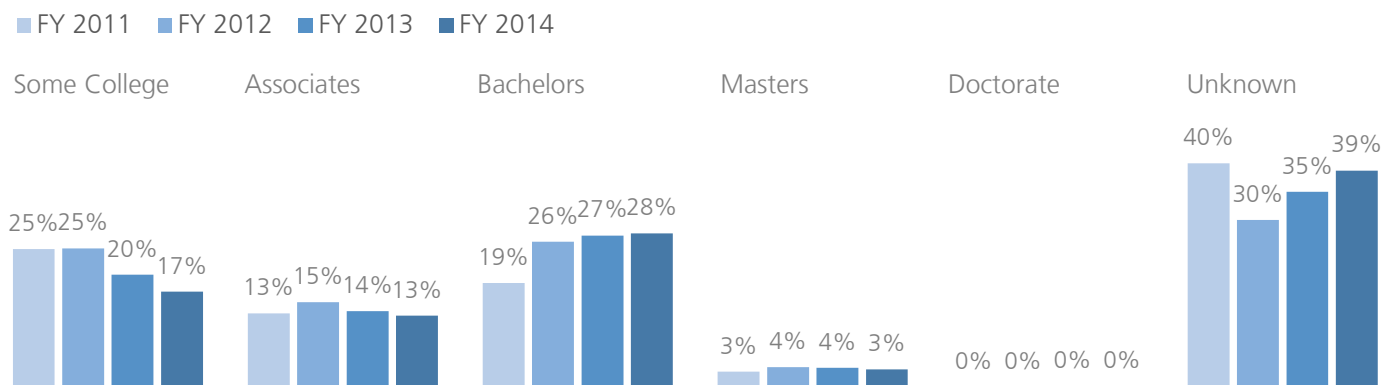
Figure 4. Average Retention Rate by Position



There seems to be a shift over the years in educational attainment among staff, with fewer staff having had “some college” and more staff having a bachelor’s degree.

Educational attainment has been linked to high-quality teaching. The following chart shows the highest degree attained by teaching staff, by fiscal year. The data includes lead teachers, assistant teachers, and directors across all programs. Findings that can be drawn from this data are limited, because educational attainment is unknown for almost one-quarter of the teaching staff.

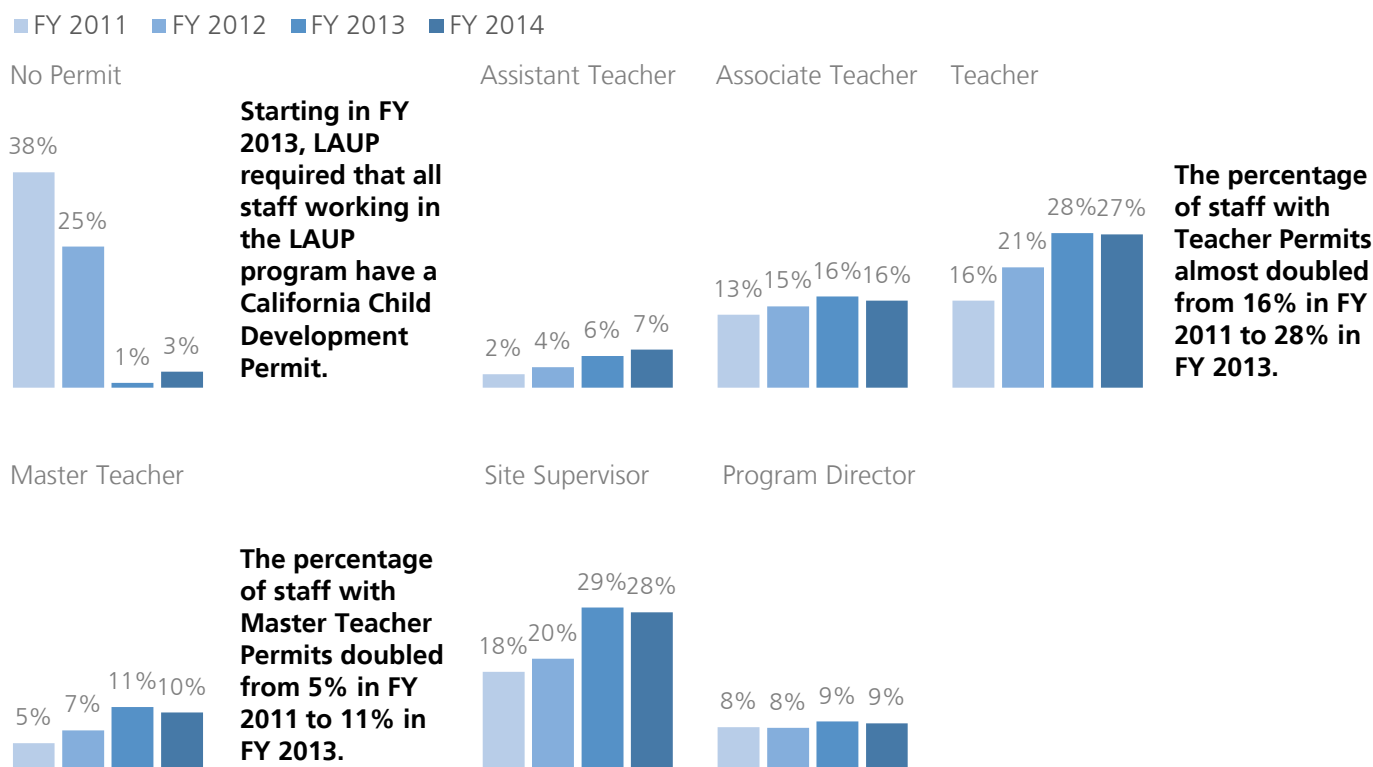
Figure 5. Educational Attainment of Teaching Staff in LAUP Programs



The percentages of staff with California Child Development Permits have increased from year to year.

In order to attain a Child Development Permit, staff must apply and meet specific educational and/or training requirements (see Appendix C).

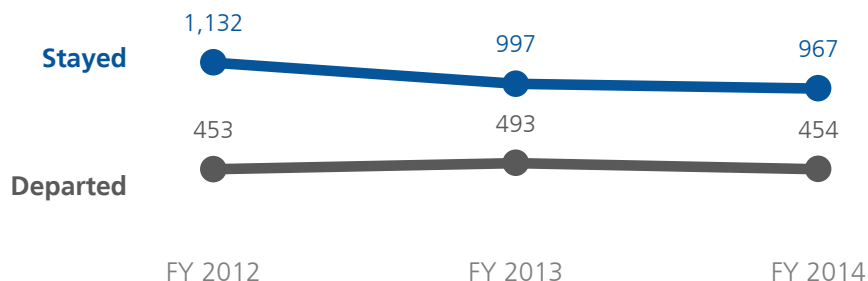
Figure 6. Child Development Permit Attainment



Each year, about 30% of teaching staff stopped working in LAUP classrooms, while about 70% or less remained in LAUP classrooms.

The following chart show the number of teaching staff that stayed in or departed from LAUP classrooms for Fiscal Years 2012, 2013, and 2014. Fiscal Year 2012 had the lowest percentage of staff leaving (29%), while 2013 had a somewhat higher percentage (33%).

Figure 7. Numbers of Teaching Staff Departing LAUP Classrooms



Staff who stayed were one to two years older, on average, than those who left.

Based on 2012 and 2014 data, staff who were older were more likely to stay in the LAUP classroom. Older staff may be more likely to stay because their careers may be more established.

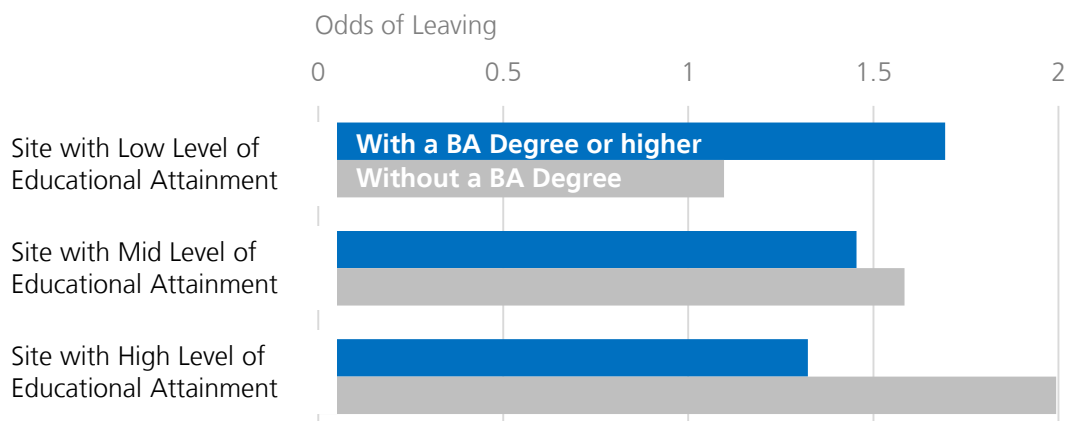
Non-lead teacher positions were associated with risk for turnover.

The model examined whether lead teachers, as compared to staff in non-lead teacher positions (assistant teachers and administrators), were more likely to leave or to stay. In 2014, non-lead teachers were 1.86 times, or nearly two times, as likely to leave as lead teachers. Findings were similar for 2012 and 2013; lead teachers were more likely to stay, while non-lead teachers, including assistant teachers and administrators, were more likely to leave.

Higher degree attainment was not a significant protective factor against turnover.

The percentages of staff with bachelor's degrees were similar for those who departed and those who stayed. Having a bachelor's degree or higher was not a significant factor in retention. However, staff with more Child Development units were more likely to leave in 2014. Because trends were dissimilar in 2012 and 2013, it is unclear whether the number of Child Development units had an impact on retention. In 2013, staff at sites that had the highest proportion of staff with at least a bachelor's degree were more than twice (2.5 times) as likely to leave (see Appendix B, Table 4). Data from 2013 also showed a significant interaction between a staff person's educational attainment and the proportion of staff at their sites who had a bachelor's degree or higher (see Figure 8). At a site where approximately 50% of the staff have at least a bachelor's degree, a teacher with at least a bachelor's degree had almost the same likelihood of leaving as a teacher with a lower level of educational attainment. At sites where most of the staff had a bachelor's degree or higher, a teacher with a bachelor's degree or higher was less likely to leave than a teacher with a lower level of educational attainment. Overall, a teacher with at least a bachelor's degree was most likely to leave a site where relatively few staff also had at least a bachelor's degree. Conversely, a teacher with at least a bachelor's degree was least likely to leave a site where most of the teachers had at least a bachelor's degree. Trends were similar in 2012 and 2014.

Figure 8. Individual Staff's Odds of Leaving Interacted with the Overall Level of Education at their Site, FY 2013



Note: Educational attainment defined as number of staff possessing a bachelor's degree or higher.

Scores for each of the program quality measures were somewhat higher among the staff that stayed for each of the fiscal years. This finding was significant for environment ratings and emotional support ratings in 2014.

Program quality was measured by the Early Childhood Environment Rating Scale (ECERS)/ Family Child Care Environment Rating Scale (FCCERS) and the Classroom Assessment Scoring System (CLASS), which includes three domains: Classroom Organization, Emotional Support and Instructional Support. Staff were more likely to stay in LAUP programs that had higher average scores on their ECERS/FCCERS and their CLASS Emotional Support domain. In 2014, staff were 1.6 times more likely to stay at sites with higher-than-average scores on either of these scales. While not all factors were significant in each year, the data shows that the trends are similar across the years.

Generally, the directors interviewed (n=5) reported that the main reason for staff leaving was to find higher-paying jobs that were more stable, and that offered more consistent hours, benefits, and opportunities for growth.

Staff have also left to pursue higher education degrees, or because they had completed their education while working in the LAUP program and were looking for another job. A few directors at small, private centers indicated that they were not able to provide the raises or benefits that school districts can provide.

Directors' retention strategies ranged from providing competitive salaries and benefits packages to creating a positive work environment.

Positive work environment characteristics that directors discussed included open communication between staff and leadership, high teacher to student ratios, and allowing teachers to focus on working with children (not on administrative tasks).

Directors reported that staff worked in their programs for varying lengths of time.

The average staff employment period ranged from two to three years at one site, to 20 to 25 years at another. The high tenure reported by several of the directors was surprising, given that the turnover rates among the five programs appeared to be high. This information highlighted the gaps in the data LAUP had collected. The LAUP data on staff included only the staff that were part of the LAUP classrooms, and did not include all staff at each site. During the director interview process, it became clear that what had appeared to be teacher turnover was, in some cases, a teacher that had moved from an LAUP classroom to a non-LAUP classroom. However, this information was not used to adjust the data analyzed, because it was limited to the small number of directors that were interviewed. There were several primary reasons for this movement within programs. Sometimes, teachers were moved to a non-LAUP classroom if their California Child Development Permit had expired and was not renewed in time; some directors routinely gave teachers the option to choose which classroom they wanted to work in for the school year; and a few directors intentionally moved teachers from non-LAUP to LAUP classrooms, to give teachers the opportunity to receive coaching support from LAUP. Regardless of the reasons for teacher movement, however, such changes can affect the stability of the classroom, and therefore can affect classroom quality and child outcomes.

Discussion

The literature shows that high turnover rates have been linked to low-quality programs, and to programs that have staff who lack education and/or specialization in early learning. Given that LAUP programs have been required to meet quality criteria and encouraged to have highly qualified staff, the high annual average turnover rates were somewhat surprising initially. However, the interview data helped clarify that classroom turnover rates were not always representative of site-level turnover rates. The average turnover rates reported in fact represent the stability of the LAUP classrooms, rather than site turnover rates. It became clear that while turnover rates for the LAUP classrooms at some sites seemed high, the sites' overall turnover rates were actually quite low. In other cases, both the sites' overall turnover rates and the LAUP classrooms' turnover rates were high.

Annual turnover rates and the reasons for turnover varied greatly. Turnover rates ranged from 0% to 600%. More than a third of programs had no turnover, while a little more than 10% of programs had turnover rates

of 100% or more. Programs with high turnover had as many as three lead teachers in one fiscal year. These programs may have had turnover in other positions as well. It is important to understand the reasons for these changes. In some cases, staff actually departed from the programs, while in other cases, staff switched from a non-LAUP classroom to an LAUP classroom as a way of getting professional development. These different situations may have had very different effects in the classrooms. As a result, these data on LAUP turnover are somewhat different from other existing turnover data.

Despite these differences, some of the factors associated with staff departing from the LAUP classrooms were similar to findings in the existing data. These included the findings on two quality measures. The literature has linked both higher ECERS scores and higher-quality teacher-child interactions to lower turnover rates (Whitebook et al., 1997; Helburn, 1995). Similarly, staff in LAUP programs with higher-quality environments (as measured by ECERS/ FCCERS scores) and staff in programs with teachers who provided higher-quality emotional support to children (measured on the CLASS Emotional Support Domain) were more likely to stay in their positions in the LAUP classrooms. However, the other CLASS measures of teacher-child interactions (Classroom Organization and Instructional Support) did not appear to have an effect on turnover. The reason may be that scores on Emotional Support cover a wider range on the CLASS rating scale, while scores on Classroom Organization and Instructional Support have narrower ranges. Classrooms also received higher scores for Emotional Support, on average, than for Classroom Organization or Instructional Support. Nevertheless, a high-quality environment and warm, friendly teachers are the foundations for quality programs, and this data confirms the established link between higher-quality programs and higher teacher retention. The other factors linked to staff turnover in LAUP classrooms included the age, position, and education of staff members. Older staff were more likely to stay in their positions in the LAUP classrooms. Similarly, the U.S. Bureau of Labor and Statistics (2014) reports that median employee tenure is higher among older workers than among younger workers across areas of employment. This is not surprising, given that the rate of turnover for lead teachers when compared to assistant teachers is somewhat higher. Lead teachers are more likely to have consistent hours and better pay than assistant teachers. Although staff with a bachelor's degree or higher were more likely to leave their programs on average, staff with a bachelor's degree or higher were more likely to stay in their programs if they worked among others who also had a bachelor's degree or higher. This is consistent with findings that highly skilled teachers were more likely to leave their jobs if they worked with a greater percentage of teaching staff who lacked a bachelor's degree and specialized training in ECE (Whitebook, Sakai, Gerber, & Howes, 2001; Whitebook & Sakai, 2003).

One limitation in our data was that the data was found to reflect LAUP classroom turnover, and not program turnover. It is possible that the trends found in the current data might change, if classroom turnover data were excluded and only data on program turnover were analyzed. However, future studies will not be possible because FY 2016 is the last year of funding for LAUP slots and preschools. LAUP will not be able to collect the detailed level of data needed for such a study.

Recommendations

Program-level turnover data should be collected in order to understand the true turnover rates among LAUP providers. Data on staff qualifications and quality data would also need to be collected for each classroom, in order to look at the connection between turnover and quality.

Although it is still unclear how high turnover rates are among the LAUP programs, the following are some retention strategies the programs can focus on to encourage staff to stay and provide more consistent care and education to young children:

- Optimize working conditions by having high teacher-child ratios and low group size, providing teachers with appropriate space for child-free breaks, allowing teachers sufficient planning time, and ensuring teachers' tasks are focused on children
- Create a positive work environment, including a supportive culture, recognition for achievements, open communication, and allowing teachers to have input in decisions that affect them
- Ensure that leadership supports teachers when implementing new practices
- Support all staff to achieve higher education qualifications and enhance their professional development
- Strive for flexibility in allowing teachers to participate in professional development

Policy changes can help reduce turnover rates. Not Golden Yet: Building a Stronger Workforce for Young Children in California (Jackson, 2015) discusses California's policies and provides recommendations for teachers and other professionals in child care, preschool, transitional kindergarten, and the early grades of public schools. These policies focus on ways in which the workforce can be supported.

The following are some of the recommendations discussed:

- Invest public dollars to improve compensation and working conditions
- Provide coaching and mentoring in order to increase teachers' knowledge and skills while on the job
- Ensure that community colleges and universities offer courses highlighting the best research-based practices for teaching young children (by updating the teacher preparation and credentialing systems)
- Encourage community colleges and universities to meet the needs of teachers (who are non-traditional students) by offering opportunities for scholarships, tutoring, evening and weekend classes, and supports for those who are learning English as a second language.
- Support a workforce database and require participation in a registry, in order to improve data used for evaluation of programs directed at this workforce.

Providing these additional supports, and thus ensuring that teachers are adequately prepared to deliver high-quality care and education to young children, can lead to decreases in turnover within the field.

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Appendix A

Methods

The purpose of the study was to calculate turnover and retention rates among LAUP programs for Fiscal Years 2011, 2012, 2013 and 2014, and then to compare these rates to the county and state's turnover rates. In addition, the study sought to learn about factors associated with turnover or retention. In order to examine those factors, the study looked at factors associated with staff leaving or remaining in positions in their LAUP classrooms. Factors examined included staff age, position, and education, and measures of program quality including environment ratings (ECERS/FCCERS) and ratings of teacher-child interactions (CLASS).

Turnover rates are typically defined as: the number of people leaving an agency or employment category (e.g., position or department) during a specific time period, divided by the average number of employees in that agency or category during the same time period. The time period is usually one year; however, some organizations calculate turnover on a quarterly basis. Turnover can be measured at many levels, including agency, department, or single position.

Whitebook and Sakai (2003) identified three types of turnover in the ECE industry: (1) job turnover, when a teacher or director leaves a child care facility; (2) position turnover, when a teacher moves to a different classroom within a center, or when a teacher or director moves to a different site within an agency; (3) occupational turnover, when a teacher or director leaves the child care field entirely. Cassidy et al. (2011) also discussed a fourth type of turnover: temporary turnover, which occurs when extended maternity or sick leaves are taken. This study focuses on job turnover within the LAUP program. In this case, turnover is defined as a teacher either leaving their facility, or leaving the LAUP program and moving to a non-LAUP classroom within the same facility.¹

Retention rates, together with turnover rates, provide a more complete picture of staff movement. The retention rate is the percentage of staff who were employed at the beginning of a time period and who remained with the provider at the end of that time period. In this study, the retention rate is calculated as the percentage of staff who were employed at the start of the fiscal year and who remained in the LAUP classrooms at a site for the duration of that fiscal year.

The data used were collected by LAUP as part of the recertification process required for providers to be part of the LAUP program and receive a quality rating. This included data on teaching staff start and end dates, which were used to calculate turnover and retention rates among LAUP providers annually for Fiscal Years 2011, 2012, 2013 and 2014. Data on staff's highest level of educational degree attained, California Child Development Permit data, and Child Development units completed were also used in the analyses. Scores on the Classroom Assessment Scoring System (CLASS), which rates teacher-child interactions, and the Early Childhood Environment Rating Scale/Family Child Care Environment Rating Scale (ECERS/FCCERS) were used as

¹ Due to limitations in the data maintained on LAUP teaching staff, there is no distinction between staff who leaves the facility/industry or switches from an LAUP classroom to a non-LAUP classroom at the same facility.

measures of program quality. These classroom-level scores were averaged at the provider level for each of the corresponding years. Multiple logistic regression models were developed, and odds ratios were used to examine which factors were associated with staff staying or departing from the LAUP classrooms at their sites. The model included: number of child development units completed; whether staff had a bachelor’s degree or other higher education (such as a Master’s degree or Ph.D.); average percentage of teachers at the site with bachelor’s degrees, the interaction between whether a teacher had a bachelor’s degree and the proportion of his/her colleagues who had bachelor’s degrees; CLASS scores for emotional support, classroom organization, and instructional support; ECERS/FCCERS scores for environmental quality; staff age; and staff position. Steps were also taken to impute missing data within the model.

Appendix B

Detailed Tables

Table 1. Ranges of Program-Level LAUP Staff Turnover Rates per Fiscal Year

Turnover Rates	FY 2011		FY 2012		FY 2013		FY 2014	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0%	133	39%	128	38%	108	36%	101	36%
1-10%	0	0%	0	0%	0	0%	0	0%
11-20%	12	4%	15	4%	8	3%	7	2%
21-30%	36	11%	27	8%	24	8%	23	8%
31-40%	32	9%	28	8%	28	9%	24	8%
41-50%	18	5%	28	8%	22	7%	21	7%
51-75%	35	10%	36	11%	35	12%	33	12%
76-100%	29	9%	37	11%	26	9%	35	12%
101-200%	36	11%	30	9%	43	14%	29	10%
201% and above	7	2%	7	2%	8	3%	10	4%
Total	338	100%	336	100%	302	100%	283	100%

Data from 2012, 2013 and 2014 were analyzed to learn what factors were associated with staff remaining at or leaving the LAUP classrooms.² Factors included in the analyses were: staff age, staff position (lead teacher versus other positions), staff education, and program quality. More specifically, staff education factors included: number of Child Development units completed, educational attainment (bachelor’s degree or higher), percentage of teaching staff per site with a bachelor’s degree or higher, and the interaction of an individual staff member’s attainment of a bachelor’s degree with the percentage of site staff having attained a bachelor’s degree. Program quality factors were the average environment rating scores on ECERS/FCCERS and the average scores from the three CLASS domains (emotional support, classroom organization and instructional support).

Qualitative data was collected via director interviews. Directors who had participated in LAUP’s Directors Institute, a professional development opportunity for directors, were invited to participate in a short telephone interview. The purpose of the interview for this study was to learn how directors’ site turnover compared to turnover in the LAUP classrooms, and to learn about staff tenure and strategies used to encourage staff retention.³ Six directors were contacted to participate in telephone interviews; five agreed to participate. The five interviews were recorded, transcribed, and coded.

² Previous research showed that CLASS scores from 2011 were inconsistent with scores from the years that followed. As a result, data for 2011 was not included in this analysis.

³ The interviews were also part of the evaluation of the Directors Institute. Directors were asked about their participation in the Directors Institute, and for any additional feedback they cared to provide.

Table 2. Characteristics of Teaching Staff Who Departed or Stayed in LAUP Classrooms

	FY 2012		FY 2013		FY 2014	
	Departed	Stayed	Departed	Stayed	Departed	Stayed
Age	38.56 ± 11.17 ¹ (285) ²	40.86 ± 11.27 (806) ³	40.29 ± 11.32 (339)	41.44 ± 11.15 (693)	40.40 ± 11.37 (273)	42.21 ± 11.15 (624) ³
Lead Teacher ⁴	26.5 (120 of 453)	35.5 (402 of 1,132) ⁵	23.5 (116 of 493)	36.9 (368 of 997) ⁵	26.4 (120 of 454)	35.5 (343 of 967) ⁵
Bachelor's Degree or Higher ⁴	42.7 (129 of 302)	42.6 (344 of 807)	47.6 (137 of 288)	47.9 (326 of 680)	54.6 (137 of 251)	49.4 (306 of 619)
Child Development Units	18.93 ± 11.61 (307)	19.58 ± 12.83 (815)	19.04 ± 11.17 (247)	20.84 ± 13.14 (597)	23.88 ± 11.24 (156)	22.82 ± 11.97 (441)
Proportion Staff with Bachelor's Degree or Higher	0.31 ± 0.22 (453)	0.29 ± 0.23 (1,132)	0.31 ± 0.18 (493)	0.31 ± 0.23 (997)	0.31 ± 0.19 (454)	0.31 ± 0.23 (967)

Table 3. Characteristics of Programs Where Teaching Staff Departed or Stayed in LAUP Classrooms

	FY 2012		FY 2013		FY 2014	
	Departed	Stayed	Departed	Stayed	Departed	Stayed
Environment Rating	5.64 ± 0.41 (448)	5.60 ± 0.44 (1,122)	5.56 ± 0.47 (485)	5.58 ± 0.49 (935)	5.55 ± 0.438 (357)	5.63 ± 0.46 (750) ³
Emotional Support	5.79 ± 0.50 (367)	5.84 ± 0.50 (904)	5.79 ± 0.49 (418)	5.83 ± 0.51 (810)	5.98 ± 0.38 (413)	6.04 ± 0.38 (788) ³
Classroom Organization	5.39 ± 0.65 (367)	5.47 ± 0.67 (904)	5.45 ± 0.65 (418)	5.47 ± 0.67 (810)	5.65 ± 0.46 (413)	5.69 ± 0.48 (788)
Instructional Support	2.57 ± 0.82 (367)	2.56 ± 0.81 (904)	2.52 ± 0.76 (418)	2.59 ± 0.83 (810)	2.71 ± 0.60 (413)	2.75 ± 0.62 (788)

Table 4. Regression Coefficients and Odds Ratios for Factors Associated With Departing LAUP Classrooms

Factor	FY 2012			FY 2013			FY 2014		
	Estimate	P value	Odds Ratio (95% CI)	Estimate	P value	Odds Ratio (95% CI)	Estimate	P value	Odds Ratio (95% CI)
Age	-0.015	0.012	0.985 (0.974, 0.997)	-0.007	0.291	0.993 (0.979, 1.007)	-0.018	0.011	0.982 (0.969, 0.996)
Lead Teacher ⁶	-0.439	0.002	0.645 (0.488, 0.851)	-0.621	<.0001	0.537 (0.407, 0.709)	-0.621	<.0001	0.537 (0.399, 0.723)
Bachelor's Degree or Higher ⁷	0.410	0.161	1.51 (0.848, 2.678)	0.565	0.083	1.760 (0.407, 0.709)	0.382	0.277	1.465 (0.732, 2.932)
Child Development Units	0.000	0.963	1.000 (0.989, 1.010)	-0.007	0.285	0.993 (0.927, 3.340)	0.024	0.005	1.024 (1.008, 1.041)
Proportion Staff with Bachelor's Degree or Higher	0.411	0.321	1.508 (0.668, 3.405)	0.929	0.024	2.532 (1.29, 5.678)	0.119	0.770	1.126 (0.506, 2.508)
Interaction of Degree	-0.726	0.243	0.484 (0.143, 1.641)	-1.301	0.038	0.272 (0.080, 0.928)	-0.515	0.472	0.597 (0.145, 2.462)
Environment Rating	0.185	0.169	1.204 (0.924, 1.567)	-0.099	0.416	0.906 (0.713, 1.150)	-0.474	0.002	0.622 (0.461, 0.840)
Emotional Support	-0.084	0.659	0.919 (0.632, 1.338)	-0.203	0.278	0.816 (0.565, 1.179)	-0.483	0.040	0.617 (0.390, 0.977)
Classroom Organization	-0.120	0.363	0.887 (0.686, 1.148)	0.075	0.604	1.078 (0.810, 1.436)	0.069	0.705	1.071 (0.750, 1.529)
Instructional Support	0.006	0.944	1.006 (0.843, 1.201)	-0.082	0.310	0.921 (0.785, 1.080)	-0.009	0.939	.0991 (0.779, 1.259)

¹ $\bar{x} \pm SD$ (all such values).

² n in parentheses (all such values).

³ Significantly different from staff who departed, $p < 0.05$ (t-test).

⁴ Percentages.

⁵ Significantly different from staff who departed, $p < 0.001$ (chi-square).

⁶ Lead Teacher = 1; non-lead teachers (administrators and assistant teachers) = 0

⁷ Bachelor's degree, Master's degree or Ph.D. = 1; Some college or Associate's degree = 0

Appendix C

Table 5. Child Development Permit Matrix

Child Development Permit Matrix - <i>with Alternative Qualification Options Indicated</i>					
Permit Title	Education Requirement (Option 1 for all permits)	Experience Requirement (Applies to Option 1 Only)	Alternative Qualifications (with option numbers indicated)	Authorization	Five Year Renewal
Assistant (Optional)	Option 1: 6 units of Early Childhood Education (ECE) or Child Development (CD)	None	Option 2: Accredited HERO program (including ROP)	Authorizes the holder to care for and assist in the development and instruction of children in a child care and development program under the supervision of an Associate Teacher, Teacher, Master Teacher, Site Supervisor or Program Director.	105 hours of professional growth*****
Associate Teacher	Option 1: 12 units ECE/CD including core courses**	50 days of 3+ hours per day within 2 years	Option 2: Child Development Associate (CDA) Credential.	Authorizes the holder to provide service in the care, development, and instruction of children in a child care and development program, and supervise an Assistant and an aide.	Must complete 15 additional units toward a Teacher Permit. Must meet Teacher requirements within 10 years.
Teacher	Option 1: 24 units ECE/CD including core courses** <u>plus</u> 16 General Education (GE) units*	175 days of 3+ hours per day within 4 years	Option 2: AA or higher in ECE/CD or related field with 3 units supervised field experience in ECE/CD setting	Authorizes the holder to provide service in the care, development and instruction of children in a child care and development program, and supervise an Associate Teacher, Assistant and an aide.	105 hours of professional growth*****
Master Teacher	Option 1: 24 units ECE/CD including core courses** <u>plus</u> 16 GE units* <u>plus</u> 6 specialization units <u>plus</u> 2 adult supervision units	350 days of 3+ hours per day within 4 years	Option 2: BA or higher (does not have to be in ECE/CD) with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting	Authorizes the holder to provide service in the care, development and instruction of children in a child care and development program, and supervise a Teacher, Associate Teacher, Assistant and an aide. The permit also authorizes the holder to serve as a coordinator of curriculum and staff development.	105 hours of professional growth*****
Site Supervisor	Option 1: AA (or 60 units) which includes: • 24 ECE/CD units with core courses** <u>plus</u> 6 administration units <u>plus</u> 2 adult supervision units	350 days of 3+ hours per day within 4 years including at least 100 days of supervising adults	Option 2: BA or higher (does not have to be in ECE/CD) with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting; <u>or</u> Option 3: Admin. credential *** with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting; <u>or</u> Option 4: Teaching credential**** with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting	Authorizes the holder to supervise a child care and development program operating at a single site; provide service in the care, development, and instruction of children in a child care and development program; and serve as a coordinator of curriculum and staff development.	105 hours of professional growth*****
Program Director	Option 1: BA or higher (does not have to be in ECE/CD) including: • 24 ECE/CD units with core courses** <u>plus</u> 6 administration units <u>plus</u> 2 adult supervision units	One year of Site Supervisor experience	Option 2: Admin. credential *** with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting; <u>or</u> Option 3: Teaching credential**** with 12 units of ECE/CD, <u>plus</u> 3 units supervised field experience in ECE/CD setting, <u>plus</u> 6 units administration; <u>or</u> Option 4: Master's Degree in ECE/CD or Child/Human Development	Authorizes the holder to supervise a child care and development program operating in a single site or multiple sites; provide service in the care, development, and instruction of children in a child care and development program; and serve as coordinator of curriculum and staff development.	105 hours of professional growth*****

NOTE: All unit requirements listed above are semester units. All course work must be completed with a grade of C or better from a regionally accredited college. Spanish translation is available.

*One course in each of four general education categories, which are degree applicable: English/Language Arts; Math or Science; Social Sciences; Humanities and/or Fine Arts.

**Core courses include child/human growth & development; child/family/community or child and family relations; and programs/curriculum. You must have a minimum of three semester units or four quarter units in each of the core areas.

***Holders of the Administrative Services Credential may serve as a Site Supervisor or Program Director.

****A valid Multiple Subject or a Single Subject in Home Economics.

*****Professional growth hours must be completed under the guidance of a Professional Growth Advisor. Call (209) 572-6080 for assistance in locating an advisor.

This matrix was prepared by the Child Development Training Consortium. To obtain a permit application visit our website at www.childdevelopment.org or call (209) 572-6080.

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