

# Working in Early Care and Education

## in North Carolina

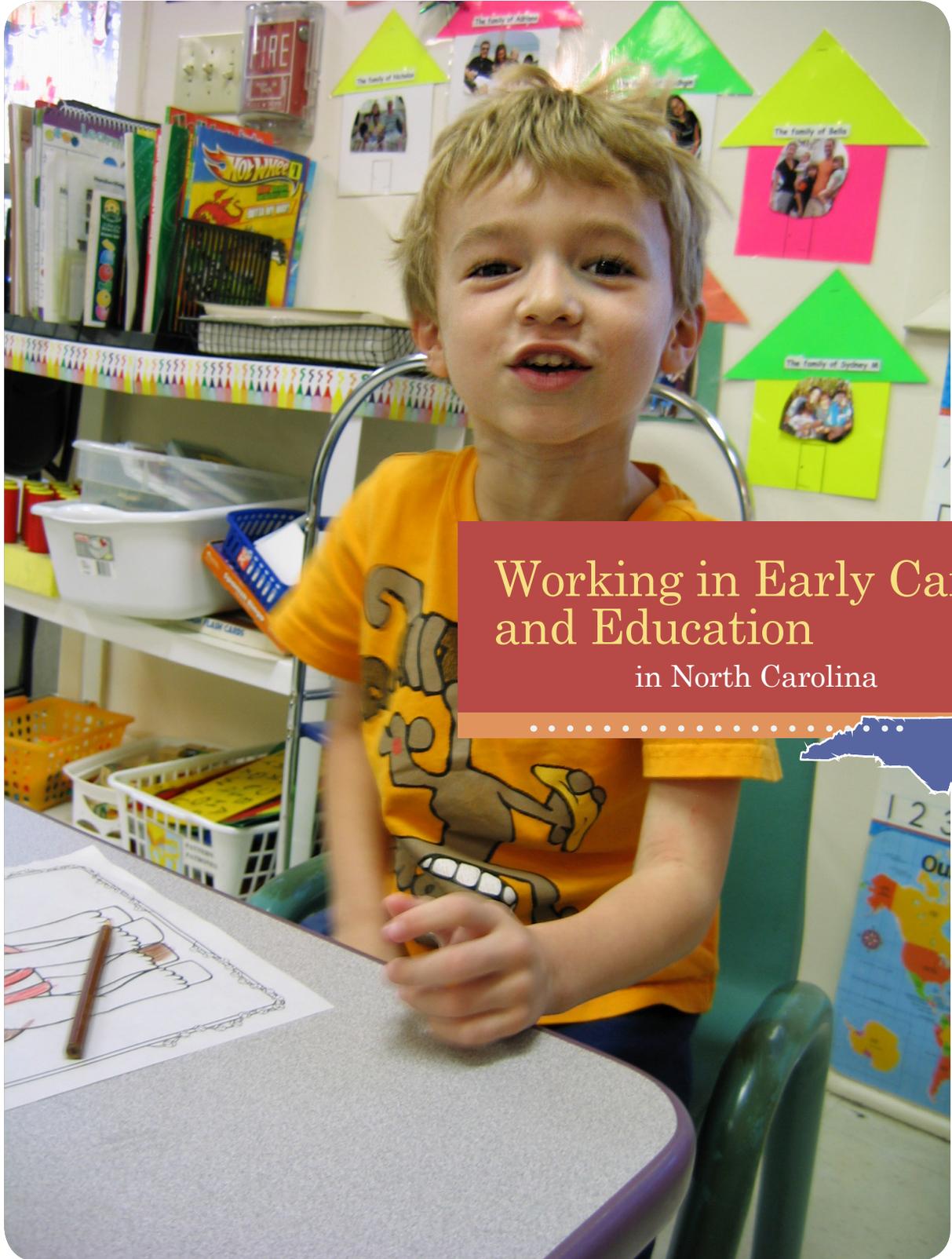


**2013 Workforce Study**

**March, 2014**

**Child Care Services Association**





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and Education  
in North Carolina



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With funding from the Division of Child Development and Early Education, through a Race to the Top Early Learning Challenge Grant, Child Care Services Association (CCSA) conducted a statewide survey of the early care and education workforce in North Carolina from March 2013 through January 2014. This study provides comprehensive data on early care and education teachers, assistant teachers and directors and on the licensed early care and education centers in which they work. Licensed centers include programs operated by public schools, for-profit entities and not-for-profit entities, including Head Start. Unlike last year, this study did not include licensed family child care homes. Additional information from a similar study conducted by CCSA in 2011 is also provided. Comparison of the data from these two surveys enables readers to learn about the continuities and changes in the early care and education (ECE) system and workforce that may have occurred over this two year interval of 2011-2013. This report also references data from the

2001 and 2003 workforce studies to provide a perspective on changes over a longer period of time.

## Working in Early Care & Education in North Carolina 2013 Workforce Study

Data for the center-based workforce report were collected through two linked surveys of samples of early childhood program directors and of teachers working in those programs conducted from March 2013 to January 2014 (based on information<sup>1</sup> as of March 2013). Useable surveys were obtained from

718 directors who constituted 71% of a stratified random sample (n=1007) of all directors of licensed child care programs in North Carolina. This sample constitutes about 18% of the population of all early care and education programs serving children birth through five in the state. The sample was designed to include 25% of the programs within each of the 14 Child Care Resource and Referral (CCR&R) regions. A map of the regions can be found in Appendix A. Participating directors were asked to distribute surveys to their teaching staff and useable surveys were returned by 2,708 teaching staff out of an estimated 5,910 in the participating centers (46%).

Program level and teacher level data have been weighted to reflect the statewide populations of centers and teaching staff respectively, adjusting for known individual, program and community characteristics associated with response bias. These factors include the location, size, sponsorship and star rating of a program as well as previous participation in a CCSA survey. Most percentages and other values reported in text, tables and graphs incorporate these sampling weights, permitting extrapolation to the population of centers (N=4,034) serving children under six who are not yet in school. In addition, non-response at the teaching staff level was adjusted for by weighting to correct for non-response among centers. Three-quarters of centers whose directors returned their own surveys yielded at least some teacher surveys and fewer than 15% of the responding centers had a survey response rate of over 80% from their estimated teaching staff. Because of this situation, information from the directors' surveys was used to assess how center and director characteristics might have affected response levels from the teaching staff. Among the relevant factors investigated only location, size, sponsorship, star-rating and designation as a NC Pre-Kindergarten site affected teacher survey response. As a result, second stage weights were applied and adjusted for the differential response associated with these center characteristics. This multi-level weighting process gives us further confidence that the results from 2,708 teaching staff surveys completed and returned in 2013 can be statistically generalized to the population of early childhood teaching staff that is estimated to consist of approximately 26,400 individuals across the state.

Throughout this report, the median value is usually reported as the measure of central tendency, e.g., for hourly wages and time intervals. As such, "average" is used interchangeably with "median" unless specifically noted otherwise .

A new feature of the workforce study this year involved initiating the capacity to conduct longitudinal studies in the future through the establishment of a special panel of centers. This panel consists of a subset of centers from which data has been and will continue to be collected over several years. In order to construct this panel, all centers which had responded to CCSA workforce surveys in both 2011 and in 2012, along with an additional random sample of centers represented in the 2012 survey, were included in the group of centers invited to participate in the 2013 survey. No separate analyses were conducted with this year's longitudinal sample but a similar design has been incorporated into the 2014 survey currently underway. Additional information about the sampling design and survey execution is contained in Appendix B to this report. Further information is available upon request.

<sup>1</sup> Data from NC Division of Child Development and Early Education (DCDEE), March 2013.



## Early Care and Education (ECE) Centers

**Star Rating, Organizational Structure and Regional Differences.** Across the state, the distribution of early childhood programs varies considerably by star rating levels, size and sponsorship. **Table 1** displays the regional distribution of programs. Examining the first row of that table reveals that at the time the sample for this workforce study was developed, there were 4,023 programs serving almost 170,000 preschool children. Only about 17 percent of the programs (16 percent of the total preschool enrollment) are rated as having 2 stars or fewer. This group includes not only 1- and 2-star licensed centers, but also GS-110 (Letter of Compliance) centers and centers with a temporary, provisional, or probationary license. Another 20% of programs in the state have 3-stars and serve about 15% of preschoolers enrolled

**Table 1**  
**Regional Distribution of Centers by Star Level, Type of Organization and Capacity**

	Star Level				Type of Organization			Capacity	
	Under 3 Stars	3 Stars	4 Stars	5 Stars	For Profit	Not For Profit	Public or Quasi public	Number of Programs	Est. Children 0-5 Enrolled
Statewide	17%	20%	26%	37%	58%	22%	20%	4,023	168,655
Region 1	23%	26%	18%	32%	46%	28%	25%	114	3,626
Region 2	15%	18%	31%	36%	58%	28%	14%	72	2,848
Region 3	23%	23%	26%	28%	60%	26%	14%	197	8,495
Region 4	25%	27%	21%	27%	60%	18%	23%	240	10,899
Region 5	16%	30%	26%	28%	56%	22%	22%	432	15,961
Region 6	18%	12%	34%	37%	73%	20%	7%	569	27,075
Region 7	11%	16%	30%	43%	54%	22%	24%	221	8,520
Region 8	15%	10%	27%	48%	36%	31%	33%	275	10,460
Region 9	8%	19%	26%	48%	44%	21%	35%	193	6,785
Region 10	18%	19%	21%	41%	41%	25%	34%	309	12,920
Region 11	17%	23%	27%	33%	59%	22%	19%	328	13,220
Region 12	17%	20%	23%	40%	68%	19%	12%	690	32,730
Region 13	17%	26%	26%	31%	59%	21%	20%	254	10,257
Region 14	14%	20%	29%	36%	55%	22%	23%	129	4,859

Source: DCDEE files and Survey data

in programs. Four-star programs constitute about 26% of the programs in the state and also serve about 26% of enrolled preschool children. Finally, about 37% of centers are the most highly rated with 5-stars and serve about 43% of all children in licensed centers.

The most prevalent organizational form represented in North Carolina is the for-profit center consisting of 58% of all centers (58% of total preschool enrollment). Non-profit programs constitute about 22% of all programs, but serve proportionately more children with 25% of preschool enrollees in this type of care. On the other hand about one in five centers (20%) is characterized as a public or quasi-public form of organization, and about 17% of the enrolled preschool population is served by these programs. See Table 1.

An important feature of North Carolina ECE organizations and workforce has to do with regional variation. The state, which has 100 counties, has been divided into 14 multi-county Child Care Resource and Referral Regions which vary substantially



in terms of their resources and scale. The smallest region (Region 2) has only 72 programs serving fewer than 3,000 children, while the largest (Region 12) has almost 700 programs serving well over 30,000 children. This 10-fold difference in scale of regions also reflects a wide variation in the socio-economic and demographic characteristics of these different regions with important implications for the supply, quality and status of ECE programs and the educational levels and wages of the ECE workforce in the different regions. In general, more urbanized regions have more centers and serve larger numbers of preschool children, while the smaller, more rural and isolated regions have fewer numbers of programs, as well as fewer children and staff.

The quality ratings of programs differ substantially by region, with some, but not all, of the more rural smaller regions lagging behind. For example, although 17% of programs have under 3 stars across the whole state, regions differ from a low of 8% in Region 9 to a high of 25% in Region 4. In three of the state's regions (1, 3 and 4) more than one in five programs is rated below three stars. At the other end of the scale, it should be noted that although 37% of the programs in the state are rated as 5 star, regions vary from a low of 27% (Region 4) to a high of 48% (Regions 8 and 9). There is also substantial variation across the state in how programs are organized. For-profit programs can comprise 73% of programs as in Region 6 or as few as 36% as in Region 8. Similarly, non-profits range from 31% of the programs in Region 8 to just 18% in Region 4. Finally, although about one out of every five programs is sponsored by public or quasi-public organizations, including public schools and some Head Start programs, these programs represent 35% of the centers in Region 9 yet only 7% in Region 6. These differences can affect conditions of the workforce such as salaries and benefits.

The overall quality of programs in which children are enrolled varies widely across the State. This is evident from examining the aggregate enrollment of programs arrayed by stars and by organizational structure across regions. See **Table 2**. Statewide only about one in eight children are enrolled in programs with fewer than three stars, but only 5% of children receive care in such settings in Region 9. Yet in some regions of the state, i.e., Regions 1, 3, 4 and 11, 20% or more of children are enrolled in such programs. Conversely, although 43% of children statewide are enrolled in 5-star programs, in some regions more than 50% of children are receiving this highest rated level of care. These include Regions 2, 9 and 12.

In a similar fashion, children in different regions receive care from programs with different kinds of organizational structures. Statewide, about 58% of children are served by for-profit centers, 25% by not-for-profit centers, and about 17% by public or quasi-public organizations. Although most children are receiving care in for-profit centers, this varies widely by region from a low of 35% in Region 1 to a high of 73% in Region 12. In a similar fashion, the percentage of children receiving care in not-for-profit centers varies from a low of 18% in Region 12 to a high of 34% in Region 8. Finally, although in some areas of the state, more than 30% of children are enrolled in public programs (Regions 1, 8 and 9) in Region 6, only 9% of children are enrolled in such public programs.

**Table 2**  
**Birth to Five Enrollment by Star Rating and Organizational Structure of Center by Region on DCDEE License Files**

	Star Rating of Program				Organizational Structure		
	Under 3 Stars	3 Stars	4 Stars	5 Stars	For Profit	Not For Profit	Public or Quasi public
Statewide	16%	15%	26%	43%	58%	25%	17%
Region 1	21%	19%	15%	45%	35%	32%	33%
Region 2	9%	10%	28%	53%	55%	31%	14%
Region 3	20%	17%	26%	37%	58%	30%	12%
Region 4	24%	19%	24%	33%	61%	20%	20%
Region 5	13%	25%	31%	30%	46%	27%	27%
Region 6	16%	6%	30%	48%	68%	22%	9%
Region 7	14%	12%	36%	38%	54%	31%	15%
Region 8	15%	9%	27%	49%	36%	34%	31%
Region 9	5%	14%	25%	57%	43%	26%	31%
Region 10	18%	18%	23%	40%	44%	29%	27%
Region 11	20%	17%	24%	39%	58%	29%	13%
Region 12	14%	14%	21%	51%	73%	18%	10%
Region 13	15%	20%	30%	36%	59%	26%	15%
Region 14	12%	17%	29%	43%	54%	22%	24%

**Staffing.** The child care center staff that participated in the survey represented a wide variety of positions in the early childhood field and worked with children of all ages. Weighting those responses to represent the total director population yielded results that show titles such as: director (52%); director/owner (24%); principal (5%); and other positions (19%). These “other positions” included answers such as administrator, assistant director, coordinator, lead, manager and supervisor.

Among staff who completed a teacher survey, 74% identified themselves as teachers or lead teachers, 20% were assistant teachers, teacher’s aides or floaters and 5% held other positions. Recategorizing these responses resulted in about 74% being considered “teachers” and nearly 24% being considered “assistant teachers”. About half of those filling out the teacher survey indicated that they work with infants, toddlers or twos at least some of the time (50%). The other half indicated that they work only with older preschool children. Respondents to the teacher survey included a small number of other staff with a wide variety of self-reported job titles. They reported that they teach or work with classrooms of children, but on the basis of available information they could not be reliably classified as either a teacher or an assistant teacher. These individuals are included in aggregate results describing “teaching staff” but are omitted from analyses where “teachers” and “assistant teachers” are reported separately.

**Wage Scales.** Center directors reported compensation scales for center teaching staff that included low starting wages and limits on the highest wages paid to teachers and assistants (upper rows of **Table 3**). In 2013 starting teachers earned a median \$9.00 per hour which is a noticeable decrease from the starting wage expected by teachers in 2011 in terms of

**Table 3**  
**Median Hourly Wages in Centers Statewide and for Centers by NC Pre-K Classroom Designation**

		2011 Wage in 2013 Dollars	2013 Starting Wage	Real Change (2011 -2013)	Percent Change 2011-2013
All Centers Statewide	Starting Teacher Wage	\$9.84	\$9.00	91%	-8.5%
	Highest Teacher Wage	\$11.65	\$12.00	103%	3.0%
	Starting Assistant Teacher Wage	\$8.29	\$8.50	103%	2.5%
	Highest Assistant Teacher Wage	\$9.84	\$10.25	103%	2.6%
Centers with NC Pre-K classrooms	Starting Teacher Wage	\$13.94	\$17.91	128%	28.5%
	Highest Teacher Wage	\$21.75	\$34.01	156%	56.4%
	Starting Assistant Teacher Wage	\$10.87	\$11.25	103%	3.5%
	Highest Assistant Teacher Wage	\$12.43	\$17.95	144%	44.4%
Centers without NC Pre-K classrooms	Starting Teacher Wage	\$8.80	\$8.50	97%	-3.4%
	Highest Teacher Wage	\$10.62	\$11.00	104%	3.6%
	Starting Assistant Teacher Wage	\$8.29	\$8.00	97%	-3.5%
	Highest Assistant Teacher Wage	\$9.06	\$9.00	99%	-0.7%

Note: Median wages are reported. Data are based on directors’ reports. Adjusted for CPI using wage calculator from BLS Website: [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)

real buying power.<sup>2</sup> The situation for assistant teachers, with a median starting wage in 2013 of \$8.50 per hour, represents a modest increase over 2011 starting wages. For the highest paid teachers and assistant teachers, the outlook over the past year was a bit brighter. Both groups saw their compensation increase by 3.0% and 2.6% respectively. Median highest paid teacher wages rose from \$11.65 per hour (adjusted) in 2011. Median highest paid teachers grew to \$12.00 per hour in 2013; median highest assistant teacher wages grew from a 2011 adjusted figure of \$9.84 per hour to \$10.25 in 2013.

Despite these overall trends, there are important wage scale and wage progression differences for teaching staff depending on whether or not they work in a program with an NC Pre-K classroom on site. Licensed early care and education programs with NC Pre-K classrooms have substantially better compensation at all levels than do those without such classrooms as shown in the lower two panels of Table 3. For starting teachers and assistant teachers and for highest paid teachers and assistant teachers, working in settings with an NC Pre-K classroom results in higher compensation. The

<sup>2</sup> Adjusted for CPI using wage calculator from the BLS Website, [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)

difference is far greater for the highest paid teachers working in settings with an NC Pre-K classroom compared with the median wage of highest paid teachers in other settings (median highest wage of \$34.01 vs. \$11.00 per hour). However, there is still a substantial wage premium for an assistant teacher who is at the starting assistant teacher level: \$11.25 in those settings that have an NC Pre-K classroom vs. \$8.00 in other settings. This difference may grow with seniority as highest paid assistant teachers were reported to have a median wage of \$17.95 in settings with NC Pre-K classrooms compared with only \$9.00 per hour in other settings. Data suggests that employment at a site with a NC Pre-K classroom results in a more rapid wage progression for all of the staff in such settings.

**Table 4** suggests that any “NC Pre-K wage effect” varies according to program organization, location and sponsorship. Examining the first column of this table reveals that NC Pre-K programs are more likely to be found in publicly sponsored programs, especially public schools. In fact, 92% of the public school programs in our sample have an NC Pre-K

<b>Table 4 Wages of ECE Teaching Staff in NC by NC Pre-K Classroom Designation</b>										
		Percent With NC Pre-K Classrooms	Median Starting Teacher Wage		Median Highest Teacher Wage		Median Starting Asst Wage		Median Highest Asst Wage	
			No NC Pre-K	NC Pre-K	No NC Pre-K	NC Pre-K	No NC Pre-K	NC Pre-K	No NC Pre-K	NC Pre-K
Statewide (2013)	All Programs	29%	\$8.50	\$17.91	\$11.00	\$34.01	\$8.00	\$11.25	\$9.00	\$17.95
Type of Organization	For-Profit	16%	\$8.02	\$9.00	\$10.00	\$13.50	\$8.00	\$8.00	\$9.00	\$10.50
	Non-profit	20%	\$8.50	\$10.00	\$11.25	\$14.90	\$8.00	\$9.00	\$9.50	\$11.00
	Public	73%	\$12.80	\$17.91	\$19.00	\$34.01	\$9.69	\$11.25	\$12.50	\$17.95
Sponsoring Agency	Proprietary or Corporate	16%	\$8.10	\$9.00	\$10.00	\$13.50	\$8.00	\$8.00	\$9.00	\$9.50
	Community Board / Faith Community	20%	\$8.25	\$10.00	\$11.25	\$14.90	\$8.00	\$9.00	\$9.50	\$11.00
	Head Start Programs	42%	\$11.71	\$14.00	\$16.00	\$21.00	\$8.75	\$10.58	\$11.89	\$12.50
	Public Schools	92%	\$17.91	\$17.91	\$34.01	\$34.01	\$11.25	\$11.25	\$17.95	\$17.95
Location	Rural	36%	\$8.00	\$17.91	\$10.00	\$34.01	\$7.50	\$11.25	\$8.50	\$17.95
	Urban	23%	\$9.00	\$12.50	\$12.00	\$18.40	\$8.25	\$10.00	\$10.00	\$12.00
Star Rating	No stars to 3 stars*	*	\$8.00	\$17.91*	\$10.00	\$34.01*	\$7.75	\$11.25*	\$8.75	\$17.95*
	Four Stars	25%	\$8.43	\$10.00	\$10.25	\$15.00	\$8.00	\$9.00	\$9.00	\$11.00
	Five Stars	54%	\$10.00	\$17.91	\$14.00	\$34.01	\$8.50	\$11.25	\$10.60	\$17.95
Source: 2013 Directors Survey										
*Based on 9 cases of public school programs with pre-K classrooms; these are in the process of attaining star-rated licenses										

classroom while almost half of Head Start programs (42%) also have NC Pre-K classrooms. On the other hand, the more commonly found for-profit and not-for-profit centers are much less likely to have NC Pre-K classrooms. However, NC Pre-K classrooms are disproportionately likely to be found in rural as opposed to urban counties. Thirty-six percent (36%) of the centers located in rural counties have NC Pre-K classrooms, while only 23% of centers located in urban counties have such classrooms. There is a positive correlation between a program’s star rating and the likelihood of having an NC

Pre-K classroom; more than half of 5 star programs in the state have NC Pre-K classrooms, while virtually none of the 3-star or below programs have these classrooms. This is to be expected because of the state Pre-k standards related to license type.

The impact of centers in the non-profit and public sectors is especially pronounced in rural counties where employment challenges are greatest. Such an effect suggests that sustained career opportunities may be developed in these settings with a more attractive wage structure and progression. Urban centers without NC Pre-K programs have a better teaching staff wage profile than do rural centers, while the reverse is true of rural centers where programs with NC Pre-K classrooms display a more favorable wage structure than their urban counterparts. As seen in the bottom rows of Table 4, there is a positive relationship between better wages for teaching staff and program quality as indicated by star rating. This positive relationship is true in settings without an NC Pre-K classroom, but is even more pronounced in programs with NC Pre-K classrooms.

Thus there appears to be mutually reinforcing relationships between centers' star ratings, public sector or public school sponsorship, and the presence of an NC Pre-K designation. Further, all of these factors seem to influence the development of a more favorable wage structure for the teaching staffs of these programs. By state mandate, NC Pre-K classrooms are required to maintain high quality as indicated by higher license levels. Along with this requirement, teachers who work in NC Pre-K classrooms must have at least a bachelor's degree and Birth-Kindergarten teaching license and must be compensated comparably to licensed teachers in public schools. Given these criteria, the fact that higher license levels overall report higher starting salaries comes as no surprise. Both teachers and assistant teachers who work in higher star-rated centers earn higher wages, and this pattern seems likely influenced somewhat by having an NC Pre-K classroom.



	Director Reported Starting Teacher Wage	Director Reported Highest Teacher Wage	Director Reported Starting Assistant Wage	Director Reported Highest Assistant Wage	Teaching Staff Reported Wage
Statewide	\$9.00	\$12.00	\$8.50	\$10.10	\$10.00
Region 1	\$8.00	\$10.15	\$7.75	\$9.00	\$8.35
Region 2	\$8.00	\$10.00	\$8.50	\$9.27	\$9.35
Region 3	\$8.00	\$11.00	\$8.00	\$8.50	\$9.50
Region 4	\$8.50	\$12.00	\$8.00	\$9.00	\$9.55
Region 5	\$8.00	\$10.50	\$8.00	\$9.50	\$9.19
Region 6	\$9.25	\$12.50	\$8.50	\$10.36	\$10.50
Region 7	\$9.00	\$12.00	\$8.92	\$11.50	\$9.00
Region 8	\$9.32	\$13.00	\$9.00	\$11.00	\$10.00
Region 9	\$8.25	\$12.00	\$8.00	\$11.95	\$9.00
Region 10	\$8.25	\$11.50	\$8.50	\$9.72	\$9.16
Region 11	\$8.75	\$11.50	\$8.27	\$10.00	\$9.75
Region 12	\$10.50	\$14.00	\$9.00	\$11.75	\$12.08
Region 13	\$8.50	\$12.75	\$8.50	\$10.00	\$9.00
Region 14	\$8.50	\$9.15	\$8.00	\$9.00	\$9.40

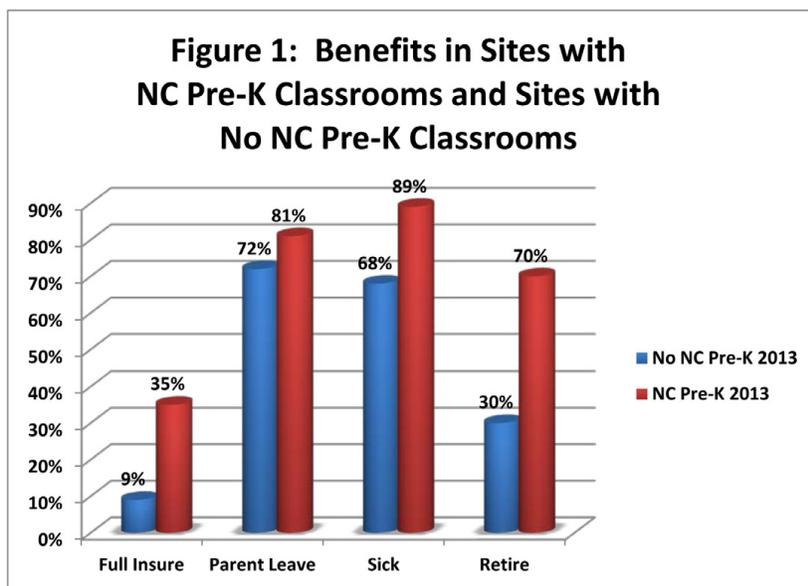
**Wage Scales of Regions.** Breaking the wage scales down by regions shows great variation in starting and highest paid teachers and assistant teachers geographically. See **Table 5**. Teachers living in Regions 1, 2, 3 and 5 can expect the lowest starting median wages of \$8.00/hour starting and are not likely to exceed \$11.00/hour as their highest wage. On the other end of the spectrum, in Region 12 median starting compensation hovers around \$10.50/hour with wages peaking around the \$14.00/hour mark. For starting assistant teachers, wages in almost all regions are low, ranging from \$7.75 to \$9.00, and typically starting at about \$8.50/hour. Statewide, assistant teachers can expect to have a maximum wage of about \$10.10 per hour, ranging from \$8.50 to \$11.95 depending on their location. Only programs in Regions 7, 8, 9 and 12 compensate their highest paid assistant teachers with a median of \$11.00 per hour or more.

(Please see Appendix B for detailed information about salary imputations in small regions. Also note that the values in Region 2 should be interpreted with caution as these estimates are based on fewer than 20 cases or had item response rates below 60%.)

**Employment Benefits.** Employment benefits offered by centers in North Carolina are shown in **Table 6**. Almost half of programs provided some help with health insurance in 2013. This pattern is close to the 51% which offered this benefit in 2011. Although fully paid health insurance has never been characteristic of most child care programs, this benefit appears to have declined from 21% in 2011 to 16% of programs in 2013. Although relatively few programs offer free child care to employees, an apparent increase has occurred in the percent of programs that offer some relief from the high cost of child care through reduced fees (from 55% to 68%). An even bigger increase can be seen in those programs offering parental leave which jumped from 56% in 2011 to 74% in 2013. Paid time off has not shown much change since 2011 with roughly the same percentage of programs offering paid time off vacation and/or holidays in 2013. Paid holidays are the most common type of benefit with 91% of programs offering this benefit to their staff. Although paid sick time is offered in only 74% of programs, this is up from 67% two years ago. Because early care and education programs are notorious for being incubators for germs, failure to provide this benefit to staff often results in teachers either having to work while sick, thus adding to the pool of germs found in programs, or having to take unpaid leave until they are well.

	2011	2013
Fully Paid Health Insurance	21%	16%
Partially Paid Health Insurance	30%	32%
Free Child Care	10%	13%
Reduced Child Care Fee	55%	68%
Parental Leave	56%	74%
Paid Sick Leave	67%	74%
Paid Vacation	86%	86%
Paid Holidays	90%	91%
Paid Retirement Benefits	40%	42%

Over the years since NC Pre-K's inception (formerly More at Four), public pre-k programs have contributed to increases in many types of benefits. Working in sites with an NC Pre-K classroom increases the opportunity to receive full health insurance, parental leave, sick time and retirement. See **Figure 1**. NC Pre-K programs are the drivers for increasing the overall benefits provided in 2013 in these areas from programs offering these benefits ten years ago in 2003.



Whether or not a child care provider receives any support with health insurance (as well as other benefits and their wages) relates to the organizational auspice of the program in which she works. See **Table 7**. All publicly sponsored programs offer their teachers either free or reduced health insurance, and in most of these programs a teacher can expect a starting wage exceeding \$12.00 per hour and most can expect to make over \$14.50 per hour after some time. Those providers working in non-profits (excluding those sponsored by faith communities) fell just under public employees with 56% receiving full or partially paid health insurance with a starting median wage of \$8.65/hour and highest median wage of \$12.50/hour.

On the other end of the scale, employees in single center, for-profit programs had a median starting salary of just \$8.00/hour (average highest salary of \$10.00) and only 19% received support with employer offered health insurance. This type of auspice is the most prevalent form of organization in the state; almost 40% of all centers in the state are single site private for-profit centers. On the other hand, fewer than one in four programs statewide are publicly sponsored, and fewer still are public school sites.

These wage findings reflect similar national findings from the Government Accountability Office<sup>3</sup> which found low wages among all child care providers but higher pay for individuals working in publicly funded programs such as Head Start.

<sup>3</sup> US Government Accountability Office Report to the Chairman, Committee on Finance, US Senate, February 2012. "Early Childcare and Education. HHS and Education are Taking Steps to Improve Workforce Data and Enhance Worker Quality."

Type of Center	Pct Employers Who Offer at Least Partly Paid Health Insurance	Median Starting Teacher Wage	Median Highest Teacher Wage
Private for profit (single center)	19%	\$8.00	\$10.00
Private non-profit (sponsored by faith community)	43%	\$8.50	\$11.50
Private for profit (multi-center)	52%	\$9.00	\$12.00
Private non-profit (comm./ board sponsored)	56%	\$8.65	\$12.50
Head Start	100%	\$13.00	\$19.00
Public Program (Mental Hlth, Comm. College)	100%	\$12.68	\$14.50
Public School	100%	\$17.91	\$34.01

Source: Directors Survey, 2013



**Overtime Pay.** Among the 44% of the teaching staff who reported that they had ever worked over 40 hours per week, half (50%) said that their centers paid them time and a half for the overtime hours that they worked. When directors were asked this same question about their teaching staff, a comparable 38% said that their teachers sometimes work over 40 hours per week. However, 71% of these directors explained that teachers who are asked to work over 40 hours per week are compensated at one and a half times their regular hourly wage. Another 12% of employers, mostly in public school settings, report that their teachers are on annual salaries and exempt from overtime requirements, while another 7%, again mostly in the public schools, reported time off in lieu of additional compensation. Federal wage and hour law requires that non-exempt workers such as early care and education teachers receive time and a half for overtime hours. This law does not apply to public sector employees who may receive time off in lieu of paid compensation. Regardless of setting, 18% of teachers reported that they have worked over 40 hours per week on occasion without receiving any type of compensation or time off.

## Profile of the Early Care & Education Workforce

The center-based early care and education workforce in North Carolina is overwhelmingly female and includes a large proportion of workers who have children of their own. **Table 8** displays data for directors and teaching staff for two

	Director		Teaching Staff	
	2003	2013	2003	2013
Median Age	43 yrs	47 yrs	33 yrs	37 yrs
Female	97%	94%	99%	99%
People of Color*	38%	43%	49%	43%
Have Children	89%	87%	73%	73%
Single Parent w/child 0-18	10%	9%	28%	16%
At least one child 0-18	53%	46%	54%	48%
Annual Family income <\$30K	23%	15%	63%	58%

\*Includes, Asian, African American, bi-racial, and American Indian/Native American

periods in time a decade apart permitting an examination of continuities and changes in this workforce. Child care program directors have grown older and slightly more diverse in terms of race and gender over the period 2003 to 2013. When directors in 2013 are compared to those in 2003 relatively fewer directors have children at home (46% vs. 53%). About 43% of the teaching staff in centers as well as directors are people of color. However, the overall percentage of people of color leading early care and education programs has increased from 38% to 43% over the decade.

Although racial differences in wages in the NC early childhood workforce cannot be found, some differences in the level of educational attainment of

different racial groups within the workforce can be seen. African Americans are less likely than others to have a college degree, but the wages for different racial groups with similar levels of education are quite close together. About 37% of the ECE teaching staff workforce is African American, but among those with bachelor's degrees with an early childhood education or child development emphasis this figure rises to 44%. This finding is important for the professional advancement of this demographic group because there appears to be a wage premium for individuals with these degrees over other bachelor's degrees. This selective focus on the core knowledge and skills of the profession bodes well not only for African American teachers but also for the children with whom they work.

Many teachers and assistant teachers have children young enough to need child care. Note that programs and services provided by early childhood employers as well other community agencies can be valuable resources for these workers and their families. Examination of the survey data suggests that of the estimated 26,400 early care and education teachers in North Carolina, about 7,700 are estimated to need child care, and most are served by the centers where they work (61%) or other child care centers or homes (28%). The centers employing them typically provide free or reduced care at the center for these employees' children (66%), but many remain eligible for government assistance for child care. The survey data suggest that about 2,100 early care and education staff statewide receive government assistance to help pay for their children's care at work or elsewhere; others may be eligible and on one of the long waiting lists for subsidy in counties across the state. The dominant source of this payment is from vouchers (89%). The remaining help comes from diverse sources such as NC Pre-K funding, Head Start and Early Head Start.

## Education of the Early Care and Education Workforce

The education of the early care and education workforce is a critical factor influencing children's early learning opportunities. This section profiles the educational attainment and aspirations of the workforce as expressed in the current survey. See **Table 9** for education data on center directors (directors, director/owners and assistant directors), teachers (teachers and lead teachers) and assistant teachers (assistant teachers, teacher aides and floaters). Data are presented from the most recent (2013) teacher and director surveys and the comparable surveys conducted in 2011.

Highest Education Completed	Directors		Teachers		Assistant Teachers	
	2011	2013	2011	2013	2011	2013
Bachelor Degree or More in ECE/CD	19.0%	21.0%	13.0%	12.9%	5.0%	2.4%
Bachelor Degree or More in Other Field	32.0%	33.0%	14.0%	16.1%	11.0%	13.1%
Associate Degree in ECE/CD	20.0%	17.0%	20.0%	20.1%	16.0%	19.2%
Associate Degree in Other Field	4.0%	5.0%	4.0%	5.1%	7.0%	7.8%
High School + Any College Courses	25.0%	23.0%	47.0%	34.6%	50.0%	38.3%
High School + Workshops	<1%	<1%	1.0%	6.1%	4.0%	9.0%
High School Only	<1%	<1%	1.0%	4.9%	5.0%	10.3%
Less than High School	0.0%	0.0%	<1.0%	0.1%	<1.0%	0.7%
<b>Other Education Credentials</b>						
N.C. EC Credential	69.0%	75.0%	77.0%	77.3%	66.0%	67.7%
N.C. EC Administration Credential	73.0%	77.0%	22.0%	24.5%	14.0%	12.5%
Child Development Associate (CDA)	9.0%	9.0%	9.0%	8.9%	9.0%	8.3%
B-K/Preschool add-on License	10.0%	13.0%	10.0%	7.7%	1.0%	1.4%
<b>Educational Pursuits</b>						
Currently Taking ECE/CD Courses	20.0%	16.0%	28.0%	21.8%	30.0%	26.4%
Sources: 2011 and 2013 Director and Teacher Surveys						

Gains in degree-earning providers are a positive sign that the workforce is advancing its education to meet the needs of young children.

Not surprisingly, center directors have completed higher levels of education than teachers and assistant teachers, though none of the groups match the minimum education requirements for teachers and administrators in public elementary, middle and high schools. Currently 38% of directors, 33% of teachers and almost 22% of assistant teachers have a degree in early childhood education (i.e., AA, BA or higher). While many others (38% of directors, 21% of teachers and 21% of assistants) have a

degree in a field other than early childhood or child development. Virtually all of these directors (97%) and a sizeable proportion of teachers/assistant teachers (95%) with a college degree in fields other than early childhood education or child development, have taken at least one course in the field; the vast majority of these have taken more than one such course.

North Carolina's early care and education workforce has a strong interest in achieving higher levels of education. As shown in the lower half of Table 9, many directors, teachers and assistant teachers have completed college courses. Furthermore, 22% of the teachers and 26% of assistants said that they were currently taking courses leading to a degree or credential in the early childhood field. Of those taking classes, 44% of teachers and 46% of assistant teachers were

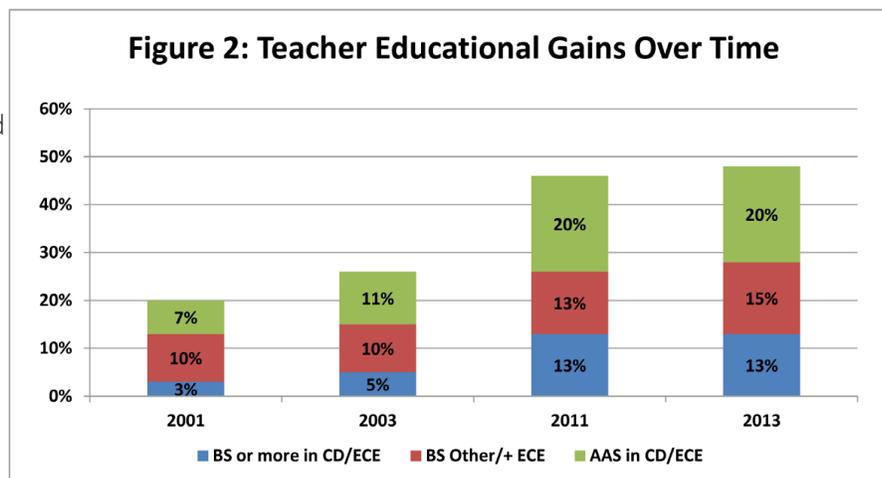


working towards a two-year degree and 16% of teachers and 24% of assistant teachers were working towards a bachelor's degree.

In 2013, 76% of directors, 54% of teachers and 42% of assistants indicated that they had attained an associate, bachelor's or master's degree in some field. In comparison, 75% of directors, 51% of teachers and 39% of assistants in 2011 had earned an associate, bachelor's or master's degree in some field. Additionally, 13% of directors, 8% of teachers and 1% of assistant teachers have a B-K/Preschool add-on Teacher License compared to 10% of directors, 10% of teachers and 1% of assistant teachers in 2011.

Investments in the early care and education system have paid off dramatically over time for the workforce in terms of increased education levels of teachers specifically around early care and education coursework. **Figure 2** shows a dramatic increase both in overall educational attainment and in specific types of degrees since the early part of the last decade.

In 2001, a mere 20% of teachers had attained as much as an associate degree in early childhood/child development or had at least a bachelor's degree in another field and had taken an ECE course. By 2013, this percent had more than doubled to almost 50%. Similarly, there has been a dramatic increase in both associate and bachelor's degrees specifically in early childhood/child development. While 2001 showed only 10% of teachers (only) with degrees specifically in the field, 2013 reveals that a full 33% of teachers (only) have obtained degrees specifically in the profession.



Also increasing, though not as dramatically, are teachers (only) who have at least a bachelor's degree in a field other than early childhood/child development who have taken at least one early childhood education course. The percent of teachers (only) falling into this category increased from 10% in 2001 to 15% in 2013. The overall effect of all of these increases in education has resulted in a workforce that is better educated not only generally, but specifically in the field of early childhood education.

**Education of Teachers and Assistant Teachers by Age Group Taught.** Education levels of teachers differ as a group depending on the age of children in their care. Infant and/or toddler teachers (ages of children from birth to 36 months) tend to have lower levels of education than those who teach children three years old or older. See

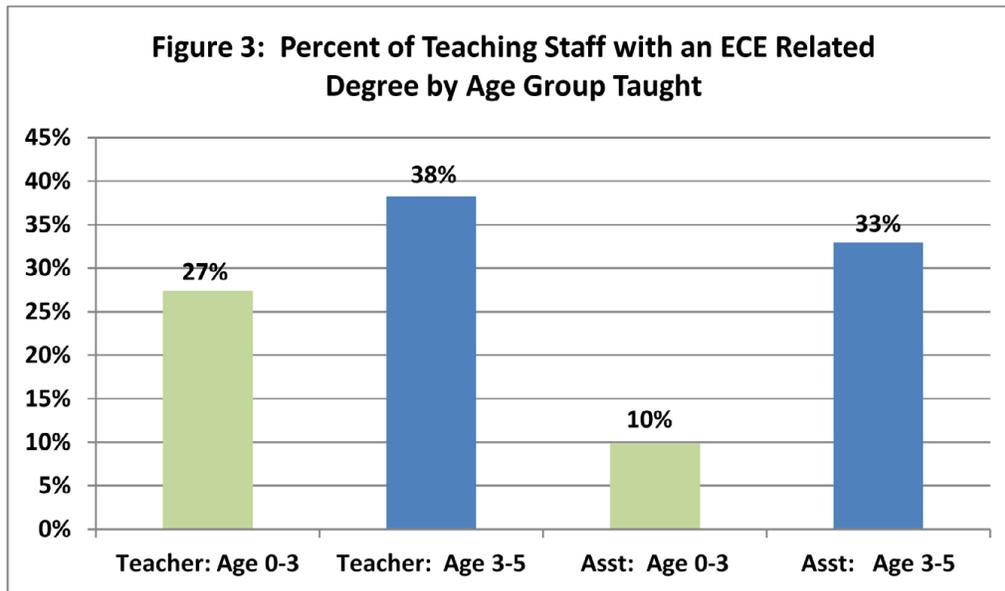


Figure 3. Many teachers indicated that they taught multiple age groups spanning across infant/toddlers and preschoolers (three to five year olds). In these cases, education levels were counted in both age groups. Sixty-five percent (65%) of those teachers who taught preschoolers

had at least a two year degree compared to only 42% of those teachers who taught infants and/or toddlers. Thirty-eight percent (38%) of preschool teachers hold degrees in early childhood education/child development, compared to only 27% of infant and/or toddler teachers.



Similarly, for assistant teachers, 53% of those who taught preschoolers hold at least an AA degree compared to only 29% of infant and/or toddler teachers. In terms of field of study, 33% of preschool assistant teachers hold early childhood education/child development degrees compared with only 10% of infant and/or toddler assistant teachers.

**Education by Regions.** Across the state, education levels of directors and teachers vary by region. See **Table 10**. The percentage of directors statewide with a bachelor’s degree or more education in any field is 55%; 42% of directors in North Carolina have a college degree at the AA level or above with an ECE emphasis. Almost half of the statewide teaching workforce, including both teachers and assistants, has no degree (48%). Over one quarter (26%) has a

	Directors				Teachers/Teacher Assistants			
	Greater than AA degree	AA degree	Less than AA degree	*ECE Degree	Greater than AA degree	AA degree	Less than AA degree	*ECE Degree
Statewide	55%	22%	24%	42%	26%	26%	48%	30%
Region 1	47%	4%	49%	22%	17%	23%	60%	25%
Region 2	46%	38%	16%	50%	26%	34%	39%	53%
Region 3	43%	28%	29%	39%	23%	28%	49%	32%
Region 4	60%	14%	26%	48%	35%	25%	41%	34%
Region 5	50%	20%	30%	43%	21%	33%	46%	32%
Region 6	54%	21%	26%	43%	26%	20%	54%	24%
Region 7	51%	36%	13%	53%	19%	24%	58%	17%
Region 8	63%	12%	26%	42%	21%	25%	53%	26%
Region 9	61%	18%	21%	34%	18%	26%	56%	27%
Region 10	57%	30%	13%	54%	21%	33%	46%	39%
Region 11	55%	15%	30%	28%	26%	22%	52%	29%
Region 12	60%	21%	19%	42%	37%	22%	41%	31%
Region 13	49%	24%	27%	44%	17%	28%	55%	30%
Region 14	55%	31%	14%	52%	21%	42%	37%	47%

Source: Director and Teacher Surveys  
\*ECE degree includes associate’s, bachelor’s, master’s and PhD degrees in early childhood education or child development

bachelor’s degree or more education. Nearly one in three of the teaching staff in centers has a college degree (AA or higher) in early childhood education.

Region 1 exhibits the lowest overall level of education for directors with almost half (49%) of the directors having no college degree. In a similar fashion, teachers/teacher assistants in this region have the lowest level of education; 60% do not have a college degree. However, Region 2 has a higher percent of directors with ECE degrees than the statewide average.

Higher levels of education can be seen in a number of regions. For directors, Regions 7 and 14 stand out in that more than 85% of their directors have some type of college degree. Region 8 has the highest percent of directors with at least a bachelor’s degree at 63%. When looking specifically at ECE degrees, Region 10 has the highest percent of directors with this type of degree at 54%.

For teachers and assistant teachers, Region 14 leads the way with the most degreed at any level at 63%. Region 12, however, has the highest percent of bachelor’s degree or higher teachers/assistant teachers at 37%.

Regional variation in educational levels of the workforce is likely affected by the wide geographic variation in the availability of educational resources and supports across the state. For many North Carolinians in rural communities, there

are access barriers to obtaining continuing education. At times, accessibility can be limited by distance, i.e. the excessive commute to an on campus class. Other times, accessing higher education in rural areas can be limited by insufficient technological support or resources such as limited internet availability or only dial up access.

## Earnings of the Early Care and Education Workforce

Workforce earnings in North Carolina remain low. See **Table 11**. The median self-reported wage of \$10.00 per hour for child care teachers and assistants in North Carolina does not compare favorably to the starting wage of public school teachers in the state (\$17.91 per hour not including local supplements). Child care center directors' self-reported median hourly wage of \$15.00

barely competes with that of the starting public school teachers despite the added responsibility of running a business. With such low earnings, it is no wonder that early care and education teachers (9% of teachers and 14% of assistant teachers) said that they worked another paid job in addition to their job as a teacher. The median number of hours worked per week in these additional jobs was 15 for teachers and 12 for assistants.

	2003 Wage in 2013 dollars	2013 Wage	Real Change (2003-2013)	Percent Change 2003-2013
90th percentile wage: Teacher & Asst Teacher	\$15.19	\$14.43	95.0%	-5.0%
50th percentile wage: Teacher & Asst Teacher	\$10.13	\$10.00	98.7%	-1.3%
10th percentile wage: Teacher & Asst Teacher	\$7.60	\$7.91	104.1%	4.1%
90th percentile wage: Director	\$23.74	\$26.91	113.4%	13.4%
50th percentile wage: Director	\$15.19	\$15.00	98.7%	-1.3%
10th percentile wage: Director	\$9.56	\$10.00	104.6%	4.6%

Source: Director and Teacher Surveys

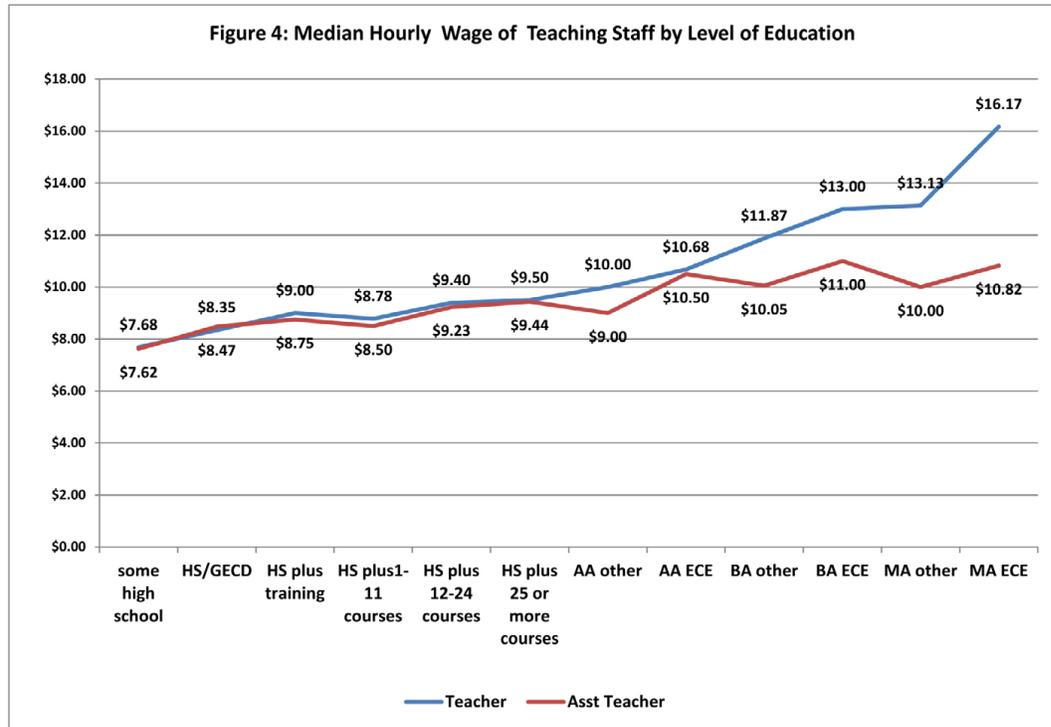
**Wage Trends** Wages for the early childhood workforce have not been keeping pace with the cost of living for the most part. See Table 11. In 2003, teachers and assistants had a median wage of \$10.13 in 2013 dollars. By 2013, the median wage for these early childhood professionals was still only at \$10.00. This represents a decline in wages of nearly 1.3% over the decade. Real wages declined even more for those in the top 10% of earnings, although those in the bottom ten percent saw their real wages increase somewhat from \$7.60 to \$7.91, an increase of 4.1%. The relatively stagnant wages at the bottom were likely affected by two minimum wage increases and the introduction of the NC Pre-K program in North Carolina. Without these the lowest paid teachers would have even lower wages.



Center directors experienced a different kind of wage trajectory over the last decade. In the mid range wages declined from a median of \$15.19 in 2003 to \$15.00 in 2013, a decline in real wages of almost 1.3%. Those directors at the top, in the 90th percentile, saw a gain of 13.4% to a real wage of almost \$27 per hour. On the other hand, center directors at the lower end of the wage spectrum saw their real hourly wage increase from \$9.56 to \$10.00. The past decade might be best characterized as one of wage stagnation for most of the early childhood workforce, with some slight improvements for those with the lowest wages and income.

As would be expected, educational level plays a role in teacher and assistant teacher wages. **Figure 4** shows, when all fields of degrees are combined, the more education teachers receive, the higher their paycheck. Having an associate degree raises the median paycheck by almost \$1.70/hour. Jumping from an associate to a bachelor's degree or higher yields a median paycheck that is \$2.25/hour higher than the average paycheck for the lower degree. This same pattern holds true for assistant teachers as well. Those assistant teachers with less than an AA degree receive a median wage of \$8.75 per hour. With an AA degree, this median wage is raised by \$1.25 an hour to \$10.00. Continuing on, assistant teachers with a bachelor's or higher degree receive a slight increase to \$10.10 per hour median wage.

For teachers, taking formal post-secondary coursework provides a financial reward as more classes are taken (see Figure 4). Teachers with a high school degree or GED only average \$8.35 per hour. Those who have also taken some workshops receive a median wage of



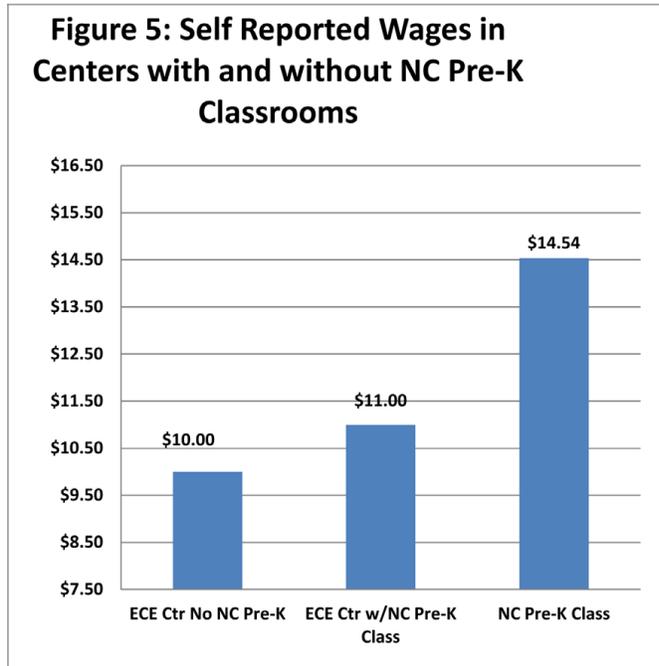
\$9.00 per hour. Teachers who have taken post secondary coursework have a median salary of \$9.40/hour with one to 24 courses. Taking 25 or more courses yields a median \$9.50 per hour. For teachers, a degree specifically in early childhood/child development provides sizeable financial gain at the associate, bachelor, and master degree levels. For an associate degree level teacher, one who has an early childhood degree makes, on average, \$0.68 more per hour. For a bachelor level teacher, those with an early childhood degree make \$1.13 more per hour than their counterparts with a bachelor's degree in any other field. The highest yield is for a master's degree.

Previous NC workforce studies have suggested that for the typical teacher, pursuing degrees beyond a bachelor's level in early childhood may not advance wages. In the 2012 survey, teachers with a bachelor's degree in early childhood/child development, earned a median salary of \$13.84/hour as opposed to teachers with a master's degree in early childhood/child development who averaged \$13.52/hour. Wage estimates for individuals with master's degrees in previous studies were inconclusive about the value of ECE/CD master's degrees in part because they were based on relatively few cases overall and an especially small number of post-baccalaureate degrees in the early childhood/child development field. However, relatively more individuals in the 2013 workforce sample reported both hourly wages and having a master's degree level of education. Further a larger number of individuals reported having ECE/CD master's degrees (N=30) as well as master's degrees in other fields (N=45). These results suggest substantial wage premiums for those with bachelor's degrees with an early childhood emphasis versus those with a different kind of bachelor's degree (\$13.00 vs \$11.87). An even stronger wage premium occurs for those with an early childhood master's versus those with a different type of master's degree (\$16.17 vs. \$13.13 per hour).

For assistant teachers, a similar trend holds true for increased education, though not as dramatically or consistently as with teachers. Assistant teachers with a high school degree have a median wage of \$8.47 per hour. This salary increases to \$8.75 per hour with some additional workshop hours. For those with some college coursework, assistant teachers

with 1-11 courses make \$8.50 per hour; this increases to \$9.23 per hour for 12 -24 courses and \$9.44 per hour for 25 or more courses. For assistant teachers with an AA degree in early childhood, their compensation increases to \$10.50, however, teacher assistants with an AA in another field only make on average \$9.00 per hour. Relatively few teacher assistants have advanced degrees, however.

The presence of NC Pre-K is a significant factor in teacher pay. As **Figure 5** demonstrates, for teachers, being in a center with an NC Pre-K classroom and/or teaching in an NC Pre-K classroom increases the opportunity for a larger paycheck. State policy mandates higher salaries for those directly in NC Pre-K classrooms, so a higher salary specifically for NC Pre-K classroom teachers is expected. However, there is no directive for those in non NC Pre-K classrooms operated by centers that also have NC Pre-K classrooms. However, data indicate that there has been a positive impact or “spillover effect” for these teachers as well. Teachers who work in early care and education programs that have an NC Pre-K classroom, but who themselves do not work in that classroom, make \$1.00 more per hour than teachers in programs without such a classroom. For those teachers working in NC Pre-K classrooms as well, their salary is typically over \$3.50 per hour more than their peers who work in centers with an NC Pre-K classroom but who themselves do not work in those classrooms.



**Earnings of Teachers and Assistant Teachers by Age Group Taught.** For teachers and lead teachers, those who teach infants and/or toddlers had a median salary of \$9.50 per hour. Those teachers who taught preschool children fared better with a median salary of \$11.00 per hour. The same holds true for assistant teachers of infants and/or toddlers who make only \$9.00/hour compared to their preschool counterparts making \$9.49/hour. (Many teachers and assistant teachers indicated that they taught multiple age groups spanning across infant and/or toddlers and preschoolers. In these cases, earnings were counted in both age groups.)

**Earnings by Region.** As with most professions, earnings vary based on geographic location. **Table 12** breaks down the median earning of directors, teachers and teacher assistants by region. Regions 1 and 3 have the lowest paid directors at a median salary of \$12.75/hours and \$12.50/hour, respectively. Highest paid directors can be found in Region 12 at a median wage of \$16.90 per hour

Lowest paid teachers can be found in Region 1 at a median wage of \$8.35 per hour. Regions 7 and 9 pay their assistant teachers less than other regions at \$8.25 per hour. Teachers and assistant teachers make more on average in Region 12

**Table 12  
Director, Teacher and Teacher Assistant Hourly Wages by Region**

	Director	Teacher	Teacher Assistant
Statewide	\$15.00	\$10.15	\$9.25
Region 1	\$12.75	\$8.35	\$8.60
Region 2	\$13.46	\$9.35	\$9.13
Region 3	\$12.50	\$9.75	\$9.00
Region 4	\$15.00	\$9.82	\$9.40
Region 5	\$15.39	\$9.50	\$9.00
Region 6	\$16.83	\$11.00	\$9.50
Region 7	\$16.53	\$9.50	\$8.25
Region 8	\$15.00	\$10.50	\$8.67
Region 9	\$13.00	\$9.00	\$8.25
Region 10	\$14.42	\$9.47	\$8.50
Region 11	\$14.90	\$9.25	\$11.00
Region 12	\$16.90	\$13.00	\$10.45
Region 13	\$15.00	\$8.65	\$9.13
Region 14	\$13.93	\$9.40	\$8.47

Source: Director and Teacher Surveys,

than others across the state. Teachers in this region make \$13.00 per hour, while assistant teachers' median wage is \$10.45 per hour. In many regions, teachers and assistant teachers median wages do not differ much, and in some (Regions 1, 11 and 13) reported median hourly wages of assistant teachers appear to exceed the wages of teachers. This apparent discrepancy can be explained by the fact that disproportionate numbers of assistants reporting in those regions may be employed in centers with higher wage scales.

**Economic Well Being of the Early Care and Education Workforce.**

Many people working in the early childhood field face severe economic challenges that affect their families and them personally. Overall, the early care and education workforce is at a significant disadvantage economically. Strictly in terms of household income alone, early care and education providers and their families fall well short of other North Carolinians as a whole. From the U.S. Census Bureau's Quick Facts, the median North Carolina household income is \$45,570. For over 77% of early care and education teachers and assistant teachers, their household income falls below this amount. One in eight early care and education teachers and assistant teachers (12%) have had to adjust to the loss of family income due to their job loss some time in the last three years. Less than half (48%) who lost their jobs received unemployment compensation.



But household earnings are not the only indicator of overall economic well being. Over a third (35%) of the teachers and 31% of assistants said that they had no health insurance coverage from any source. Additionally, 42% of teachers and assistants had received some type of public assistance (e.g., Medicaid, SNAP, TANF) in the previous three years. These indicators are slightly worse than the findings of the 2011 survey when 32% of teachers and assistant teachers had no health insurance from any source and 41% had received some type of public assistance in the previous three years.

**Table 13**  
**Individual Economic Well Being of Child Care Providers**

	Teachers	Assistant Teachers
Median Hourly Earnings	\$10.15	\$9.25
Median Household Income	\$25K-\$30K	\$20K-\$25K
Single Parent with Child 0-18	17%	15%
No Health Insurance	35%	31%
Used Public Assistance in Past 3 Years	42%	40%
Works a 2nd Job	10%	14%

Source: Teachers Surveys

**Table 13** breaks down the hard financial burden that teachers and assistant teachers must battle each day. Given the bleak economic climate for teachers and assistant teachers in North Carolina, center directors often find it difficult to attract and retain qualified staff. As expected, assistant teachers face more severe economic challenges than teachers. Hourly wages for assistant teachers remain below that of teachers as do their overall household earnings. To increase their financial situations, a higher percentage of assistant teachers than teachers work a second job.

**Professional Support for the Early Care and Education Workforce**

Early childhood research has shown that higher education and compensation of early care and education providers can lead to positive outcomes for children. Programs such as the T.E.A.C.H. Early Childhood® Project and salary supplements have addressed the educational and financial needs of early care and education providers while lowering staff turnover. At the program level, child care centers offer staff opportunities to develop their teaching skills and professionalism through coursework and by creating a supportive work environment. The workforce survey included a number of questions on these professional support topics.

**The T.E.A.C.H. Early Childhood® Project.** According to center directors, 55% of centers in North Carolina had at least one staff member that had ever received a T.E.A.C.H. scholarship. This is comparable to the 55% reported in 2011. Among respondents to this year's teacher surveys, a sizeable proportion of teachers and assistant teachers (22%) said that



they had received a T.E.A.C.H. scholarship. In 2011, 25% of teachers and assistant teachers had received such a scholarship. Among respondents, 99% of center directors and 96% of teachers and assistants had heard of the T.E.A.C.H. Early Childhood® Project.

Data from the T.E.A.C.H. Early Childhood®<sup>4</sup> Project indicate that the Project is working to increase the education levels of child care providers. Evaluation data show that 54% of T.E.A.C.H. Early Childhood® participants were not working on a degree before they learned about the Project. Of those, 80% indicated they could not afford the cost of higher education. For Project participants, nearly 2/3 indicated that they are more satisfied with their jobs (65%). Similarly, close to 2/3 said that participation in the T.E.A.C.H. Early Childhood® Project has made them more willing to stay with their current early care and education program (61%).

In any given year, nearly 50% of T.E.A.C.H. scholarship recipients are people of color. The widespread availability of T.E.A.C.H. scholarships has helped raise the qualifications of the workforce and has potentially contributed to the increasing percentage of people of color in center leadership positions.

**Salary Supplements.** Among North Carolina teachers and assistant teachers, 39% reported that they had received a salary supplement funded by Smart Start and the Division of Child Development and Early Education (up from 35% reported in 2011 survey). According to Child Care WAGE\$® information<sup>5</sup>, the average mean six month supplement for all participants in 2012 was \$876. Ninety-six percent (96%) of participants in the program indicate that WAGE\$ encourages them to stay in their current program. Further, 95% say that the program helps them feel more satisfied with their job and 98% say that WAGE\$ supplements help ease financial stress.

Child Care WAGE\$® not only provides benefits for participants. Directors also realize the benefits with 71% indicating that the program increases morale and 68% specifying that lower turnover is a benefit. Finally, 41% of directors cite Child Care WAGE\$® as a method to attract more qualified staff to their center. Salary supplement amounts were not included in the calculation of individual respondent hourly wages.

**Other Center-Provided Support.** Child care centers can support the professional development of staff without creating a significant financial burden on their programs. Seven key types of professional support that centers can provide staff are an orientation, written job descriptions, written personnel policies, paid education and training expenses, paid breaks, compensatory time for training and paid preparation or planning time. See **Table 14**. Over the course of the last two years, those programs providing these low cost benefits have increased. Of note, over 95% of programs offer an orientation, written job descriptions and written personnel policies, but this is up from about 90% offering these three supports two years ago. Only slightly more than half, (56%) provided paid breaks for their teaching staff in 2011, but this had increased to almost two-thirds (65%) by 2013. Similar changes can be noted for other important career development options. For example, 85% of centers provide paid education or training up from 76% in 2011.

Among the responding centers, 84% offered at least five of these seven types of support and only 6% offered three or fewer. This pattern is a clear increase from two years before when only 70% offered at least five of these types of supports

**Table 14**  
**Professional Support Benefits in Child Care Centers**

Type of Professional Supports	2011	2013
Orientation	90%	95%
Written Job Description	91%	96%
Written Personnel Policies	91%	97%
Paid Education/Training	76%	85%
Paid Breaks	56%	65%
Time Off for Training	55%	65%
Planning/Preparation Time	67%	76%
Numbers of Professional Supports Provided	2011	2013
0-3	16%	6%
4	14%	9%
5+	70%	85%

Source: Directors Surveys 2011 and 2013

<sup>4</sup> T.E.A.C.H. Early Childhood® data received from participant evaluation received in 2012.

<sup>5</sup> Child Care WAGE\$® data received from financial payment made to participant in 2012.

and 16% offered three or fewer. Offering a more professional work environment may be a low-cost means for centers to reduce staff turnover.

## Experience and Turnover of the Child Care Workforce

Young children need experienced, well-educated teachers with whom they can form close attachments over time. These attributes are even more important for teachers of infants and toddlers. North Carolina has a combination of seasoned child care professionals who have remained with their current programs for years as well as some less-experienced

	2011	2013
Teachers Years in Current Center	3.5	3.2
Teachers with less than 1 Year in Current Center	19%	19%
Teachers Years in Child Care Field	10.0	10.0
Assistant Teachers Years in Current Center	2.0	2.0
Assistant Teachers with less than 1 Year in Current Center	31%	27%
Assistant Teachers Years in Child Care Field	6.0	7.4
Directors Years in Current Center	6.0	6.0
Directors Years in Child Care Field	17.0	18.0

Source: Director and Teacher Surveys

providers who have either just begun in the field or in a new child care program. Across the state, median length of experience in the child care field was 18.0 years for directors (who began working in the field at an average age of 27), 10.0 years for teachers and 7.4 years for assistant teachers. See **Table 15**. Further, about 19% of teachers and 6% of directors reported having worked at their center for less than a year, a rate that is identical to what was found in 2011. Overall, for directors and teachers, the typical years of experience in the child care field did not change between 2011 and 2013.

Teacher assistants reported a median of 7.4 years working in the field in 2013, somewhat longer than the median of 6.0 years reported in 2011. This finding is a possible indication that assistant teachers were being retained in the field longer. In addition, the percentage

of teacher assistants with less than one years experience in their current work setting declined from 31% to 27% over the two year period, suggesting a trend toward greater stability in this segment of the workforce.

The current survey included two measures of turnover: (1) for center-based teacher turnover, the percentage of child care teachers and assistant teachers who left their centers during the previous year and (2) for individual directors, teachers and assistant teachers, the percentage of workers who are planning to leave the child care field in the next 3 years. See **Table 16**. As a proportion of all full-time teachers and assistants, 17% left their centers during the previous 12 months. Turnover rates within centers ranged from 0% to 300% of full-time staff. Forty-nine percent (49%) of centers reported that they had no full-time staff turnover during the previous year while 4% of centers had turnover at or above 100% of current full-time staff. In 2011, 18% of full-time teachers and assistants left their centers during the previous 12 months. The full-time teacher annual turnover rate of 20% is similar to the 19% of full time teachers who have been in their programs one year or less.

Twenty percent (20%) of teachers said that they plan to leave the field in the next three years. For assistant teachers, this rate was higher at 27%. Directors, however, were less likely to say that they plan on leaving the field in the next three years at 9%. These rates are generally comparable to those found in 2011.

	2011	2013
Full-time Teachers and Assistant Teachers	18%	17%
Full-time Teachers	19%	20%
Full-time Assistant Teachers	16%	8%
Teachers Leaving the Field in 3 years	21%	20%
Assistant Teachers Leaving the Field in 3 years	24%	27%
Infant Toddler Teachers Leaving the Field in 3 years	23%	24%
Preschool Teachers Leaving the Field in 3 years	18%	17%
Directors Leaving the Field in 3 Years	11%	9%

Source: Director and Teacher Surveys

**Experience and Turnover by Age Group Taught.** Not surprisingly, when controlling for age group taught, preschool teachers and assistant teachers show slightly more experience both in their centers and in the field as a whole compared with infant and/or toddler teachers. Preschool teachers have worked in their center for a median of 3.7 years and have 10.5 years experience in the early care and education field overall. Infant and/or toddler teachers have been in their programs 3.1 years and in the field as a whole for 10.0 years on average.

When asked if they would be leaving the field within three years, just 17% of preschool teachers answered in the affirmative. For infant and/or toddler teachers, 24% responded that they may not be in the field in three years. Our youngest children who need to be able to count on the adults in their lives are expected to lose their teachers at a rate of one and one half times the rate of teachers of older preschool children. During this early period of development (8 months to 2 years), many young children go through a period of stranger anxiety, which can only be exacerbated by staff churning.

For assistant teachers, median years working in their current center for preschool teachers was 3.0 and 8.0 years in the child care field. Infant and/or toddler assistant teachers, however, showed just 1.4 years in their current program and 6.0 years in the field as a whole. (Many teachers and assistant teachers indicated that they taught multiple age groups spanning across infant and/or toddlers and preschoolers. In these cases, experience and turnover were counted in both age groups.)



**Experience in ECE Field by Region.** The amount of experience both within their current center and within the field as a whole varies across regions in our state. **Table 17** displays the median number of years that teachers, assistant

**Table 17**  
**Median Years of Experience of the Early Childhood Workforce by Region**

	Median Years Working in Current Center			Median Years Working in Early Child Field		
	Teacher	Asst Teacher	Director	Teacher	Asst Teacher	Director
Statewide	3.2	2.0	6.0	10.0	7.4	18.0
Region 1	2.4	3.3	4.0	8.3	6.7	18.6
Region 2	5.2	5.0	5.0	14.0	15.0	20.0
Region 3	2.5	1.3	3.6	8.3	5.0	15.0
Region 4	3.0	1.7	6.2	10.0	8.0	20.0
Region 5	3.3	3.8	7.0	10.0	9.0	16.0
Region 6	3.0	1.0	7.0	11.0	7.0	17.8
Region 7	4.0	2.2	7.0	10.0	5.2	20.0
Region 8	4.0	1.5	8.0	10.0	5.4	21.8
Region 9	2.3	1.8	6.0	8.0	7.5	13.8
Region 10	4.2	2.1	6.7	10.1	6.9	20.3
Region 11	4.0	.8	7.0	10.0	7.0	14.4
Region 12	3.0	3.8	5.0	10.0	10.0	18.0
Region 13	3.2	1.5	7.0	9.0	3.3	16.0
Region 14	5.0	3.0	4.0	14.3	8.6	20.4

Source: Director and Teacher Surveys

teachers and directors have worked in the center where they are currently employed. The table also displays the typical length in years that these early childhood professionals have spent working in the field. Teachers' length of time working in their center ranges from median of 2.3 years in Region 9 to 5.2 years in Region 2 with a statewide median of 3.2 years. For assistant teachers, the statewide average of 2.0 years in their center compares to a low in Region 11 of less than a year to a high in Region 2 of 5.0 years. Finally, and not surprisingly, directors typically have the lengthiest tenure in their centers. Directors have a statewide average tenure of 6.0 years, but the median years range from 3.6 in Region 3 to 8.0 in Region 8.

In terms of teachers overall experience in the field, Region 9 has a low of 8.0 years for teachers and Region 14 has a high of 14.3 years (compared with 10.0 years statewide average). Experience in the field as a whole is typically briefer for assistant teachers, ranging from a low of 3.3 years (Region 13) to 15.0 years (Region 2). These years compare with a statewide median career length of 7.4 years for assistant teachers. Directors, as would be expected, tend to have relatively lengthy careers in the ECE field, just as they did in their own centers. Typically a child care center director has been in the field for 18.0 years.

Directors in Region 9 have had the shortest careers (13.8 years), while those in Region 8 have been in the field for the longest period of time (21.8 years).

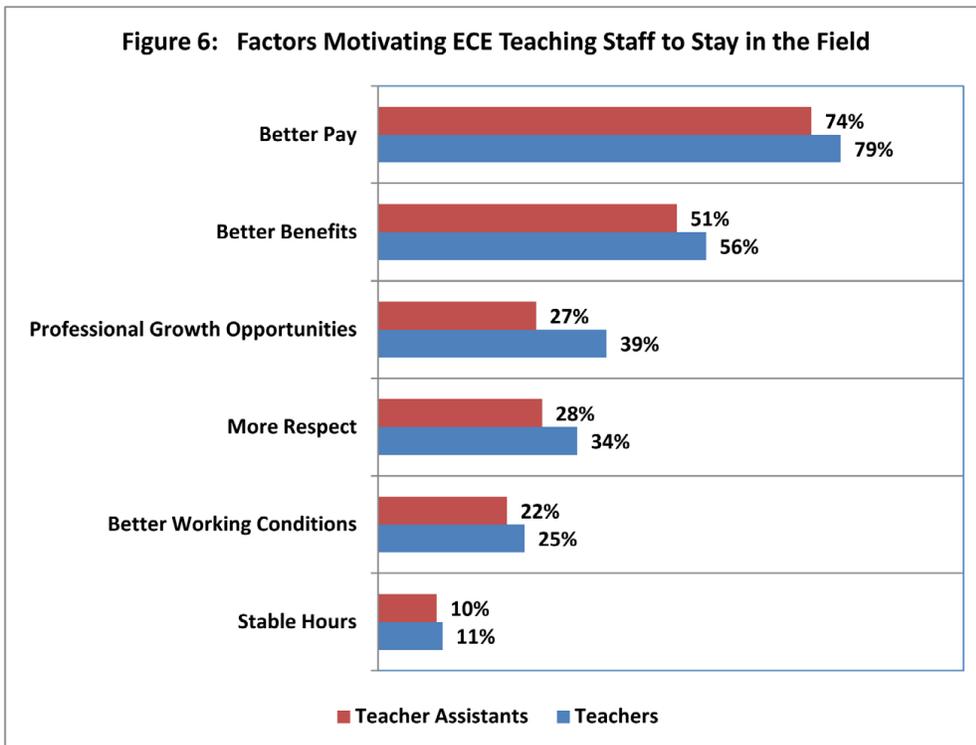
**Workforce Retention.** Survey respondents who indicated that they planned to leave the field within three years were then asked what would make them stay in the field. Directors and teachers provided some similar and some different motivators stemming from the unique roles and responsibilities of each group. Higher earnings were listed by the largest group of directors (33%) as a motivator to stay in the field. See **Table 18**. Likewise, more benefits was also a concern of many directors (25%) while fewer problems with money for the center was also listed by 20% of directors as a way to keep them in the field. The remaining items suggest that one in five of those directors intending to leave the field within the next three years might be deterred from doing so if there were better professional growth opportunities and an easier mechanism for finding substitute teachers. More administrative help and the availability of more qualified teachers might also deter some directors withdrawal from the early childhood field. Despite these factors, it is important to note that almost half of the directors (48%) who are planning to leave the field in the next few years said nothing would stop them from doing this, as they are planning on retiring.

Motivator	Percent Naming this motivator
More pay	33
More benefits	25
Fewer money problems for center	20
Professional growth opportunities	19
Finding substitutes	19
More administrative help	16
Finding qualified teachers	15
Working fewer hours	14
Better working conditions	13

Source: Director Surveys

Some motivators noted by directors were also identified as important factors for the teaching staff planning to leave the field in the next three years. Strategies that might help them stay in the field included higher pay, which was listed as the top motivator with 79% of teachers and 74% of assistant teachers naming this factor. See **Figure 6**. Better benefits were listed by 56% of teachers and 51% of assistant teachers as important for their remaining in the early care and education field. Professional growth opportunities (39%) and more respect (34%) were also named by teachers as important

motivators. Teacher assistants mirrored teachers in identifying these two factors as well although with not quite the same frequency. Finally, having better working conditions was also identified by about one in four teaching staff considering leaving as something that might make them stay.



## Conclusion



Remarkable progress has been made in the education of the early care and education workforce in North Carolina in the last ten years. In the most recent period covered in this report, 2011-2013, the profession continues to show slow, but steady progress. With a significant percent of center directors holding a two year degree or higher (76%) has come some salary gains in some employment settings, though overall the increase continues to fall far short of public school teacher salaries and in general has not kept up with inflation. Similarly, teachers have also increased their education levels (52% of teaching staff with degrees), although they are not seeing the same increase in compensation. Regardless, early care and education providers are feeling the rewards of the field and remaining in their chosen profession (18 years for directors, 10 years for teachers, and 7 years for assistant teachers).

Centers seem to be doing their share for advancing employees by providing supports and services to their staff. Maintaining or increasing employees' wages and health insurance coverage remains a challenge for all small businesses in this state and elsewhere, and in this respect the centers in North Carolina profiled in this report are no exception. However, what does distinguish North Carolina's early care and education sector is notable expansions in the range of employment benefits provided to teaching staff in recent years. Three distinct types of improvements stand out:

- expanding the use of some HR practices and policies such as formal orientation programs and the institution of standardized job descriptions and personnel policies that hold the promise of making employees' work lives more rational and predictable;
- increasing and broadening support for employee career development and recognition of teachers as educational professionals through targeted benefits such as paid breaks, time off for training, and payment for preparation and planning time;
- providing in-kind support in the form of free or reduced rate child care services for employees, many of whom are the heads of struggling young families faced with their own need for safe, affordable, quality child care.

These particular benefits come at some cost to employers and are not reflected in the actual paychecks that their employees receive. However, they do represent rational human resource investments that will pay dividends in the short



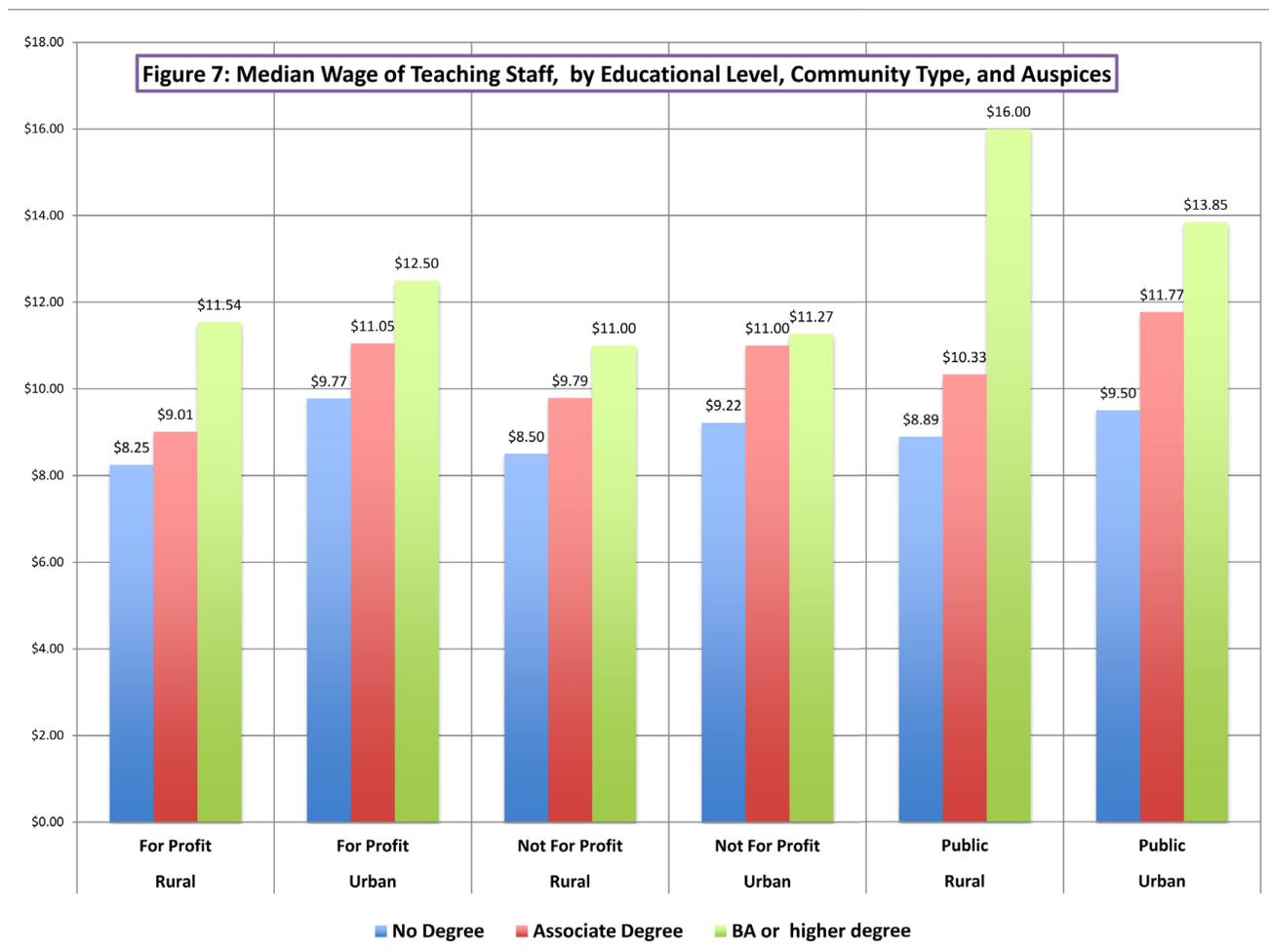
and long term. Such investments are likely to have a near term impact on the lives of their employees, enabling them to advance careers as educational professionals. They may help promote a healthier work-family balance, and enrich the lives of their children. To the extent that such benefits encourage stability in the workforce, and reduce employee turnover, they will affect employer viability and capacity to provide quality services to the larger community.

Although the educational profile of teaching staff and directors has not changed much in the last two years, the 2013 workforce reflects a substantial improvement over the situation a decade ago when only 5% of the teaching staff had at least a bachelor's degree with an

ECE/CD emphasis. By 2013 that percentage had almost tripled. Similarly only 11% of teachers had an AA degree in ECE/CD in 2003, while 20% had this degree in 2013. Over the same period, the percentage of directors with a bachelor's degree or more in ECE/CD more than doubled from 10% to 21%.

Despite the fact that there have not been widespread gains in the material rewards for ECE teachers overall, significant sectors within the profession have sought and received more education and been rewarded with more compensation. Many more teachers continue to seek additional educational experiences and credentials even as they remain actively engaged in the workforce and providing service to North Carolina's young children.

For these individual teachers, these educational gains have translated into increased wages and career mobility, and the positive relationship between more education and higher wages has been demonstrated across the state in all employment sectors and communities. See **Figure 7**. However the net impact on teachers' wages varies substantially depending on where a teacher lives and works. Although these gains have been real and widespread they have been uneven. It is important to remember that the sector with the greatest gain and the steepest link between education



and compensation-- teaching staff in rural public sector settings--represents only 5 percent of the workforce or fewer than 1,425 teachers out of an estimated 26,400 across the state's varied communities and work settings. Nonetheless, the progress of teachers in this sector and the potential gains associated with increases in education stand out as an example to which the rest of North Carolina's early childhood workforce can aspire.

State policymakers, funders and workforce initiatives can take some pride in the positive changes they have helped forge for the workforce. The NC Pre-K program continues to drive substantial increases in the educational level and compensation profile for teachers of young children as well as the proportion of children who benefit from being in more highly rated (i.e., 5-star) settings. Although only about one-quarter of centers in the state are involved in the NC Pre-K system, as this program expands broadly, it has the promise of promoting a more supportive environment for professional advancement of the early childhood workforce and across the state. Over one-third (36%) of the centers in rural counties have NC Pre-K classrooms, greater than the percentage in urban communities. The fact that this program can develop in challenging communities is a hopeful development. This increases the confidence of all stakeholders that North Carolina can continue to build on its successes as the state continues working on the perennial challenges facing its early care and education programs and personnel.

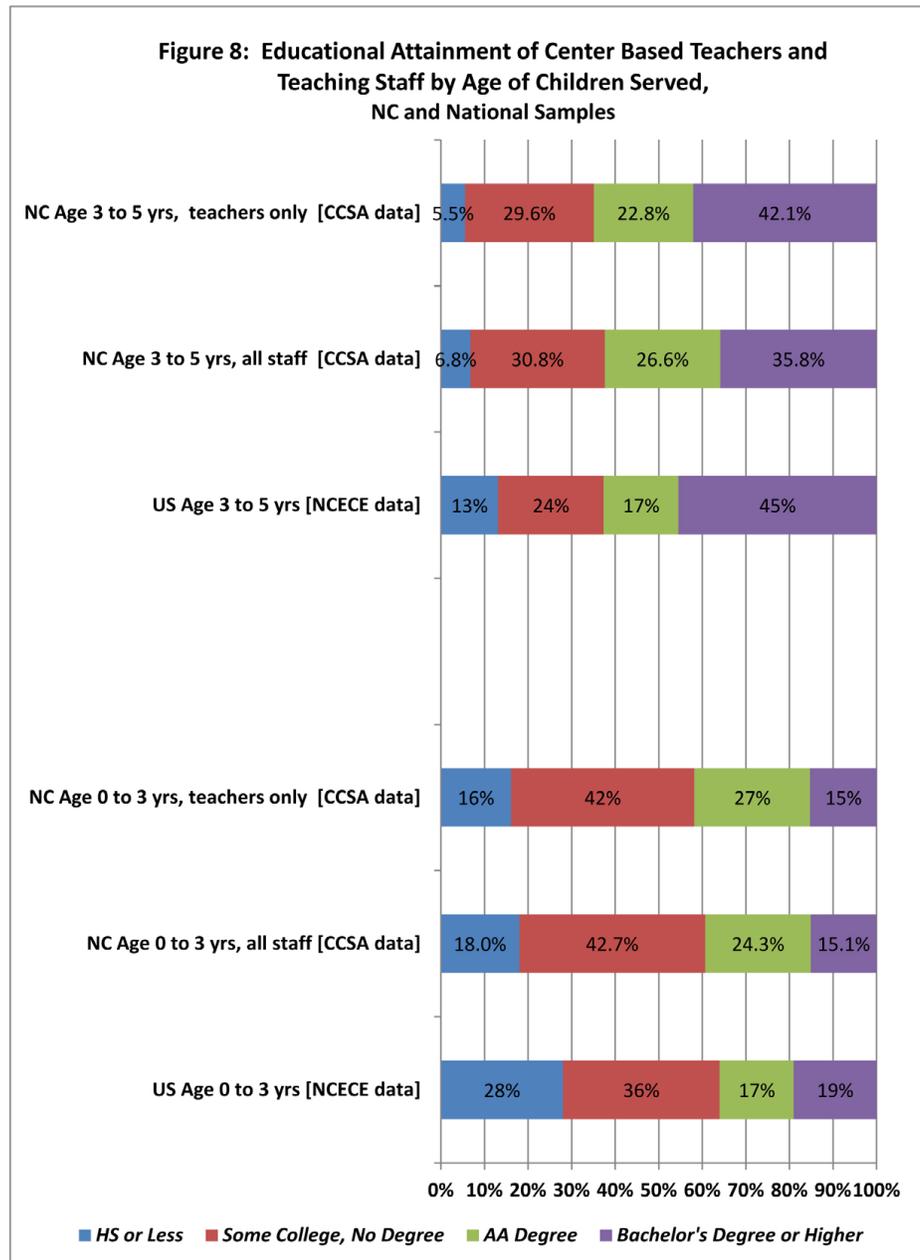
It should be a source of pride for North Carolina that the educational profile of early childhood educators working with infants and toddlers as well as those in the preschool years compares favorably with national benchmarks [See

**Figure 8].** Only 7% of NC teaching staff working with preschoolers lack any college courses, while almost double that percentage (13%) was found in a national sample study.<sup>6</sup> Similarly although the national study revealed that 28% of infant/toddler teachers have not had any college courses, in North Carolina, the comparable figure is only 18%. North Carolina also mirrors the same relationship between education and compensation as has been observed nationally, [See **Figure 9**] but lags behind the nation somewhat in terms of compensation for teachers with a bachelor's degree or higher.

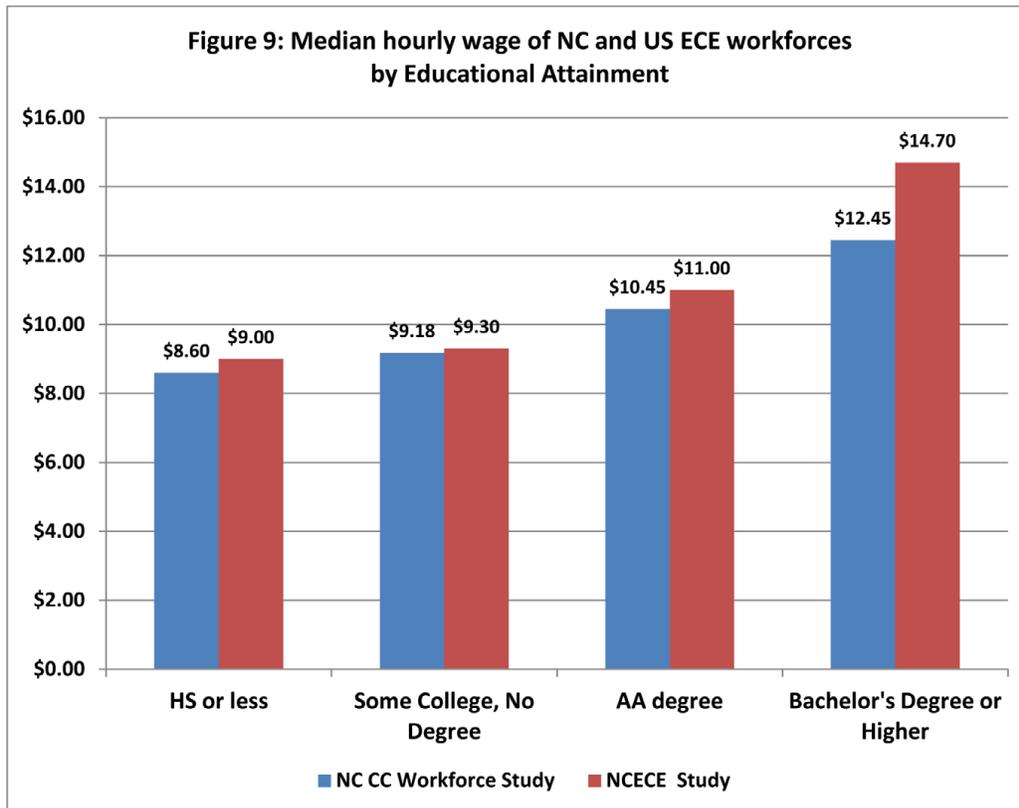
Despite some encouraging trends observed in our last (2012) report, the early care and education workforce in North Carolina has not experienced improvements in the salaries of the highest paid assistant teachers, teachers and directors since 2011. Further, this appears to be part of a long-term trend in stagnation of wages characteristic not only in this sector, but more broadly for workers in North Carolina and in the US as a whole. Given these challenging times it should be no surprise that the use of public assistance at some point over the past three years (42% of teachers, 40% of teacher assistants) continues to remain high.

The lack of health insurance portends a potential for significant financial difficulties for many North Carolina ECE providers and their families. Over a third (35%) of teachers and 31% of assistant teachers reported having no health insurance coverage from any source and the number of ECE employers offering insurance is low and may be shrinking.

The teaching staff in single site for-profit centers and not-for-profit programs sponsored by faith communities (which together comprise a substantial majority of ECE employers) fare worst in this regard with only 19% and 43% respectively providing any support for health insurance for their employees. It is too soon to know how much the availability of federally subsidized health insurance coverage under the Affordable Care Act will help the currently uninsured segment of the ECE workforce. Certainly, the lack of Medicaid expansion in North Carolina, rapid changes in the state's health insurance markets, and controversies surrounding health reform make it unlikely that any new publicly sponsored programs will be developed to resolve health insurance coverage deficits for that segment of the ECE workforce whose family incomes may be too low to qualify for Affordable Care Act subsidies.



<sup>6</sup> NCECE Project Team. Number and Characteristics of Early Care and Education (ECE) Teachers and Caregivers: Initial Findings from the National Survey of Early Care and Education (NCECE) NCECE Research Brief OPRE Report #2013-38. Washington DC: OPRE, Administration for Children and Families, US Dept of Health and Human Services.



North Carolina has developed a variety of community supports for the early care and education workforce which have become important and popular features of the early childhood delivery system. These programs operate both at the center and community level and seek not only to improve the quality of the early care and education workforce but also to enhance the retention of teaching staff by linking compensation to education. Forty-three percent (43%) of center teachers and assistant teachers receive or have received a salary supplement funded by Smart Start. Likewise, nearly a quarter of teachers and assistant teachers (22%) have received T.E.A.C.H. Early Childhood® scholarships. Both of these initiatives specifically address the issue of high turnover and raise compensation. Providers who take advantage of these projects have shown an increase in their commitment to remaining in their programs for a period of time. Turnover of staff in NC centers has remained at similar levels and patterns as those observed in 2011, but lower than it was a decade ago.



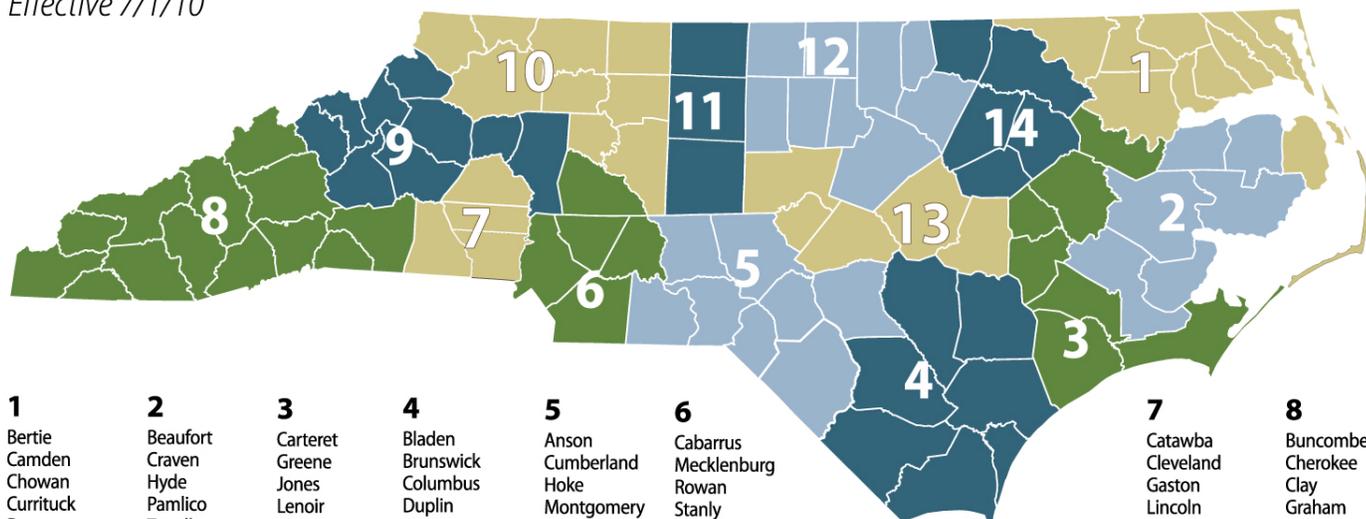
Overall, North Carolina has remained stagnant or suffered losses in the typical wages paid assistant teachers, teachers and directors over the last decade. Despite this, center based staff have been working in their programs about the same length of time as they were in 2011, but this remains at a higher level than was the case a decade ago. The constant challenge of supporting workforce professional development while raising wages and lowering turnover is clearly at play across North Carolina. Early childhood programs and the workforce clearly face some significant challenges. Without some new and targeted investments, North Carolina's gains over the last ten years may have peaked and may actually decline as the rest of the economy improves. The availability of better paying jobs in the coming years may actually draw away those in the workforce that have become better educated, because wages in early childhood programs have not kept up. At this point, however, North Carolina can remain cautiously optimistic that the early care and education workforce will continue to demonstrate resilience in advancing their profession and their dedication to the cause of North Carolina's young children.



## Appendix A

### North Carolina Regional CCR&R System - 14 Region System

Effective 7/1/10



#### 1

Bertie  
Camden  
Chowan  
Currituck  
Dare  
Gates  
Hertford  
Northampton  
Pasquotank  
Perquimans

#### 2

Beaufort  
Craven  
Hyde  
Pamlico  
Tyrrell  
Washington

#### 3

Carteret  
Greene  
Jones  
Lenoir  
Martin  
Onslow  
Pitt

#### 4

Bladen  
Brunswick  
Columbus  
Duplin  
New Hanover  
Pender  
Sampson

#### 5

Anson  
Cumberland  
Hoke  
Montgomery  
Moore  
Richmond  
Robeson  
Scotland

#### 6

Cabarrus  
Mecklenburg  
Rowan  
Stanly  
Union

#### 7

Catawba  
Cleveland  
Gaston  
Lincoln

#### 8

Buncombe  
Cherokee  
Clay  
Graham  
Haywood  
Henderson  
Jackson  
Macon  
Madison  
Polk  
Rutherford  
Swain  
Transylvania

#### 9

Alexander  
Avery  
Burke  
Caldwell  
Iredell  
McDowell  
Mitchell  
Watauga  
Yancey

#### 10

Alleghany  
Ashe  
Davidson  
Davie  
Forsyth  
Stokes  
Surry  
Wilkes  
Yadkin

#### 11

Guilford  
Randolph  
Rockingham

#### 12

Alamance  
Caswell  
Durham  
Franklin  
Granville  
Orange  
Person  
Vance  
Wake

#### 13

Chatham  
Harnett  
Johnston  
Lee  
Wayne

#### 14

Edgecombe  
Halifax  
Nash  
Warren  
Wilson

#### Regional Lead Agencies

- Region 1: Albemarle Smart Start Partnership, Inc. (Pasquotank County)
- Region 2: Craven Smart Start, Inc.
- Region 3: Martin-Pitt Partnership for Children, Inc.
- Region 4: Southeastern CCR&R (Columbus County)
- Region 5: Cumberland County Partnership for Children
- Region 6: Child Care Resources Inc. (Mecklenburg County)
- Region 7: Child Care Connections of Cleveland County
- Region 8: Southwestern Child Development Commission, (Jackson County)
- Region 9: Iredell County Partnership for Young Children
- Region 10: Work Family Resource Center, Inc. (Forsyth County)
- Region 11: Guilford Child Development (Guilford County)
- Region 12: Child Care Services Association (Orange County)
- Region 13: Child Care Networks, Inc. (Chatham County)
- Region 14: Down East Partnership for Children (Edgecombe County)

## Appendix B

### Survey Methods and Response Rates

**Survey instruments.** The written and online versions of the questionnaires used in this survey were based on the forms for child care center directors, and teachers previously created and used by the authors of this study. The questionnaires were modified to include currently relevant and time-sensitive items. There were 2 separate instruments: (1) a director's survey which was intended for directors of early care and education programs; (2) a teaching staff survey which was provided to teachers and teachers' assistants in those programs whose directors participated in the study. There was no family child care provider survey this year.

**Sampling Strategy.** Licensed child care centers selected for survey participation were drawn from March 2013 regulatory data of the North Carolina Division of Child Development and Early Education. At that time, several types of programs were excluded from the sampling frame that was constructed for the study. Those programs that served only school-age children or that provided care *only during the summer months* were excluded. It should be noted that unlicensed, public pre-k programs (and hence are not included in the licensure files) are excluded from this study. Unlike the 2011 study, no licensed family child care homes were included.

The total population of programs was sorted by location in each of the 14 multi-county Child Care Resource and Referral (CCR&R) Regions. Each region was further divided according to its star rating (five categories) and size of program as measured by numbers of children aged 5 and under enrolled in the program (five categories). Each program within each cell was then assigned a random number and sorted by that number. Within each region the first 25% of each region's centers were randomly selected to mirror the star ratings and size categories of the overall population of child care programs in each region. This process yielded a total 1007 centers selected to be surveyed. The goal was to obtain data from 70% of the centers.

A new feature of the workforce study introduced in 2013 involved initiating the capacity to conduct longitudinal studies in the future through the establishment of a special panel of centers. This panel consists of a subset of centers from which data has been and will continue to be collected over several years. In order to construct this panel, all centers which had responded to CCSA workforce surveys in both 2011 and in 2012 were identified along with an additional random sample of centers represented in the 2012 survey only were included in the group of centers invited to participate in the 2013. These cases were then substituted for the first randomly drawn cases in each of the 14 regions. No separate analyses are reported using the 2013 longitudinal panel separately, but a similar design has been incorporated into the planned 2014 survey currently underway. Additional information about the sampling design is available upon request.

**Survey Implementation Processes.** To begin the study, all centers with a valid email address on file with the Division of Child Development and Early Education were sent an online survey uniquely linked to their email address. Several reminder emails were sent and phone calls were made to remind center directors to check their emails and respond to the surveys. For programs with no email addresses and for those programs who failed to respond after numerous attempts through email, phone calls were made in an attempt to conduct the surveys over the phone.

Following numerous phone attempts, non-responding programs were sent a survey in the mail. Center packets included a cover letter, questionnaire and postage-paid return envelope for the director; cover letter, questionnaire and postage-paid return envelope for each teacher/assistant teacher, and raffle tickets and small thank you gifts for the director and teachers.

For programs in which the director had completed the survey either online or by phone, packets were sent that included a cover letter for the director and a small thank you gift. Also included were enough surveys for each teacher and assistant teacher, postage-paid return envelopes, raffle tickets and small gifts.

To ensure a high survey response rate, repeated email reminders, phone calls and mailings were made to child care centers to remind and assist participants in responding. When requested, mailings were faxed to programs. Staff also asked each participating program to confirm the number of full- and part-time teachers and assistant teachers who were included in ratios for children birth to five. This number was used to help estimate the teachers' participation rate.

At the end of the survey process it was found that of the 1007 cases originally selected only 81 programs had to be replaced with newly targeted ones for various reasons including closure, inability to reach an informant and in a few cases explicit refusal to participate in the survey. Each was replaced with the next highest randomly numbered case in the same region with a similar star rating and size category. Both replacement cases and panel cases are documented on the subsequent files.

**Survey Response Results.** Surveys of samples of early childhood program directors and of teachers working in those programs were conducted over the period from September 2013 through December 2013. Useable surveys were obtained from 718 directors, which constitutes 71% of a stratified random sample (N = 1007). This number constitutes about 17% of the total population of all directors in the state.

The director survey data were examined for differential response of directors of centers by region, by type of center, by size and by star rating, and panel vs. other sample segment. Weights were constructed and applied which would allow generalization of the sample data up to the level of the 4,023 centers in the population and on the sampling frame. The results of the application of these weights are available upon request and suggest that the weighting strategy employed proved to be quite effective in representing the population and major sub-populations of analytic significance.

The second stage of the survey process involved surveying teaching staff and built upon the first phase. Participating directors, i.e., those who had answered their own survey, were asked to distribute surveys to their teaching staff, and useable surveys were returned by 2,708 teaching staff out of an estimated 5,910 (46%). This level of response is somewhat below the 50% target level. This estimate of a denominator of eligible was based on directors' reports of their own eligible teaching staff (i.e., teacher/assistant teacher) either in their survey or on the basis of a supplementary phone call made to confirm the appropriate number of teaching staff eligible to return the survey.

The eligible statewide population of teaching staff is not currently known with complete precision; and estimates of that population in centers were calculated by several different methods using director survey data and data from the sampling frame, to arrive at a teaching staff population size. The smallest estimate, 26,399, is likely the most accurate because it is based upon and extrapolated from the most extensive and timely data much of which was collected from directors through a separate phone survey asking for these staffing numbers directly.

Centers also varied in the extent to which their teaching staff responded to the survey. Teaching staff participation rates at the 718 centers varied from no teaching staff responses (0%) to all teaching staff responding with an average rate of 42%. When teaching staff participation rates were calculated separately by region, by center size, and by star ratings, no average rates in these various cells fell below 33% and several were above 50%. When teaching staff participation rates were calculated at the center level, it was found that 28% of centers whose directors had responded to the first survey, yielded no teaching staff responses. On the other hand, 46% of the center directors had more than half of their teaching staff represented in their teacher surveys, and 18% of the participating centers had at least 80% of their own teaching staff represented by survey responses. (About 4% of centers yielded more teacher surveys than the director had initially reported as having on staff; these were considered to be 100% responses.) Not surprisingly, teacher participation rates are related to a number of characteristics of the center and this variation in response level was taken into account in establishing and adjusting the teacher level analysis weights described below.



**Survey Weighting Strategies.** Program and teacher level data have been weighted to reflect the statewide populations of centers and teaching staff respectively, adjusting for known individual, program and community characteristics associated with response bias. Percentages and other values reported in tables and graphs incorporate these sampling weights, permitting extrapolation to the population of centers (N=4,023) and an estimated teaching staff population of 26,400.

In general, sampling weights reflected the inverse of the probability of selection and response for each of the strata used in the sampling design described above. First stage corrections were made for size, star rating and type of organization factor. When this process was completed each of these samples was rescaled to reflect the geographic distribution of cases in the 14 Child Care Resource and Referral regions. A similar process was employed for the first stage of teaching staff sample which was again adjusted to reflect an estimate of within center response level, and geographic rescaling was performed to match the percentage distribution of the aggregate numbers of teaching staff as provided on the sampling frame across the 14 Child Care Resource and Referral regions.

As part of the data analysis process, cases in each of the datasets were weighted in a way as to create more unbiased population estimates. Weighting schemes incorporated variables that affected probabilities of selection of a case as well as the other variables used in sample stratification which were empirically tested and found to display a distribution that approximated the actual probability of survey response for either a director or a teaching staff member. Samples were then tested to assure that the totals in the up-weighted datasets summed to approximate the estimated statewide totals

and reasonably reflected regional percentage estimates. Results for center level and teaching staff level responses are available upon request.

It should be noted that the weighting process used in the report quite effectively adjusts for biases in estimates of measures of central tendency, e.g., means and medians that might be due to differential response, but does not address the precision of those estimates, i.e., such measures of dispersion as variance, standard error, standard deviation. This situation is not problematic for this summary report, because no confidence intervals were reported, nor were formal tests of statistical significance reported or conducted. However, with further analysis such estimates could be calculated from the datasets by using more intensive statistical procedures. Further details are available upon request.

**Starting/Highest Paid Teacher and Director Salary Calculations.** Regional estimates of wage progression of teachers and assistant teachers were difficult to construct because initial and peak wages were often missing in the directors' surveys. Fortunately, wage data reported in the teacher survey were available to fill in some of the gaps. If initial wages were missing from the director's survey, available corresponding data from teachers' surveys were used for initial wages, if the teacher or assistant teacher had been employed in the center for two years or less. Similarly, if the highest wage for a teacher or assistant was missing from the director survey, the highest actual wage reported by any of the appropriate staff who had been working at the center for 10 or more years was used to impute the highest wage. Through this process, reasonably sound estimates of the wage progression could be constructed for each of the regions and the median wage estimates displayed some upward progression between initial and highest wage and were reasonably close to the corresponding estimates in the 2012 survey.

In more than 30% of the cases, the value of hourly wage of the director was missing in the original directors' survey. This is not surprising as many of these directors are small business operators and have difficulty expressing their income in hourly wage or annual salary terms. A wage estimate quantity was calculated using the multiple imputation procedure in SPSS which uses information from non-missing cases to create plausible values for missing cases. A regression equation was used to identify statistically significant correlates of known values of the hourly wage. These variables were then employed in the multiple imputation procedure. This process was replicated five times and the median of those five replications was used as the directors hourly wage estimate. The following dichotomous or continuous variables were included in the imputation process: size, quality rating, auspices, and NC Pre-K program participation, length of tenure, education, and reported family income of the director, as well as the starting wages of teachers in the program as reported by the director. Imputed values were flagged and overall estimates with and without imputed variables were compared and found to be similar.

In various places within the report, organizational categories were collapsed for simplification. A three-fold categorization of organizational structure was employed in several analyses of the survey data: For-profit centers, non-profit centers and public sponsored programs. NC Pre-K programs (formerly More at Four) are represented among all three organizational structures. However, it is important to recall that public pre-k programs that are not licensed were not included as part of this study. Appendix C contains more information on definitions.

**Weighted estimates of the number of teaching staff in NC Centers.** Given the uncertainty about statewide denominators it is difficult to directly assess a response rate for part- and full-time teachers and assistants in North Carolina child care centers. This study used the number 26,400 as the basis for weighting up teacher survey respondents. Survey responses were weighted up to reflect the probability of selection and response at the center level to reflect the known number of licensed centers in North Carolina at the time the sampling frame was constructed in 2013.

The differences in the percentage distribution of teaching staff by part-or full-time status in the teacher survey population and in the director survey estimation is worth noting. This comparison suggests that the teacher survey responses as currently weighted are more highly reflective of a core child care center workforce, i.e., full time staff, particularly of full time teaching staff, than of part time staff. Clearly the survey estimates are likely to be less representative of part-time teachers and assistants.

Differences in response patterns for full-time versus part-time workers should not be surprising, and may have occurred for a number of reasons. Directors may have been less likely to distribute surveys to some part-time workers because they may not have considered them to be members of their regular staff, or because some of part time workers enumerated earlier may actually have been volunteers or temporary workers. Conversely, some part-time workers who actually received surveys may have been less likely to respond than their full-time counterparts.

What might be deemed the core full-time center teaching staff workforce in North Carolina in 2013 likely consists of more than 20,000 individuals who identify themselves as teachers or teacher assistants and who regularly work at a single center for 32 hours per week or more. Given our weighting scheme, over 80% of “teaching staff” survey data reported here effectively comes from this group of full-time teaching staff (i.e., those typically working 32+ hours per week) and of this group, almost three quarters would be teachers, almost one-quarter would be teacher assistants, and the remaining small group (less than 5%) would be quite heterogeneous including a wide variety ranging from therapeutic professionals and/or vaguely defined ancillary personnel all of whom spend some time with young children. Of the survey respondents, 80% of teachers report that they typically work 32+ hours per week in the surveyed center, while only 61% of assistant teachers do so. Similarly, full time teacher survey respondent are almost 80% of all full time teaching staff responding, while part-time teachers are only 38% of the part-time respondents.



The actual size of the part-time segment teaching staff workforce in North Carolina’s centers is quite difficult to specify, and varies somewhat depending on how “part-time” and how “intermittent” these workers are at a given center, and how the center and the individual workers define themselves, and whether or not they can be unduplicated from survey or license data if they work at several centers. Although it is more difficult to assess the number of different persons falling in the category of “part-time”, these types of individuals are probably less likely than their full time counterparts to be included in the dataset generated from the teacher surveys and reported on here. The extent to which these part-time workers have jobs in other settings, consider their child care work a “second job,” or actually identify with or aspire to careers in child development is not well understood. Although it would be possible to perform a separate analysis of part time teaching staff, it would be difficult to draw meaningful conclusions from examination of an extrapolation from the small number of cases available from the teaching staff survey database.

## Appendix C

### Definitions of key variables

**Child Care Centers-** an arrangement where, at any one time, there are three or more preschool-age children or nine or more school-age children receiving care.(from Child Care Center Handbook produced by the Division of Child Development and Early Education, 2009) Centers may be found in community buildings, churches or synagogues, buildings built specifically for child care, in private homes or in public buildings.

**For-profit centers-**Child care centers ranging from single-classroom facilities consisting of a multi-age group of children and one teacher/director to multi-site facilities enrolling hundreds of children and employing a director, assistant director, lead teachers and assistant teachers that are operated as sole proprietorships, partnerships, or corporations with the goal of making a profit for their owner or stockholders.

**Non-profit centers-**Child care centers operated by a board of directors that govern the program, that is mission-driven and not operated with a goal of making a profit. These programs may be sponsored by community or faith-based organizations. Includes programs with a Notice of Compliance (GS-110) as well as centers with a star-rated license.

**Public (sponsored programs)-**Head Start sites, public school sponsored and other publicly funded programs.

**Unlicensed Pre-K programs** - any child care program or arrangement consisting of two or more separate components, each of which operates for four hours or less per day with different children attending each component.([http://ncchildcare.dhhs.state.nc.us/providers/pv\\_sn2\\_rcc.asp](http://ncchildcare.dhhs.state.nc.us/providers/pv_sn2_rcc.asp))

**NC Pre-K-**a community-based education initiative designed to prepare at-risk four-year-olds in North Carolina for success in school. Pre-kindergarten classrooms operate for the school day and school year and are provided in diverse settings such as public and private schools, Head Start centers, and community-based child care centers and preschools. ([http://ncchildcare.dhhs.state.nc.us/providers/pv\\_providres.asp](http://ncchildcare.dhhs.state.nc.us/providers/pv_providres.asp))

**People of color-**People who self identify as Asian, African-American, bi-racial, or American Indian/Native American.

**Median**-one of three measures of central tendency; the number representing the case which has equal cases above and below it. Throughout this report, “average” is used interchangeably with “median”.

**Degree**-either an associate degree, bachelor’s degree, master’s degree or Ph.D. from an institute of higher learning.

**Degree in ECE**-an associate, bachelor’s or master’s degree or Ph.D. in either early childhood education or child development.

**Degree in other**-an associate, bachelor’s or master’s degree or Ph.D. in a field of study other than early childhood education or child development.

**Star rated license system**-North Carolina’s Star Rated License System gives stars to child care programs based on how well they are doing in providing quality child care. Child Care programs receive a rating of one to five stars. A rating of one star means that a child care program meets North Carolina’s minimum licensing standards for child care. Programs that choose to voluntarily meet higher standards can apply for a two to five star license.([http://ncchildcare.dhhs.state.nc.us/parents/pr\\_sn2\\_slfaq.asp](http://ncchildcare.dhhs.state.nc.us/parents/pr_sn2_slfaq.asp))

**T.E.A.C.H. Early Childhood®**- This program provides comprehensive educational scholarships that help pay the cost of tuition, books, and travel, and may insure paid release time, require compensation incentives and encourage retention for child care providers working on a credential or degree in early childhood education or child development.([www.childcareservices.org](http://www.childcareservices.org))

**Child Care WAGES® Project**- This program provides salary supplements that are linked to the education level of participants and are paid every six months as long as participants remain in child care program.([www.childcareservices.org](http://www.childcareservices.org))

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For more information about the 2013 Statewide Workforce Survey, please contact the Research Department at Child Care Services Association, (919) 967-3272 or [research@childcareservices.org](mailto:research@childcareservices.org).

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