



Early Childhood Teacher Education Policies

Research Review and State Trends

CEELO Policy Report

April 2016

Center on Enhancing Early Learning Outcomes (CEELO)

Author

Diane Schilder, Ed.D., Principal Research Scientist, Education Development Center, Inc. dschilder@edc.org

Acknowledgments

Staff from the **Connecticut Office of Early Childhood** requested the policy report to inform the development of the state's plan to improve the quality of the early childhood workforce in the state. **Deborah Adams, Laura Dunleavy, Harriet Feldlaufer, Margaret Gustafson, and Nordia Savage** collaborated on the development of a CEELo survey and regularly served as thought-partners in the design and development of the paper.

W. Steven Barnett and **Marcy Whitebook** reviewed a working draft of the paper and provided insightful comments and recommendations. Their careful review and input greatly strengthened the paper, and their time and effort devoted to improving the quality of the workforce is greatly appreciated.

Early childhood specialists in state departments of education completed the NIEER Yearbook Survey, and a sample of 15 additional specialists completed a CEELo Survey. Moreover, five state specialists participated in interviews. Their time and commitment to sharing insights and addressing issues that are pressing not only in their own state but also across the nation is highly valuable.

Louise Stoney and **Debi Mathias**, national experts working with states to improve the quality of early care and education, each participated in the study by completing interviews and sharing documents and materials. They generously gave their time to support the paper.

Copyright © 2016 Center on Enhancing Early Learning Outcomes (CEELO). Permission is granted to reprint this material if you acknowledge CEELo and the authors of the item. For more information, call the Communications contact at (732) 993-8051, or visit CEELo at CEELO.org.

Suggested Citation:

Schilder, D. (2016, April). *Early childhood teacher education policies: Research review and state trends* (Policy Report). New Brunswick, NJ: Center on Enhancing Early Learning Outcomes.

Abstract

The 2015 Institute of Medicine and National Research Council's *Transforming the Workforce* report highlights the state's role in creating a pathway for early care and education (ECE) teachers to acquire the needed education and professional development to meet the demands of their important role. Research shows that ECE teachers' skills and competencies are predictive of child outcomes and that education with specialization in early childhood development is correlated with child outcomes.

This paper provides policymakers with a review of published research on ECE workforce education and credentials as well as research on the current status of ECE wages, recruitment and retention challenges, and promising practices. It summarizes trends in state requirements regarding ECE teachers with bachelor's degrees and specialized certification, licensure, or endorsements of pre-K teachers. Examples of state funding sources and strategies to increase the percentage of ECE teachers with bachelor's degrees and ECE credentials are included. Moreover, the paper describes promising practices employed by some states designed to retain educated and credentialed ECE teachers. The paper concludes with recommended actions and strategies, based on research and state suggestions, regarding approaches that states can use to recruit and retain teachers with bachelor's degrees and ECE credentials.

*Young children's learning and development
depend on the educational qualifications of
their teachers.*



Contents

Abstract.....3

Acronyms and Terms6

Introduction7

Section 1. Review of Research9

Section 2. State Trends and Promising Practices.....19

Section 3: Conclusion and Recommendations26

References29

**Appendix A: Institute of Medicine and National Research
Council ECE Workforce Recommendations.....33**

Appendix B: Data Tables34

Appendix C: CEELo 2015 Survey Instrument40

Acronyms and Terms

AA: An associate in arts degree typically requires successful completion of a minimum of 60 college-level credit hours.

BA: A bachelor of arts degree typically requires successful completion of a minimum of 120 college-level credit hours.

CCDBG: Child Care and Development Block Grant—the federal program authorizing child care subsidies and state child care quality improvement activities.

CDA: Child development associate’s credential—a widely recognized credential in early childhood education (ECE). Typically, a CDA requires approximately 16 credential hours compared with 45 to 60 for an ECE credential.

CEELO: Center on Enhancing Early Learning Outcomes.

ECE: Early care and education.

ECE credential: States use a variety of terms and processes to ensure teachers working in early childhood settings have specialized ECE education. Terms used include credential, license, certificate, and endorsement. We use the term credential as the broad term and, in the text, note the differences in terms and intensity of training required across states within this broad category.

GED: General Educational Development—a test taken by individuals who did not graduate from high school, which measures proficiency in key subjects. Most states grant individuals who successfully pass the GED a certificate of high school equivalency.

HS: High school completion or successful completion of a GED.

IOM & NRC: Institute of Medicine and National Research Council.

K–12: Kindergarten through twelfth grade.

NIEER: National Institute for Early Education Research.

QRIS: Quality Rating and Improvement Systems.

RTT-ELC: Race to the Top—Early Learning Challenge—a federal initiative to improve early learning systems.

SEA: State education agency.

T.E.A.C.H.: Teacher Education and Compensation Helps Early Childhood® Project—provides educational scholarships to early care professionals and those who perform specialized functions in the early care system.

INTRODUCTION

Research demonstrates and recent studies continue to report that a bachelor's degree with specialized training in early childhood education is associated with high-quality early care and education (ECE) (Austin et al., 2015; Institute of Medicine [IOM] & National Research Council [NRC], 2015; Whitebook, 2003). Despite some evidence that the relationship between teacher education and child outcomes is correlational (Bowman, 2011), the IOM & NRC (2015) recently recommended that all lead teachers of young children from infancy through grade 3 have a minimum of a bachelor's degree with specialized knowledge of ECE and associated skills and competencies. This recommendation was based in part on the principle that holding lower educational expectations for early childhood educators than for elementary school teachers would perpetuate the perception that educating children before Kindergarten requires less expertise than educating elementary school-aged children.

Studies suggest that a comprehensive professional development system for pre-service and in-service teachers is important to provide the knowledge, skills, and supports for ECE teachers to effectively tailor instructions to children's development (IOM & NRC, 2015; Fuller, 2011; Gilliam & Marchesseault, 2005). Recent reports recommend that states take an active role in creating more cohesive and aligned systems of professional development to ensure teachers have the education, skills, and competencies to provide high-quality ECE (IOM & NRC, 2015). Yet, one major challenge faced in recruiting, educating, and retaining ECE teachers with a combination of bachelor's degrees and ECE skills and competencies is the very low compensation paid to ECE teachers relative to their counterparts working in public schools (Whitebook, 2014). In 2014, ECE teachers with a bachelor's degree received compensation that was 30 percent lower than for teachers working in public schools (Whitebook, Phillips, & Howes, 2014). State policymakers have posed questions about promising approaches and challenges associated with different policies designed to increase the portion of ECE teachers who have bachelor's degrees and certification. This report is designed to address these questions.

Purpose and Organization of the Report

The purpose of this report is to provide policymakers with the following information:

- A review of published research on ECE workforce education and credentials as well as research on the current status of ECE wages, recruitment and retention challenges, and promising practices
- A summary of trends in state requirements regarding ECE teachers with bachelor's degrees and specialized certification, licensure, or endorsements of pre-K teachers
- Examples of state funding sources and strategies to increase the percentage of ECE teachers with bachelor's degrees and ECE credentials
- Descriptions of promising practices employed by some states designed to retain educated and credentialed ECE teachers
- Recommended actions and strategies, based on research and state suggestions, regarding approaches states can use to recruit and retain teachers with bachelor's degrees and an ECE credential

This paper is organized into three parts. The first examines current research on the topics of education, credentials, wages, and retention. The second presents state requirements regarding teachers with bachelor's degrees and specialized certification, licensure, or endorsements. The third summarizes state strategies for educating and retaining educated, degreed, and credentialed ECE teachers, and presents recommendations.

The report relies on existing research, analysis of existing data, and newly collected data from a convenience sample of states (see Box 1 for more details about the methods). The report focuses on the workforce that serves children from infancy through the age immediately prior to Kindergarten, as many policymakers are grappling with implementing the recommendations of the IOM report that requires a coherent approach for all ECE teachers. Existing data are more readily available on a state-by-state basis for preschoolers than for teachers of younger students. Each section of the report begins with information about all ECE teachers, and then presents information about preschool teachers, and finally presents research—if it is available—about infant and toddler teachers.

Box 1. Methods

For this paper, we (1) reviewed the existing research, (2) performed secondary analysis of National Institute for Early Education Research (NIEER) Yearbook data, (3) surveyed states in the fall of 2015, (4) conducted telephone interviews with a small sample of states, and (5) analyzed state documents.

Review of Existing Research. We reviewed existing research on the ECE workforce and its relationship to observed quality as well as child outcomes. We also reviewed research on teacher retention policies and practices. We focused primarily on research conducted in ECE settings, but included studies regarding teacher retention and compensation conducted in K–12 settings as well. We focused primarily on research conducted within the past decade, but because seminal work on teacher education was conducted in the 1980s, we included those studies that provided foundational findings regarding the relationship between teacher education and desired outcomes.

Secondary Analysis. We focused our secondary analysis of NIEER Yearbook data on two periods of time. We analyzed data from the 2007–08 school year as well as the 2013–14 school year. Data in the Yearbooks were collected primarily through surveys of state preschool administrators, with follow-up interviews and reviews of documents as needed. In the summers of 2008 and 2014, NIEER staff contacted state preschool administrators and asked them to complete a survey asking for information for the most recently completed program year. State administrators were asked to answer questions about each state-funded pre-K program. After the surveys were completed, staff followed up with state administrators to clarify any questions about their responses and major changes from the previous year. Later, respondents were

asked to review and verify all of the data from their state survey, as well as the narrative about their program.[1]

Collection of New Data from a Convenience Sample of States. In fall 2015, in collaboration with the Connecticut Office of Early Childhood, CEELo collected survey data from 15 states regarding workforce requirements. (See Appendix C for the CEELo 2015 Survey instrument). The CEELo Web-based survey was sent to 44 states; a total of 15 states responded but only 12 responded to each question. The responding states represent regions across the United States of differing sizes, levels of funds supporting ECE, and configurations of early childhood programs. Thus, while this is not a comprehensive national picture, it does provide deeper insights into the issues multiple states face. The states are California, Connecticut, Georgia, Illinois, Kansas, Kentucky, Louisiana, Missouri, Nebraska, North Carolina, Rhode Island, South Carolina, Tennessee, Vermont, and Wisconsin.

The quick turnaround timeframe coupled with demanding requirements faced by SEAs resulted in a low response rate. Thus, the convenience sample provides useful illustrations about state actions but is not generalizable. To further elaborate on the information provided by the states, CEELo followed up with five states and two national experts working with states on issues of the ECE workforce to obtain additional information via interviews or Web-based correspondence. These key informants also provided documents and materials that elaborated on the state approach to supporting ECE teachers with degrees and credentials.

[1] For a full explanation of the specific methodology used in collecting all data, please see the Methodology section of the 2015 report online at http://www.nieer.org/sites/nieer/files/yearbook2015_methodology.pdf

1. REVIEW OF RESEARCH

Research conducted over the past three decades demonstrates the importance of teacher degrees and credentials in supporting the development and education of young children from infancy through the early grades (Austin et al., 2015; Barnett, 2003; Barnett, 2004; IOM & NRC, 2015; & Whitebook, 2003). A body of research exists that describes the challenges of recruiting, preparing, and retaining an educated and credentialed ECE workforce (IOM & NRC, 2015; Whitebook, 2014). Strategies and promising policies adopted by ECE and K–12 policymakers alike point to possible solutions to enhance the recruitment and retention of educated and credentialed ECE teachers. This section presents a snapshot of the research on these topics.

A Bachelor's Degree with Specialized Knowledge of ECE Is Important

Research demonstrates that bachelor's degrees are associated with high-quality ECE (Austin et al., 2015; IOM & NRC, 2015; Whitebook, 2003). Based on this research, the IOM & NRC (2015) recently recommended that lead teachers of young children from infancy through third grade have at least a bachelor's degree and specialized training in ECE. Moreover, requiring ECE teachers to have at least a bachelor's degree and specialized training in ECE are 2 of 10 national benchmarks for quality according to the NIEER *State of Preschool Yearbook* (Barnett, Carolan, Squires, Clarke Brown, & Horowitz, 2015). These indicators are included because research has shown the following:

- Classrooms in which teachers have at least a bachelor's degree are more likely to be of higher quality, including richer language environments, enhanced literacy environments, and better teacher–child interactions (Barnett, 2003; IOM & NRC, 2015).
- Teachers with at least a bachelor's degree are more likely to aptly approach instruction—they are more sensitive, less punitive, and more engaged (IOM & NRC, 2015; Whitebook, 2003).
- Specialized training at the bachelor's degree level or above makes a difference in the quality of teacher–child interactions in family child care settings (Fuligni, Howes, Lara-Cinisomo, & Karoly, 2009; IOM & NRC, 2015), and research has shown that ECE programs that demonstrate strong child outcomes employ teachers who have a bachelor's degree with ECE focus (Minervino, 2013).

Early et al. (2007) suggest that teacher quality is complex, and level of education alone might not be sufficient to consistently predict quality. Early and others note, however, that a comprehensive professional development system for pre-service and in-service teachers could deliver the knowledge, skills, and supports for teachers to provide a high-quality early education experience that can positively impact children's development (Pianta, Barnett, Burchinal, Thornburg, 2009; Pianta et al., 2005). Moreover, the Society for Research in Child Development (SRCD) also reports that:

Teacher qualifications such as higher educational attainment and background, certification in early childhood, or higher than average compensation for the field are features of many early education programs that have had strong effects. Yet here too, research indicates that qualifications alone do not ensure greater gains for children during the course of the preschool years. To promote stronger outcomes, preschool programs should be characterized by both structural features of quality and ongoing supports to teachers to assure that the immediate experiences of children, those provided through activities and interactions, are rich in content and stimulation, while also being emotionally supportive (Yoshikawa et al., 2013, p. 6).

Consistent with these recommendations, Fuligni et al. (2009) report that “any policy that not only mandates [bachelor’s] degrees, but provides tangible support for obtaining the [bachelor’s degree] in a child development major will raise the quality of the pool of educators serving the low income children who can most benefit from a high-quality early childhood education” (Discussion ¶10). The IOM & NRC (2015) report echoes this by recommending the development and enhancement of interdisciplinary higher education programs for ECE professionals, including practice-based and supervised learning opportunities.

Young children’s learning and development depend on the educational qualifications of their teachers. Specialized education in ECE or child development is an important component of quality early education (Barnett et al., 2015; IOM & NRC, 2015). When teachers have specialized training in ECE, they are better able to support children’s healthy development and school readiness (Bueno, Darling-Hammond, & Gonzales, 2010). Research by Barnett reveals that specialized training in early childhood development is linked with improved classroom quality and child outcomes (Barnett, 2003).

Based on the body of existing research, the National Association for the Education of Young Children (NAEYC) recommends that all ECE teachers have a bachelor’s degree with specialized training in ECE or child development so that they are aware of the unique needs and learning trajectories of young children (Hyson, 2003). Teacher behavior is one of the major influences on early childhood development (Shonkoff & Phillips, 2000), and teachers with specialized knowledge of early childhood development are more likely to have positive relationships with young children to support development of social and academic skills (Pianta, 1997; Reninger & Sigel, 2006). Moreover, the IOM & NRC (2015) recommend that ECE teachers be taught instructional and assessment strategies that are informed by research on child development and early learning and state that “educators need to be taught learning trajectories specific to particular content areas, including the content. . . and how to provide experiences integrating this content into curricula and teaching practices” (p. 386).

*Young children’s
learning and
development depend
on the educational
qualifications of their
teachers.*

The IOM & NRC (2015) recommend that policymakers undertake a number of actions to ensure that ECE teachers have the knowledge, skills, and competencies needed to support young children’s education and development. Specifically, they recommend that policymakers—

“develop and implement comprehensive pathways and multiyear timelines at the individual, institutional, and policy levels for transitioning to a minimum bachelor’s degree qualification requirement, with specialized knowledge and competencies, for all lead educators’ working with children from birth through age 8” (p. 7).

The IOM & NRC also recommend that policymakers “develop incentives and dedicate resources from existing and new funding streams and technical assistance programs to support individual, institutional, systems, and policy pathways for meeting this requirement in states and local communities” (p. 514). While the IOM & NRC (2015) issued a number of other recommendations to strengthen the ECE workforce, those noted above are directly applicable to policymakers focused on increasing the education and credentials of the ECE workforce.

ECE Degree and Credential Requirements and Attainment

Degree and credential requirements differ substantially across early childhood programs, such as pre-K, Head Start, and child care. Moreover, degree attainment differs substantially based on formal care and on the age of the children served. The different requirements create challenges for state-level policymakers charged with development of a cohesive professional development system for all ECE teachers (IOM & NRC, 2015).

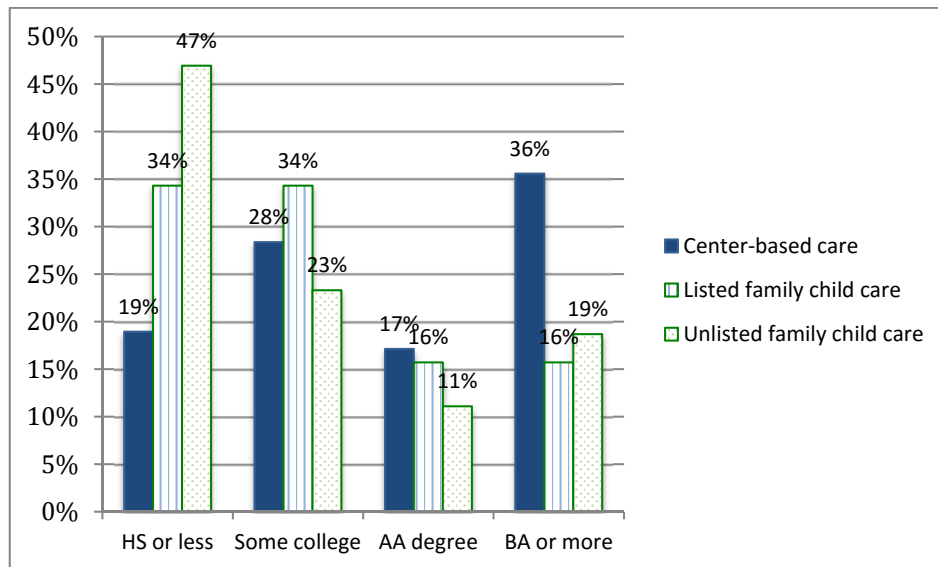
“Educators need to be taught learning trajectories specific to particular content areas, including the content . . . and how to provide experiences integrating this content into curricula and teaching practices.”

(IOM & NRC, 2015, p. 386)

Head Start now requires that at least 50 percent of lead teachers have a bachelor’s degree with specialized training in early childhood, but these requirements are still not as rigorous as most state pre-K programs and child care. Moreover, standards for education and training of ECE teachers are still more variable than those for elementary teachers (IOM & NRC, 2015; Whitebook, 2014).

A recent national study on the characteristics of the ECE workforce reported that center-based classroom teachers and caregivers had attained higher levels of education than family child care providers (Brandon et al., 2013). This study examined center-based providers, family child care providers who are listed in state registries, and unlisted family child care providers—those who are not participating in the regulated system of child care. As Chart 1 shows, higher percentages of center-based teachers had completed at least a four-year degree than family child care providers, but variation exists among family child care providers that are listed in the regulated system and those that are unlisted (Brandon et al., 2013; Maroto & Brandon, 2012).

Chart 1. Degree attainment by type of child care

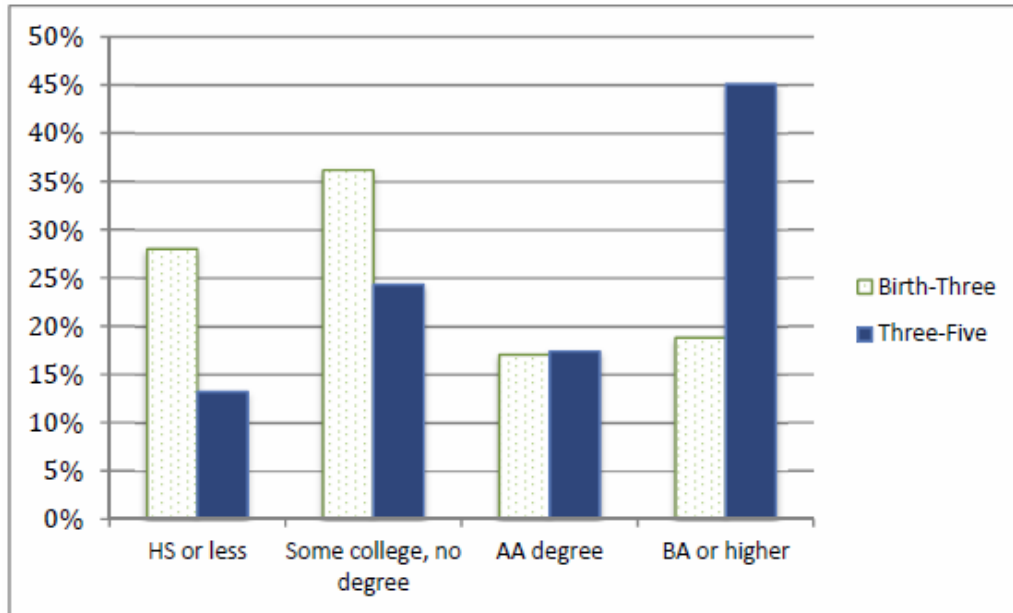


Data source: Brandon et al., 2013

Education and credential requirements articulated in state and federal policies tend to be higher based on age range of those in attendance and grade level. Pre-K programs often require higher levels of education and associated

credentials in settings for children prior to Kindergarten entry than programs for infants and toddlers. Consistent with this, degree and credential attainment differ substantially by the age of the children served. Chart 2 presents data from the national ECE workforce study by age of children served. This chart shows that center-based teachers working with preschool-aged children (three through five years old who have not yet begun Kindergarten) have higher degree attainment than teachers working with children who are infants and toddlers (Brandon et al., 2013). Because family child care providers serve mixed-age groups, data on degrees by ages of children served are only available for center-based providers.

Chart 2. Degree attainment by age of children served in center-based care



Data source: Brandon et al., 2013

The Role of Institutions of Higher Education and Challenges Associated with Existing Capacity

To meet the IOM & NRC (2015) recommendation of ensuring ECE teachers have attained degrees and credentials, it is important to recruit not only already degreed teachers but to also provide educational opportunities to non-degreed teachers. It is important to consider the role of higher education institutions in meeting challenges and providing coursework and degrees for new and veteran teachers alike.

The majority of ECE teachers seeking and obtaining degrees and credentials in the area of early childhood attend two-year institutions rather than four-year institutions (IOM & NRC, 2015; Whitebook et al., 2012). Yet, a number of different challenges exist related to higher education institutions' capacity to provide high-quality coursework for ECE educators. See Box 2 for details about the findings of recent work on teacher preparation programs from the Center for the Study of Child Care Employment.

The first challenge is that substantial variability exists among the required coursework within and across associate's and bachelor's degrees in early childhood. Maxwell and colleagues (2006) and Whitebook and colleagues (2012)

found that depending upon the state and institution, teachers seeking degrees in early childhood might or might not be required to take the coursework covering the following topics: assessment and observation; classroom and behavioral management; cultural and linguistic responsiveness; family engagement; literacy, language, and numeracy instructional strategies; social and emotional development; and physical health and motor development (IOM & NRC, 2015; Maxwell et al., 2006; Whitebook et al., 2012). Thus, one consideration in ensuring institutions of higher education have the capacity to offer degrees and specialized training is to create comparability within and across institutions of higher education regarding ECE coursework and degrees (IOM & NRC, 2015).

Box 2. Center for the Study of Child Care Employment Inventories

The Center for the Study of Child Care Employment, housed in the Institute for Research on Labor and Employment at the University of California, Berkeley, is developing a series of briefs on the extent to which state ECE teacher preparation is currently integrated across the birth-to-age-eight continuum, and on variations in field-based practice opportunities for teachers of young children. The briefs highlight findings from inventories conducted in seven states: California, Indiana, Nebraska, New Hampshire, New Jersey, New York, and Rhode Island. Key findings are as follows:

- In each state studied, public and private institutions of higher education offered a complex array of early childhood degree programs. Moreover, no consistent educational floor was reported by the states for ECE providers working with children aged birth to five. In other words, there are no consistent minimal levels of education required. With the exception of state public pre-K programs, across states it was rare for teachers of preschool-aged children to be individually licensed or certified.
- States reported that programs with different funding streams and located in different settings typically require different standards, resulting in multiple sets of qualifications for ECE teachers working with children from birth to five, even for those working with children of the same age.
- No state reported that the primary goal of their ECE higher education program was to prepare students for teaching roles in an ECE setting only. Instead, states reported that the primary goals were to prepare students for teaching or administrative roles in ECE and elementary education settings, for the roles of early interventionists or early childhood special educators, or for multiple roles involving young children, working in many types of settings.
- The titles of degree programs often do not carry a clear indication of their content and purpose. Degree programs with the same name often do not

share the same primary goal, while programs with differing names may share the same primary goal.

There is no widely implemented standard of field experience, such as student teaching, for the preparation of teachers working with children from birth to age five. In all states, the majority of ECE degree programs that are not linked to certification, including most associate degree programs, require students to complete a practicum rather than student teaching. A practicum is an experience that is short in duration, associated with a course, often focused on a particular skill or population of children, and supervised by a faculty member or mentor. In contrast, student teaching is full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching, and supervision by a cooperating teacher.

The authors note that in the absence of well-articulated statewide certification standards that apply to ECE teachers in all types of ECE programs and for those working with all age groups of children, institutions of higher education have primarily focused on preschool-aged children in public settings. Authors report that creating a unified approach to the preparation of educators working with children from birth through age eight will require transforming policies and practices in the following ways:

- Revising current systems of teacher and administrator certification
- Aligning content with evidence to strengthen content for infants and toddlers and field-based learning experiences
- Identifying leadership and committing resources to strengthen early childhood higher education

See full report at Whitebook, M. & Austin, L. J. E. (2015). *Early childhood higher education: Taking stock across the states*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. <http://www.irle.berkeley.edu/cscce/wp-content/uploads/2015/11/Cross-state-Brief-Final.pdf>

A second challenge is that the current educational attainment of the existing ECE workforce varies substantially, with a large percentage of lead ECE teachers reporting that they have a high school education or less. A teacher seeking to complete a GED—a necessary step in completing future coursework—has different educational needs than a teacher seeking to complete a child development associate’s (CDA) credential, associate’s degree, or bachelor’s degree (IOM & NRC, 2015).

Providing coaching and mentoring within the working day can both provide hands on experience and address the challenge of lack of hands-on field experience for ECE teachers.
(Whitebook et al., 2009)

Third, for early childhood practitioners to acquire an understanding of development and learning across the age spectrum, “it is critically important that they engage in varied field-based learning opportunities” (Whitebook & Austin, 2015, p. 12) similar to the student teaching experiences required by K–12 teacher preparation programs. Most ECE degree programs that require field-based experience focus on preschool or school-based children, and most do not offer any experience related to infants and toddlers (Whitebook & Austin, 2015). Thus, despite the IOM and NRC’s recommendations to create pathways for ECE teachers working with children across the age continuum, higher education institutions do not currently offer tailored experiences to those working with very young children.

Fourth, a majority of ECE teachers seeking degrees work full-time (typically in low-wage child care positions) and are financially responsible for family members—characteristics that place ECE teachers at greater risk of dropping out of school and not reaching their educational goals (Brock, 2010). Full-time work creates challenges in scheduling courses at times and in places that are logistically feasible for ECE teachers. This challenge could be addressed through a concerted effort to provide courses that are designed to meet the scheduling needs of full-time workers (Whitebook et al., 2012). Providing coaching and mentoring within the working day can both provide hands-on experience and address the challenge of lack of hands-on field experience for ECE teachers (Whitebook, Gomby, Bellm, Sakai, & Kipnis, 2009).

Finally, “a sizeable proportion [of ECE teachers] speaks English as a second language and faces substantial challenges in pursuing college-level work in English. For these reasons, early care and education students, like all nontraditional students, are at greater risk of leaving school or failing to attain a degree” (Sakai, Kipnis, Whitebook, & Schaack, 2014, ¶4). This issue is exacerbated by the fact that a large percentage of young children attending ECE are dual-language learners, and to support young children’s language and socio-emotional development and to effectively engage caregivers, it is important for ECE teachers to be able to communicate with families.

Thus, states seeking policy options to ensure ECE teachers have access to higher education should consider the challenges faced by the existing institutions as well as teachers. The IOM and NRC (2015) recommend that states craft policies to create a more coherent pathway for teachers to obtain high-quality coursework and degrees. Specifically, the IOM and NRC (2015) recommend the development and enhancement of interdisciplinary higher education programs for ECE professionals, including practice-based and supervised learning opportunities (Whitebook & Austin, 2015).

Research on ECE Wages and Retention

The federal government (U.S. Department of Education, 2015), national organizations (Barnett, 2003, 2004; Whitebook, 2015), early childhood membership organizations (NAEYC, n.d.), and researchers have identified a relationship among teacher pay, desired program, and child outcomes—teachers who are compensated at higher rates provide higher quality care that leads to improved child outcomes. Yet, Whitebook et al. (2014) report that 25 years after the seminal study documenting the very low wages of ECE workers, the occupation remains one of the lowest compensated of those documented by the Bureau of Labor Statistics even among those with relatively high levels of educational attainment. Moreover, child care workers have experienced no real wage growth since 1997, despite increasing requirements regarding education and training.

Studies report that the issue of low wages is the primary barrier that exists to reaching the IOM and NRC’s 2015 recommendation of ensuring an educated ECE workforce. Currently, the ECE workforce consists primarily of low-income women who are often paid minimum wage for their work (Whitebook et al., 2014). The low wages make it difficult to attract degreed teachers, encourage ECE teachers to obtain degrees, and retain teachers when they earn degrees.

Researchers have identified a relationship among teacher pay, desired program, and child outcomes—teachers who are compensated at higher rates provide higher quality care that leads to improved child outcomes.

Researchers examining K–12 education policies report that policymakers have a number of options for compensating teachers at a level that will lead to retention and improved performance (Heneman & Kimball, 2008). Specifically, policymakers have developed innovative pay practices that include increasing pay, providing financial incentives for teachers who have attained additional credentials or degrees, and compensating teachers differently when they are working in traditionally hard-to-fill positions (Heneman & Kimball, 2008). As policymakers consider options for increasing ECE retention, this body of research could inform the development of strategies for early education that have worked in K–12 education, and address the many challenges in the field.

One challenge in addressing ECE turnover differs from K–12 education—families pay the vast majority of ECE costs whereas K–12 education is largely publicly funded (Fraga, Dobbins, & McCready, 2015). In most states, credentialed teachers working in K–12 education are paid based on salary schedules that are negotiated between teacher unions and public schools, and public tax dollars pay teacher salaries (Hanushek, 2007). In contrast, families pay for up to 60 percent of child care costs, and increasing ECE teachers’ wages can lead to increased costs for families unless other sources of funding are used (Fraga, Dobbins, & McCready).

A second challenge in addressing ECE that differs from K–12 is that the largest public sources of ECE funding are offered primarily to families that meet eligibility criteria and are not open to all age-eligible children. These programs include the Child Care Development Block Grants (funded at \$5.3 billion in fiscal year 2014), state-funded pre-K (\$5.5 billion in school year 2013–14), Head Start (\$7.8 billion in fiscal year 2014), and Preschool Special Education federal funds (approximately \$355 million in fiscal year 2014) (Barnett et al., 2015; Schilder, forthcoming; U.S. Department of Education, n.d.; U.S. Department of Health and Human Services (DHHS), 2015; DHHS, n.d.). Other sources of funding for state-funded pre-K as well as programs for infants and

toddlers include state general revenue dollars, school funding formulas, local taxes, and tax credits. However, these sources are not stable and do not cover the costs for all age-eligible children to attend (Mead, 2006). In contrast, states and communities support over 80 percent of the costs of K–12, and the support is more stable and extensive than pre-K funding, and does not restrict access based on child or family eligibility criteria (U.S. Department of Education, 2005).

To address the challenge of recruiting and retaining a high-quality workforce, the newly created Preschool Development and Expansion grant program, authorized by Congress in 2014, offers grant funding to states that offer high-quality pre-K and requires that participating states provide pay parity to preschool teachers (U.S. Department of Education, 2014). However, the \$237 million in federal funding allocated for this program in fiscal year 2015 is dwarfed by overall ECE spending (U.S. Department of Education, 2015). And, although the requirement that preschool teachers are paid at parity with K–12 teachers is based on a body of research suggesting the benefits of paying ECE teachers at a rate that is similar to their peers, the reauthorization of the program in late 2015 discontinued this requirement (Barnett, 2003; Cassidy, Lower, Kintner-Duffy, Hegde, & Shim, 2011; Mims, Scott-little, Lower, Cassidy, & Hestenes, 2008; U.S. Government Printing Office, 2015).

The challenge of ensuring the retention of educated ECE teachers is even more of a concern for infant and toddler teachers and caregivers. According to the U.S. Bureau of Labor Statistics (2015), the average compensation for child care workers is only \$10.44 per hour. According to Whitebook et al. (2014), teachers with bachelor's degrees who are working with infants and toddlers earn less than half of the wages earned by females working in the civilian labor market earn or by elementary school teachers. It is, therefore, not surprising that staff turnover among ECE teachers is high. Moreover, many states lack requirements for formal education and workforce training for infant and toddler teachers. As such, opportunities for professional preparation designed to support teachers working in infant and toddler classrooms need to be integrated into existing professional development systems and requirements. According to NAEYC, one important way to retain highly qualified early childhood teachers is to ensure teachers are adequately and appropriately compensated (NAEYC, n.d.).

States and communities seeking solutions to the challenges of financing high-quality ECE that is affordable to families have explored a number of different options, including supporting shared-services agreements, supporting blended funding models and approaches, and systematically reviewing existing policies to identify inefficiencies (Center for the Study of Child Care Employment, 2009; Stoney, 2013; Save the Children Action Network, 2015).

A shared-services approach in ECE is a contractual mechanism that allows small ECE providers to engage in joint purchasing, shared staffing, centralized administration, or some combination of these that creates efficiencies so providers can devote financial resources to improved compensation or professional development activities (Stoney, 2014). Providers that blend funds from child care, Head Start, pre-K, and other public and private sources can maximize funds (Stoney, 2013). Although no quantitative research studies have been conducted to date, anecdotal evidence suggests that by pooling services, some providers have increased ECE teacher compensation (See Box 3).

Box 3. Two examples of shared-services models reporting improvements in compensation and professional development for ECE teachers

Example 1. Sound Child Care Solutions

Sound Child Care Solutions (SCCS) is a consortium of seven center licenses (28 classrooms in multiple locations) with centralized administration. The shared functions include financial management (e.g., payroll, benefits, and some billing), bulk purchasing of goods and services, a shared professional development system, accreditation support, mentoring, staff recruitment, and a substitute pool.

By sharing administrative, human resource, accounting, and professional development costs and functions, SCCS reports that they “spend more of every dollar on child care programming.” According to SCCS, “The consortium model helps free Center Directors from administrative requirements, and allows them to focus on their educational vision, and work more closely with teachers and families.” SCCS reports investing in professional development, with a strong focus on building pedagogical leadership centered on teaching and learning processes. Staff receive mentorship training geared towards guiding teaching staff to become thoughtful and intentional in their practice. Stoney reports that since engaging in a shared-services model, SCCS has reduced unwanted teacher turnover, increased compensation for teachers, and provided teachers with professional development opportunities (L. Stoney, personal communication, January 14, 2016).

See <http://soundchildcare.org/>

Example 2. Chambliss Child Care

Chambliss Child Care is a large child care center serving 300 children that also provides management services to five off-site centers and five off-site classrooms. All centers are at the highest tier of quality based on the Tennessee QRIS, meet Head Start Program Performance Standards, and have demonstrated positive child assessment outcomes.

The shared central services include enrollment/billing (dual enrollment of Head Start children), financial management (payroll, benefits), human resources and staff recruitment, food program administration, fund development, professional development, child assessment, maintenance, and recruitment and oversight of volunteers. Chambliss reports that staff in smaller sites that are currently participating in the shared-services agreements now have better wages, health and retirement benefits, and access to a career ladder.

See <http://www.del.wa.gov/publications/elac-qris/docs/SharedServicesWebinarPresentation.pdf>

<http://citiesspeak.org/tag/chambliss-center-for-children/>

Stoney (2015), Save the Children Action Network (2015), and the Center for the Study of Child Care Employment (2009) each reports strategies that have been implemented at the state and local levels that are designed to address retention of educated ECE teachers. Stoney (2015) and Save the Children Action Network (2015) recommend strategies to access additional funds that could be used to increase wages, provide employment benefits, and offset the costs of professional development. One strategy is to ensure that ECE providers have full enrollment rather than operating at less than full capacity, and using the funds that are collected through full enrollment for improved teacher compensation. Other strategies include supporting the blending of child care subsidy, Head Start, pre-K, and private funding, and offering incentives through QRIS via tiered reimbursement or one-time bonuses (Save the Children Action Network, 2015; Stoney, 2015). Moreover, states report that these strategies *can* be used by providers to maximize per-child funding which, in turn, could be used by providers to increase teacher compensation, benefits, and professional development opportunities. Yet, additional research is needed to document how these strategies translate into increased compensation and benefits.

Research has also shown the importance of addressing the workforce climate by addressing ratios—providing appropriate leadership and administrative support (Whitebook et al., 2009). Additionally, research has shown that compensation, professional development, and workforce climate affect quality and, in turn, child outcomes (Cost Quality Outcomes Study Team, 1995). In sum, existing research suggests that to address the issue of retaining an educated ECE workforce that can provide high-quality supports for young children, funds are needed to improve the ECE climate, improve ECE teacher compensation, and support professional development (see Box 4). Adequate funding for ECE not only addresses teacher education issues, but it is necessary to support sufficient structural variables of quality that lead to improved workforce climate and improved child outcomes.

Adequate funding for ECE not only addresses teacher education issues, but it is necessary to support sufficient structural variables of quality that lead to improved workforce climate and improved child outcomes.

Box 4. State actions designed to retain educated ECE teachers

A number of states have developed plans to retain educated ECE teachers. Some are taking actions to work with community-based and school-based pre-K programs to ensure that teachers receive pay parity with public school K–12 teachers. Reviews of state documents and key informant interviews, as well as reviews of existing research, reveal a range of approaches:

Develop a strategic financial plan.

- A southern state with a limited tax base contracted with a finance expert to facilitate state ECE stakeholder meetings designed to lead to a detailed plan that provides a list of all of the existing ECE funding streams, laws, and regulations that could be leveraged for ECE teacher pay. Through this process, the state identified all possible funding streams, regulatory barriers that would need to be changed to more efficiently leverage funds, and implementation challenges that would need to be overcome. The analysis revealed that under-enrollment and low subsidy rates limit the ability of providers to generate enough revenue to compensate well-prepared teachers in child care.
- Another state has a tax credit for teachers and directors that specifically focuses on wages linked to professional education. Recently, a different state passed a law to also offer teacher and director tax credits. In one locality, the policy analysis revealed that child care subsidies were too low to support quality ECE and led to a recommended increase in the child care subsidy (Stoney, 2013). However,

cost efficiencies identified through this type of process do not necessarily lead to cost savings that will be used to enhance staff salaries.

- A state in the Northwest reported using an outside expert to convene a stakeholder group, which reached consensus on an action plan that articulated comprehensive strategies to enhance the quality of ECE, including strategies designed to improve the education levels of the existing workforce. The informant stated that in the absence of an outside expert, the group might have become mired in the details, and she believed each individual would have been more likely to focus solely on the programs he or she oversaw. The stakeholder group developed a comprehensive strategic plan to address issues of state systems capacity as well as quality of ECE overall. The state legislature recently passed legislation that provides funding and support for systems to enhance the overall quality of ECE, including supports for a pathway for ECE teachers seeking degrees and incentives.

Use QRIS to enhance teacher compensation and incentivize acquisition of bachelor's degrees. Some state QRIS are designed with an aim of rewarding programs that have low turnover, well-compensated staff, and links between education and compensation. The additional financial support can provide programs with the ability to cover additional costs associated with increasing their quality ratings, including costs for hiring and adequately compensating well-educated and well-qualified staff and

supporting coursework for existing teachers. Financial resources range across states and can come in the form of grants or bonuses awarded each time a higher quality rating is achieved or a higher reimbursement rate is given to providers serving children whose families receive child care subsidies (Schulman, Mathews, Blank, & Ewen, 2012).

Review language in existing state legislation as well as existing teacher contracts regarding pay schedules.

One state engaged the Office of General Council (OGC) in the state department of education to review contracts and pay schedules, which ultimately led to pay parity between ECE teachers and K–12 teachers. The OGC issued a finding that the current language required “certified teachers” to receive compensation per the pay schedules. Since this state requires pre-K teachers to be certified, the OGC ruled that there is a legal requirement that they receive the same compensation as K–12 teachers. Currently, the funding for pay parity

in this state is from a legislatively authorized set-aside that must be reauthorized every two years.

Use school funding formulas instead of set-asides. Some states are using existing school funding formulas and others are using set-asides to support pre-K. The use of school funding formulas is described in existing reports (Bornfreund, Cook, Lieberman, & Loewenberg, 2015; Stone, 2008;) as a strategy to secure sustainable funding for pre-K, but not all agree that this is the best approach (Regenstein, 2015). Nonetheless, research suggests this can be a sustainable strategy, and two state stakeholders recommended the use of funding formulas. One state leader noted that in the short term, this source would be slightly lower than the set-aside, but if pre-K were funded at the same rate as K–12 without funding caps, it would have the advantage of providing stable funding.

2. STATE TRENDS AND PROMISING PRACTICES

To determine the current status of degreed and credentialed teachers, CEELO staff performed secondary analysis of existing data and collected new data from a small sample of states. Existing state-by-state data on the degrees and credentials of teachers is limited to data about pre-K teachers. In this section, we begin by providing information from secondary analysis of 2008 and 2014 data from the NIEER *State of Preschool Yearbook* (focusing on pre-K for 3 and 4 year olds). To supplement this information, CEELO surveyed state specialists in 2015 and conducted interviews to obtain information about policies geared toward pre-K as well as infant and toddler teachers. This section summarizes findings from the secondary analysis of NIEER Yearbook data, and follows with findings from the analysis of 2015 CEELO State Survey data, state documents, and key informant interviews.

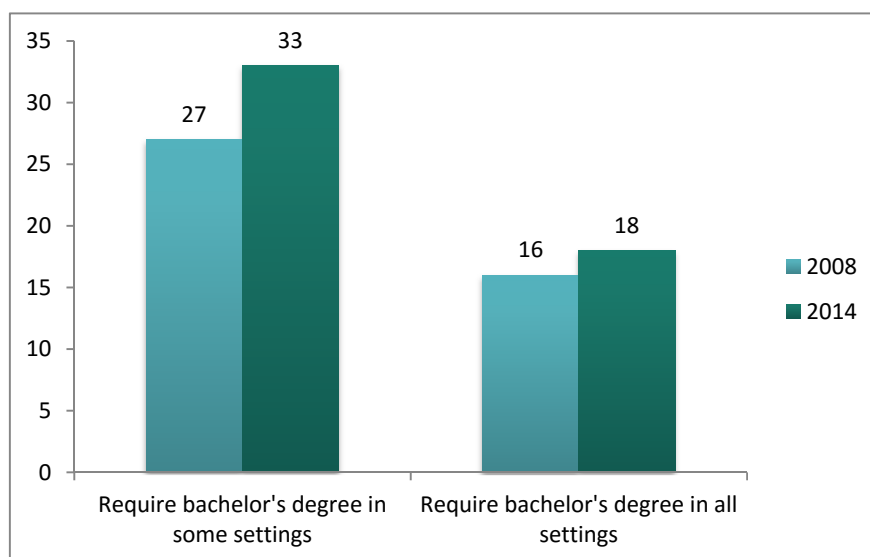
Secondary Analysis of NIEER Yearbook Data: State Policy Regarding Bachelor’s Degrees and ECE Credentials¹ for Pre-K Teachers

Analysis of 2013–14 school-year data published in the NIEER Yearbook reveals that 33 states required a bachelor’s degree for teachers working in a state-funded pre-K program. Secondary analysis of data collected during the 2013–14 and the 2007–08 school years shows the following trends:

¹ The terminology employed across states varies, with some using the term “credential” in the manner that another uses the term “endorsement,” complicating the ability to summarize trends across states. Nonetheless, generally the term “license” refers to a more rigorous set of requirements than an endorsement, as a license requires teachers to complete a state-approved teacher preparation program in early childhood education that includes completion of pedagogy course requirements and a student teaching experience.

- **Increases were reported in the number of states requiring a bachelor's degree in some state-funded pre-K programs.** In the 2013–14 school year, 33 states required a bachelor's degree for at least some state-funded pre-K programs compared with 27 states in the 2007–08 school year. Nonetheless, in the 33 states that required a bachelor's degree, many had different standards for teachers working in public school pre-K programs versus private or community-based programs.
- **Small increases were reported in the number of states requiring a bachelor's degree in public and private pre-K programs.** In the 2013–14 school year, only 21 states required a bachelor's degree for teachers working in both public and private programs, up slightly from the 18 states with this requirement in 2007–08.

Chart 3. Changes in Number of States Requiring Degrees for ECE Teachers, 2008 and 2014



The number of states requiring pre-K teachers to hold a license, credential, or endorsement increased between 2008 and 2014. As of 2014, 39 states required pre-K teachers to have a license, credential, or endorsement in early childhood education, up from 34 in 2008 (see Chart 4).

Although 39 states required pre-K teachers to have a credential, license, or endorsement in ECE in 2014, state policies regarding the nature and type of specialized education and training varied considerably. For example, some states required only a certificate with no bachelor's degree, some required an endorsement, and some required a certain number of college credit hours.

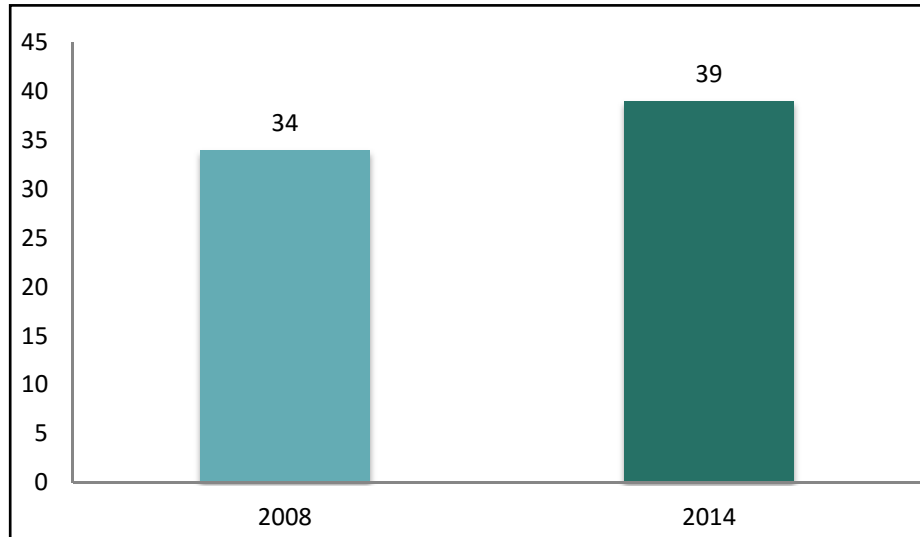
Results from the fall 2015 CEELO Survey of 15 states revealed that a number of states require *both a bachelor's degree and certification or licensure in early childhood education*. Yet, the nature of the license or certification varied as noted below.

Although 39 states required pre-K teachers to have a credential, license, or endorsement in ECE in 2014, state policies regarding the nature and type of specialized education and training varied considerably.

- **Illinois** requires a certification in early childhood development for those teaching infants through third graders.
- **Nevada** allows teachers to hold either a license or endorsement in either birth through Kindergarten or birth through second grade.

- **Tennessee** requires a certification in pre-K through third grade, pre-K through fourth grade, pre-K through Kindergarten, pre-K special education, or pre-K through third grade with a concentration in special education.
- **Wisconsin** requires a license in either early childhood education from birth through age 8 or early childhood education for those working in pre-K through middle school.

Chart 4. Number of States Requiring Endorsements, Licenses, or Certification for Pre-K Teachers, 2008 and 2014



Higher Education Capacity to Meet Teacher Education and Certification Requirements

Limited national data are available on higher education's capacity to provide courses with ECE credentials that would be accessible to ECE teachers seeking bachelor's degrees and certification (Kipnis & Whitebook, 2011). One issue is that states use different definitions, databases, and systems to track teacher education and competencies. As noted in the review of existing research, studies of higher education capacity suggest that a number of challenges exist for states to ensure that institutions of higher education offer courses and credentials to prepare ECE teachers to have the knowledge, skills, and competencies needed to support young children's development (Kipnis, Whitbook, Almaraz, Sakai, & Austin, 2012; IOM & NRC, 2015).

To learn about existing capacity of institutions of higher education among a sample of states, the 2015 CEEL Survey included capacity questions. A total of 15 states responded to the overall survey, but only 12 states responded to questions about the capacity of higher education institutions² in their states to offer coursework and specialized training. Respondents provided answers based on consultation with colleagues, but no independent data were collected to triangulate responses provided by survey recipients.

² Capacity includes the funding, resources, faculty, administrative capacity, accreditation, and classroom and technology resources available to offer coursework and degrees.

Of the respondents, most reported that there was some capacity within their states to offer pre-K teachers courses in early childhood education. Nonetheless, they also reported that the locations and timing of the courses was not sufficient to meet the need of ECE teachers in the workforce and those preparing to become ECE teachers.

- **Early childhood coursework.** Of the 12 states responding to this question, 11 reported that institutions of higher education had mostly or fully sufficient capacity to offer pre-K teachers courses in early childhood education.
- **Courses at locations that pre-K teachers can access.** A total of 9 of the 12 states reported that the courses were offered in locations that ECE teachers could access.
- **Courses at times pre-K teachers can access.** Of the respondents, only 6 of the 12 reported that institutions of higher education had mostly or fully sufficient capacity to offer courses at times pre-K teachers could access.
- **Concentration in early childhood.** Of the 11 states responding to the question about concentration in early childhood, 7 reported that institutions of higher education offered bachelor's degrees with a concentration in early childhood, but 4 states reported that it was sufficient only to meet the needs of some of the teachers in the state. Moreover, 8 reported that there was sufficient capacity to offer an ECE credential, but 4 reported that it was sufficient only to meet the needs of some teachers.
- **Stackable ECE certificate.** Only four states offer "stackable" ECE certificates, which provide a pathway for teachers pursuing education beyond an initial certificate, such as a CDA certificate. The certificates are "stackable" in that they build on one another in a sequential manner and demonstrate deepening levels of learning along the way. The nature of the certificates varies across states, but in some states, courses at participating colleges have the same titles, numbers, descriptions, and student outcomes.
- **Articulation.** Only four states have articulation agreements in place that would allow ECE teachers to easily transfer credit. In the absence of articulation agreements, ECE teachers taking courses at more than a single institution can find that they are no closer to completing a degree despite successfully completing coursework.

Approaches to Increasing Education and Credentials of ECE Teachers

States are adopting a range of policies and practices to increase the education levels and credentials of ECE teachers. See Box 5 for one innovative strategy employed by New Jersey.

An analysis of data provided by 15 states that completed the 2015 CEELo Survey reveals that about half of these states require a bachelor's degree and certification of ECE teachers working in at least some settings.

The most frequent method of ensuring ECE teachers have bachelor's degrees and ECE credentials are as follows:

- **Legislation.** Nine states have legislation requiring a bachelor's degree for ECE teachers working in at least some state-funded settings, and nine states have legislation requiring a license, certificate, or endorsement in ECE for ECE teachers working in at least some state-funded settings.
- **State policy, administrative rule, or regulation.** Five states have state policies, administrative rules, or regulations that require ECE teachers working in some settings to have bachelor's degrees.
- **Incentives encouraging increased education.** Three states reported that they provide incentives as mechanisms for increasing the percentage of teachers with degrees and ECE credentials. Separately (as noted below), a number of states provide scholarships or other incentives as mechanisms of increasing the education levels of teachers already in the ECE workforce.

Box 5. Capacity of institutions of higher education: Lessons learned from New Jersey

One issue related to the capacity of institutions of higher education to offer degrees and credentials is the capacity of the professional development system within a state to provide ongoing in-service supports to ECE teachers. New Jersey offers unique context to explore the issue of pre-K teacher certification and preparation because of the state's Supreme Court decisions, which ruled that the 30 poorest districts in the state were required to create systems of high-quality pre-K for all 3- and 4-year-old children within a relatively short timeframe. In this short period of time, New Jersey created an ECE teacher preparation system. Researchers studying the development of the system noted that coordination of human and financial resources at the state level was necessary to ensure equity and quality of teacher education programs. The following promising characteristics of the New Jersey initiative were reported:

- **The existence of strong leadership in the state.** Researchers found that faculty members in New Jersey were experts in early childhood education, had spent many years working within the K–5 teacher preparation system, and were active members of the state's education association. Thus, a group of

faculty with expertise was available as well as an organization that could help lead and facilitate this process of developing the new credential and system.

- **The initiative received the necessary financial resources.** The state provided one type of grant that was designed to support teachers' preparation and a separate to address issues of capacity that were specifically targeted for the hiring of faculty in areas of need, including early childhood. Therefore, institutions of higher education were able to expand their early childhood faculties and, as a consequence, their capacity to meet the demand for qualified preschool teachers.
- **Attention was paid to the amount and type of funding devoted to the initiative.** Study authors reported that "consideration must be given to the form of the financial support that is provided to teacher preparation programs" (Lobman, Ryan, & McLaughlin, 2005, Discussion ¶17).

Sources: Ackerman, D. (2005); Lobman et al. (2005)

States are also taking a variety of approaches to increasing the education and ECE credentials of teachers already in the workforce.

- **Scholarships.** Of the 15 states that completed the 2015 survey, eight reported offering scholarships to teachers who are pursuing bachelor's degrees. Eight states are offering Teacher Education and Compensation Helps (T.E.A.C.H.) or similar incentives.
- **Financial incentives.** Three states offer financial incentives for teachers with a bachelor's degree. Georgia is offering financial incentives in the form of increased salaries for teachers with bachelor's degrees, and Nebraska offers salaries that are comparable to K–12 teachers for infant and toddler through pre-K teachers.
- **Quality Rating and Improvement Systems (QRIS).** Three states are currently offering incentives through the state's QRIS to increase the number of degreed and credentialed teachers. Moreover, one state has designed a locally driven QRIS and some localities use the QRIS to offer incentives.

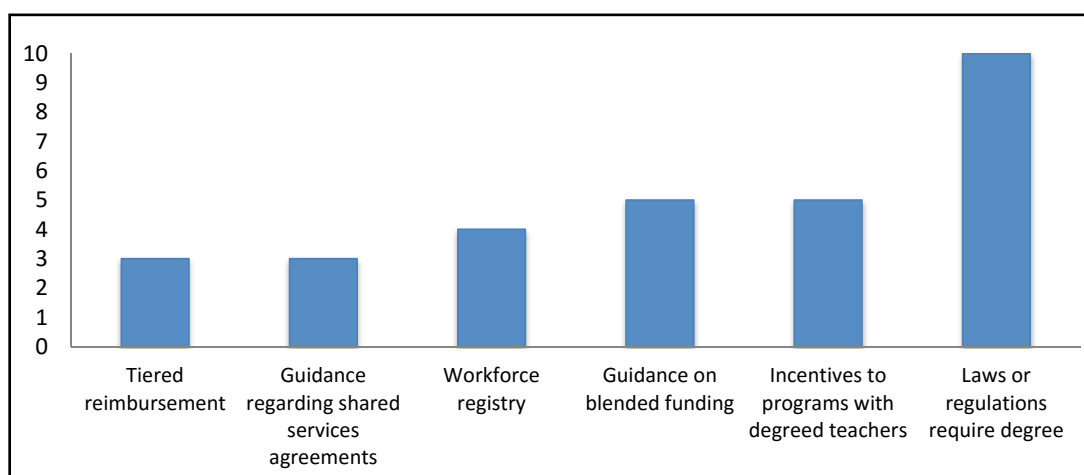
The 2015 CEELO Survey asked states about the sources of funding to support any existing activity designed to provide education and credentials to ECE teachers. States reported that primary sources of funding for these incentives are Race to the Top—Early Learning Challenge (RTT-ELC) grants (8 states), Child Care and Development Block Grant dollars (7 states), state general funds (3 states), and Head Start funds (4 states). Other funding sources include private foundations, tax credits, Title 1 dollars, lottery funds, and tobacco taxes.

The RTT-ELC grants, provided by the U.S. Department of Education to 20 states on a competitive basis, are short-term grants designed to improve state ECE systems to provide high-quality ECE designed to improve children's outcomes (U.S. Department of Education, 2014). It is important to note that the RTT-ELC grants are ending soon. RTT-ELC was the most frequently listed source of supports for states aiming to improve education and credentials of ECE teachers, yet the funds were provided to fewer than half of the states, and grants will conclude soon.

Approaches and Structures to Retain Educated ECE Teachers

States were asked about the structures that exist that can be used to retain educated ECE teachers. States reported that a range of structures exist that can be used to increase wages of ECE teachers and provide incentives to address problems of retaining educated and credentialed ECE teachers. The most common structures that exist in the 15 states that responded to the 2015 CEEL Survey are presented in Chart 5.

Chart 5. Number of States with Structures that Could Be Used to Retain Educated ECE Teachers (out of possible 15 states)



States reported using the structures in a range of ways.

- Laws or regulations.** Ten states reported that they have laws or regulations that require ECE teachers to have a degree. Interviews were conducted with three state stakeholders who reported that state laws or regulations exist that require ECE teachers to have a degree or credential. All three state stakeholders reported disseminating information about the legal requirements to ECE providers and stressed that to continue to teach in state-funded programs, providers would be required to attain degrees. Two states also offer professional development scholarships and opportunities to teachers who are seeking degrees. A stakeholder from one of these states reported that setting an ambitious target that all ECE teachers were required to meet created a “stick” that prompted teachers to seek additional education, and offering scholarships to college coursework and professional development created a “carrot.” A different state stakeholder reported that although a law exists that requires ECE teachers to have a degree, the law alone is not sufficient to provide existing ECE teachers with the education they need to obtain their required degrees.
- Incentives to programs with degreed teachers.** Five states reported that they offer incentives to providers who employ educated ECE teachers. Some states provide one-time bonuses to providers who employ degreed teachers through the QRIS. Others offer incentives through RTT-ELC or state-funded grant programs.

- **Guidance on blended funding.** Five states reported giving guidance to ECE providers to support blended funding as a mechanism to increase per-child funding and increase the overall funds available to enhance the quality of ECE. One individual reported that in the absence of additional technical assistance, incentives, or supports, blended funding does not necessarily translate to increased wages and compensation or increased education of the ECE workforce. Nonetheless, she suggested that if providers were given information both about how to increase per-child funding and about the benefits of enhancing compensation and education of teachers, providers could use a blended-funding approach to retain educated ECE teachers.
- **Workforce registry.** Four states reported the existence of a workforce registry as a tool used by the state to assess the current status of the ECE workforce and target professional development policies and incentives. One state respondent reported, “State-funded programs are required to have all staff enrolled in the registry and the education qualifications kept up to date.” States that have a legal requirement that teachers obtain degrees can use the workforce registry to track teachers’ degree attainment.
- **Guidance regarding shared-services agreements.** Shared-services agreements have been used by consortia of child care centers to pool dollars for administration, insurance, and maintenance (Stoney, 2013). Although no quantitative evaluations have yet been conducted regarding the use of shared-services agreements, anecdotes suggest that in some instances, providers that engaged in deep shared services accessed funds that resulted in increases in teacher salaries and benefits.

Some of these actions do not directly address compensation or parity directly, but states noted that the actions assist policymakers in supporting the retention of educated ECE teachers and in targeting supports. States are also taking a number of steps to improve ECE conditions, which research suggests can enhance retention of educated ECE teachers.

- **Improve ratios and group sizes.** Although increased wages are important for long-term employment satisfaction, research suggests that working conditions among ECE teachers are important for staff retention (Tarrant, 2015; Whitebook et al., 2009; Zero to Three, n.d.). It is notable that 10 of the 15 states that responded to the 2015 survey reported that the state is addressing ratios and group size as one method of retaining educated and credentialed ECE teachers working in school-based settings; nine states reported that this is also required for teachers working in community-based settings.
- **Pay parity.** As noted previously, one important strategy for recruiting and retaining educated ECE teachers is to offer salaries that are comparable or at parity with public school K–12 teachers. A total of four states reported supporting pay parity as a strategy for retaining some educated ECE teachers. Yet, these states reported that the pay parity strategies were for teachers working in state-funded pre-K and, thus, affect only a small swath of the ECE workforce.
- **Guidance to ECE programs.** A number of states reported providing guidance to counties, districts, or local programs regarding blended funding and shared-services agreements. Blended-funding approaches enable providers to use funds from two different sources—such as the Child Care and Development Block grant and pre-K funds—to provide quality enhancements to ECE providers working with children who are eligible for each program. Other states are providing guidance or support to engage in shared-services agreements.
- **Require degrees.** Most states are using incentives to encourage teachers to acquire desired education and credentials, but three states reported that teachers who lack degrees and credentials are not eligible to teach in the state’s public school pre-K program. Yet, as Whitebook and colleagues note, policies that require degrees in the absence of accompanying policies designed to provide access to education and address issues of teacher compensation do not alone lead to an increase in the percentage of teachers with degrees (Whitebook & Austin, 2015).

3. CONCLUSION AND RECOMMENDATIONS

State policymakers are seeking ways to recruit, educate, and retain ECE teachers with degrees and credentials consistent with the IOM & NRC 2015 recommendations. Through analysis of the descriptive data presented in the NIEER Yearbook, data from a sample of states that participated in the 2015 CEELo Survey, and information from state pre-K specialists who participated in interviews and provided documents, a number of themes emerged.

- **Promising policies and actions to ensure a stable and educated ECE workforce do not represent policy trade-offs but instead lead to a promising chain reaction in which policies that positively affect one outcome lead to other positive outcomes.** The IOM & NRC, NIEER, and Center for the Study of the Child Care Workforce clearly recommend that policymakers craft a coherent blueprint for improving ECE education, wages, and overall quality. As noted in the subtitle of the IOM & NRC 2015 report, policies to address the issues of retaining an educated ECE workforce require “a unifying foundation.” The existing research literature, analysis of quantitative data, and newly collected qualitative data reveal that policies, such as supporting the T.E.A.C.H. program, address issues of wages, education, and higher education capacity simultaneously.
- **Education levels of ECE teachers vary by ages of the children and settings in which they are taught.** It is important for policymakers to consider that while a majority of pre-K teachers currently have bachelor’s degrees, a low percentage of infant and toddler teachers have degrees and certification. To increase the education levels of all ECE teachers, the IOM & NRC (2015) recommend that multiple pathways exist for ECE teachers working with children of all ages and in different settings. That said, the existing multiple pathways with conflicting requirements exacerbate the challenges faced by ECE teachers seeking to attain degrees and by ECE providers seeking to retain educated teachers. The IOM & NRC thus recommend that states take actions to streamline the pathways to create a more coherent professional development system for ECE teachers.
- **Higher education institutions in many states have some capacity to offer bachelor’s coursework to ECE teachers, but opportunities exist to increase access.** While most states offer a bachelor’s degree with an ECE certification, the time required and location of course provision can be inaccessible to ECE teachers. Moreover, only a few states reported that they offer stackable certificates or have articulation agreements that can allow teachers to easily take courses from different institutions of higher education. Finally, very few states reported that courses are available online or as hybrid courses.
- **Common state actions to support increased education and credentials include legislation and regulations.** As policymakers consider actions to increase the education and credentials of ECE lead teachers, the IOM & NRC and multiple research reports (Barnett, 2003; Whitebook & Austin, 2015; Yoshikawa et al., 2013) recommend policies to ensure that existing ECE teachers have access to required coursework. In the absence of access to incentives to offset the cost of coursework, existing ECE teachers will not have access to courses needed to attain degrees with certification. State stakeholders reported through surveys and interviews that laws “definitely make it easier” to achieve goals. Yet, in the absence of incentives and a coherent set of policies to retain educated workers, requirements alone are not sufficient to ensure an educated ECE workforce (Whitebook & Austin, 2015)
- **Financing is very important.** States are using a variety of sources to offset the costs of bachelor’s level coursework and certification.
 - Sources of funding to offset costs of education include Race to the Top—Early Learning Challenge Funds (RTT-ELC), Child Care and Development Block Grant funds, and state general revenue dollars. A limited number of states received RTT-ELC grants and the initiative is short term, leading to challenges for states that have relied on this source for financing.

- In some states that require ECE teachers to have a bachelor’s degree, there is recognition of the importance that ECE teachers receive compensation commensurate with the wages received by other workers with bachelor’s degrees. Some states allocate general revenue funds to ensure ECE teachers have pay parity with K–12 teachers. This is an important step to retain an educated ECE workforce.
- **Enhancing the overall quality of ECE can create improved conditions that attract ECE teachers.** A number of states reported they are retaining teachers by requiring more rigorous ratios and group sizes, thereby creating improved conditions for teachers working in ECE settings. Moreover, states reported using QRIS to create incentives for teachers to acquire education and as a method of increasing teacher retention. As state policymakers consider the goal of increasing the educational attainment of ECE teachers, it is important that the overall conditions and quality of ECE are considered as well.



Recommendations

A number of recommendations emerge based on the existing research, the secondary analysis, the surveys and interviews with states, and document reviews. Many of these recommendations are consistent with the NRC & IOM (2015) report. These recommendations are made to state policymakers interested in ensuring ECE teachers have a bachelor’s degree with a credential:

1. **Create a coherent set of policies and actions designed to ensure a stable and educated ECE workforce rather than viewing policy options as trade-offs.** State policymakers should carefully consider the ramifications of viewing policies in isolation rather than through a coherent policy lens. A policy that focuses simply on increasing the number of degreed teachers that does not take into account the pertinence and quality of the higher education coursework, the compensation of teachers, and the overall quality and conditions within the ECE setting could lead to public dollars supporting coursework that does not lead to a more knowledgeable, competent, and skilled ECE workforce.
2. **Take into account the existing levels of education of early childhood educators working with children of different ages and in different settings.** The state of California has commissioned a study of the characteristics of the ECE workforce to better understand the courses and professional development needs of early childhood teachers working with infants and toddlers, as well as preschoolers, across different settings. Policy requiring ECE teachers to increase their education should take into account the current status of education across settings, set realistic goals, and fund coursework and supports at an appropriate level.
3. **Ensure funding is available for both coursework and worthy wages.** States should explore all possible funding streams to finance coursework (and background work to create articulation agreements and courses that meet ECE teachers’ needs), as well as compensation for ECE teachers who have received their degrees. States in this study reported that they have relied on federal dollars that will end soon to create more coherent

Photo credit: Jim Squires, Ph.D., Senior Research Fellow, National Institute for Early Education Research (NIEER) and CEELo

pathways for degrees and credentials for ECE teachers. In the absence of federal funds or another source of public financing, perceived trade-off between quality and costs will continue, with the costs of high-quality ECE remaining prohibitively high for families.

4. **Craft state policy that enables and supports cost-sharing among ECE funding streams and, at the same time, supports full enrollment.** Only a few states are currently supporting shared-services agreements, partnership among providers, cost-sharing, or other strategies to maximize funding at the provider level. These are important actions to take; yet, in isolation, such actions will not provide the funding needed to retain an educated ECE workforce. Therefore, this step should be taken in conjunction with the other recommendations.
5. **Take steps to secure sustainable public funding for ECE teachers.** Interviews with national experts and state stakeholders, as well as reviews of existing research, reveal that the state funding formula can be a stable funding source (Stone, 2008). Some recommended that legislation supporting the use of school funding formula dollars for ECE include language that requires all existing funding sources—including child care subsidies, Head Start funding, and local tax dollars—be used first, allowing ECE dollars to be used to augment quality and teacher wages (Save the Children Action Network, 2008).
6. **Review existing legislation, regulations, administrative rules, and policies to guide the development of new policies.** Some states that have reviewed existing laws, regulations, administrative rules, and policies have found ways to fund professional development pathways as well as methods for enhancing ECE teacher compensation. Moreover, by reviewing promising practices from states that have achieved the goal of increasing the education levels of ECE teachers and retaining educated ECE teachers, state policymakers can learn from one another.
7. **Support greater collaboration among institutions of higher education to create a coherent pathway for ECE teachers seeking a bachelor's degree in ECE.** It is important that higher education institutions develop articulation agreements that would allow the transferring of credits among them. The development of these agreements—which involves a process of comparing syllabi, developing comparable numbering and coursework descriptions, and carefully reviewing the requirements of each course to ensure that they are also comparable—requires engagement from college and university representatives as well as state boards of higher education. Stakeholders who have developed these agreements report that these efforts pay off when it comes to ensuring that the courses early childhood teachers complete can lead to a degree.
8. **Consider the overall quality and improved conditions that can attract ECE teachers.** To retain educated ECE teachers, it is important that the overall quality of ECE is high, and policymakers should consider ECE licensing and regulations regarding ratios, group sizes, and overall working conditions.

References

- Ackerman, D. J. (2005). Getting teachers from here to there: Examining issues related to an early care and education teacher policy. *Early Childhood Research & Practice*, 7(1).
- American Federation of Teachers. (2007). *Meeting the challenge: Recruiting and retaining teachers in hard-to-staff schools*. Washington, DC: Author.
- Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.
- Barnett, W. S. (2003, March). Low wages = low quality: Solving the real preschool teacher crisis. *NIEER Preschool Policy Matters*, 3. Retrieved from <http://nieer.org/resources/policybriefs/3.pdf>
- Barnett, W. S. (2004, December). Better teachers, better preschools: Student achievement linked to teacher qualifications. *NIEER Preschool Policy Matters*, 2. Retrieved from <http://nieer.org/resources/policybriefs/2.pdf>
- Barnett, W. S., Carolan, M. E., Squires, J. H., Clarke Brown, K., & Horowitz, M. (2015). *The state of preschool 2014: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research.
- Bornfreund, L., Cook, S., Lieberman, A., & Loewenberg, A. (2015). *From crawling to walking: Ranking states on birth-3rd grade policies that support strong readers*. Washington, DC: New America Foundation. Retrieved from <https://static.newamerica.org/attachments/11902-from-crawling-to-walking/50-State-Scan.8d1f696fd53c404880ec65d364ee08b6.pdf>
- Bowman, B. (2011). College credentials and caring: How teacher training could lift young children. In E. F. Zigler, W. S. Gilliam, & W. S. Barnett (Eds.) *The pre-k debates: Current controversies & issues* (pp. 54–57). Baltimore: Paul H. Brookes Publishing.
- Brandon, R., Abe, Y., Kim, H., Datta, A., Goerge, R., Forry, N., ... & Zanoni, W. (2013). *Number and characteristics of early care and education (ECE) teachers and caregivers: Initial findings from the National Survey of Early Care and Education (NSECE)*. OPRE Report #2013-38, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. Retrieved from https://www.acf.hhs.gov/sites/default/files/opre/nsece_wf_brief_102913_0.pdf
- Brock, T. (2010). Young adults and higher education: Barriers and breakthroughs to success. *The Future of Children*, 20(1), 109–132. Retrieved from http://www.princeton.edu/futureofchildren/publications/docs/20_01_06.pdf
- Bueno, M., Darling-Hammond, L., & Gonzales, D. (2010). *A matter of degrees: Preparing teachers for the pre-K classroom*. Washington, DC: Pew Center on the States. Retrieved from http://www.pewtrusts.org/~media/legacy/uploadedfiles/wwwpewtrustsorg/reports/pre-k_education/pkneducationreformseriesfinalpdf.pdf
- Cassidy, D. J., Lower, J. K., Kintner-Duffy, V. L., Hegde, A. V., & Shim, J. (2011). The day-to-day reality of teacher turnover in preschool classrooms: An analysis of classroom context and teacher, director, and parent perspectives. *Journal of Research in Childhood Education*, 25(1), 1–23. doi:10.1080/02568543.2011.533118
- Center for the Study of Child Care Employment. (2009). *Compensation initiatives for the early care and education workforce: A chart of current activities at the national, state and local levels*. Berkeley, CA: University of California at Berkeley.
- Cost Quality Outcomes Study Team. (1995). *Cost, quality, and child outcomes in child care centers: Public report*. Denver: Economics Department, University of Colorado-Denver.
- Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., Bender, R. H., Bryant, D., ... Zill, N. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development*, 78(2), 558–580.
- Fraga, L., Dobbins, D., & McCreedy, M., (2015). *Parents and the high cost of child care*. Arlington, VA: Child Care Aware.
- Fuligni, A. S., Howes, C., Lara-Cinisomo, S., & Karoly, L. (2009, May). *Diverse pathways in early childhood professional development: An exploration of early educators in public preschools, private preschools, and family child care homes*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2805099/>

- Fuller, B. (2011). College credentials and caring: How teacher training could lift young children. In E. F. Zigler, W. S. Gilliam, & W. S. Barnett (Eds.). *The pre-k debates: Current controversies & issues* (pp. 57–63). Baltimore: Paul H. Brookes Publishing Co.
- Gilliam, W., & Marchesseault, C. (2005). *From capitol to classrooms, policies to practice: State-funded prekindergarten at the classroom level. Part 1: Who's teaching our youngest students? Teacher education and training, experience, compensation and benefits, and assistant teachers. The national prekindergarten study*. New Haven, CT: Yale University Child Study Center. Retrieved from <http://nieer.org/resources/files/NPSteachers.pdf>
- Hanushek, E., (2007). The single salary schedule and other issues of teacher pay. *Peabody Journal of Education*, 82(4), 574–586.
- Heneman, H. & Kimball, S., (2008). *How to design teacher salary structures*. Madison, WI: Consortium of Policy Research in Education, University of Madison-Wisconsin.
- Hyson, M. (2003). *Preparing early childhood professionals: NAEYC's standards for programs*. Washington, DC: National Associate for the Education of Young Children. Retrieved from https://www.naeyc.org/store/files/store/TOC/256_0.pdf
- Institute of Medicine (IOM) & the National Research Council (NRC) of the National Academies (2015). *Transforming the workforce for children birth through age eight: A unifying foundation*. Washington, DC: National Academy of Sciences.
- Kipnis, F., & Whitebook, M. (2011). *Workforce information: A critical component of coordinated state early care and education data systems*. Berkeley, CA: Center for the Study of Child Care Employment, University of California at Berkeley.
- Kipnis, F., Whitebook, M., Almaraz, M., Sakai, L., & Austin, L. J. E. (2012). *Learning together: A study of six B.A. completion cohort programs in early care and education: Year 4—Executive summary*. Berkeley, CA: Center for the Study of Child Care Employment. Retrieved from <http://www.irle.berkeley.edu/cscce/wp-content/uploads/2012/02/LearningTogetherYear4ExecutiveSummary.pdf>
- Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research & Practice*, 7(2). Retrieved from <http://ecrp.uiuc.edu/v7n2/lobman.html>
- Maroto, M. L., & Brandon, R. N. (2012). Summary of background data on the ECCE workforce. In IOM & NRC (Eds.), *The early childhood care and education workforce: Challenges and opportunities: A workshop report*. Washington, DC: The National Academies Press.
- Maxwell, K. L., Lim, C-I, & Early, D. M. (2006). *Early childhood teacher preparation programs in the United States: National report*. Chapel Hill, NC: The University of North Carolina, FPG Child Development Institute.
- Mead, S. (2006, April). *Old policies, new ways to fund preschool*. Retrieved from <http://educationpolicy.air.org/edsector-archives/publications/old-policies-new-ways-fund-preschool>
- Mims, S. U., Scott-little, C., Lower, J. K., Cassidy, D. J., & Hestenes, L. L. (2008). Education level and stability as it relates to early childhood classroom quality: A survey of early childhood program directors and teachers. *Journal of Research in Childhood Education*, 23(2), 227–237.
- Minervino, J. (2014). Quality in center-based early learning: High-level findings and trends. In *Lessons from research and the classroom: Implementing high-quality pre-k that makes a difference for young children* (pp. 3–7). Seattle, WA: Bill & Melinda Gates Foundation. Retrieved from https://docs.gatesfoundation.org/documents/Lessons%20from%20Research%20and%20the%20Classroom_September%202014.pdf#page=5
- National Association for the Education of Young Children. (n.d.). *A call for excellence in early childhood education*. Retrieved from <https://www.naeyc.org/policy/excellence>
- National Infant and Toddler Child Care Initiative. (2010, August). *Professional development for the infant/toddler early care and education workforce*. Retrieved from <http://www.zerotothree.org/public-policy/state-community-policy/nitcci/professional-development-for-the-infant-toddler-workforce.pdf>
- Pianta, R. C. (1997). Adult-child processes and early schooling. *Early Education and Development*, 8(1), 11–26.
- Pianta, R. C., Barnett, W. S., Burchinal, M., & Thornburg, K. R. (2009). The effects of preschool education: What we know, how public policy is or is not aligned with the evidence base, and what we need to know. *Psychological Science in the Public Interest*, 10(2), 49–88.

- Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R. M., Early, D., & Barbarin, O. (2005). Features of pre-kindergarten programs, classrooms, and teachers: Prediction of observed classroom quality and teacher-child interactions. *Applied Developmental Science*, 9(3), 144-159. Retrieved from <http://www.leg.state.vt.us/PreKEducationStudyCommittee/Documents/impact%20of%20teacher%20and%20classroom%20quality.pdf>
- Regenstein, E. (2015, December 14). *Should state funding formulas include pre-K?* Washington, DC: New America Foundation. Retrieved from <http://www.edcentral.org/state-funding-pre-k/>
- Reninger, K. A. & Sigel, I. (2006). *Handbook of child psychology* (Vol. 4). *Child psychology in practice*, 6th edition. Hoboken, NJ: John Wiley & Sons.
- Sakai, L., Kipnis, K., Whitebook, M. & Schaack, D. (2014). Yes they can: Supporting bachelor degree attainment for early childhood practitioners. *Early Childhood Research and Practice*, 16(1&2). Retrieved from <http://ecrp.uiuc.edu/v16n1/sakai.html>
- Save the Children Action Network. (2015) *Innovative financing for early education: State and local options*. Retrieved from http://www.savethechildrenactionnetwork.org/atf/cf/%7B19ec55ff-7a95-4291-8376-f55521040d78%7D/R4_WHITE_PAPERS_LOCAL_STATE.PDF
- Schilder, D. (forthcoming). Early care and education accountability. In D. Couchenour & K Chrisman (Eds.), *The SAGE encyclopedia of contemporary early childhood education*. Thousand Oaks, CA: Sage Publications.
- Schulman, K., Mathews, H., Blank, H., & Ewen, D. (2012). Count for quality: Child care center directors on rating and improvement systems. Washington, DC: National Women's Law Center and Center for Law and Social Policy.
- Shonkoff, J. P., & Phillips, D. A. (2000). *From neurons to neighborhoods: The science of early childhood development* [Executive Summary]. Washington, DC: National Academies Press.
- Stone, D. (2008). *Funding the future: States' approaches to pre-K. Finance 2008 update* [Pre-K Now Research Series]. Washington, DC: Washington Appleseed Center for Law in the Public Interest.
- Stoney, L. (2013). *Early care and education compensation and policy options for Louisiana*. Retrieved from <http://www.earlychildhoodfinance.org/downloads/2013/Early%20Care%20and%20Education%20Compensation%20and%20Policy%20Options%20for%20Louisiana%20v.%203.pdf>
- Stoney, L. (2014). *Shared services in early care and education* [Powerpoint presentation to the Department of Early Learning]. Retrieved from <http://www.del.wa.gov/publications/elac-qris/docs/SharedServicesWebinarPresentation.pdf>
- Stoney, L. (2015). *Shared services: Powerful alliances for ECE programs: Early childhood investigations webinars*. Retrieved from <http://www.earlychildhoodwebinars.com/wp-content/uploads/2015/02/Slides-for-Shared-Services-2.11.15.pdf>
- Tarrant, K. (2015). *Sharpening the focus: State policy to promote effective teaching that improves learning*. Boston, MA: BUILD Initiative.
- U. S. Bureau of Labor Statistics. (2014). *Occupational employment and wages, May 2014*. Retrieved from <http://www.bls.gov/oes/current/oes399011.htm>
- U.S. Department of Education. (2005, June). *10 facts about K–12 education funding*. Retrieved from <http://www2.ed.gov/about/overview/fed/10facts/index.html?exp>
- U.S. Department of Education. (2014). *Preschool development grants*. Washington, DC: Office of Early Learning. Retrieved from <http://www2.ed.gov/programs/preschooldevelopmentgrants/index.html>
- U.S. Department of Education. (2015, April). *A matter of equity: Preschool in America*. Retrieved from <https://www2.ed.gov/documents/early-learning/matter-equity-preschool-america.pdf>
- U.S. Department of Education. (n.d.). *Special education fiscal year 2015 budget request*. Retrieved from <http://www2.ed.gov/about/overview/budget/budget15/justifications/j-special.ed.pdf>
- U.S. Department of Health and Human Services. (2015). *Head Start program facts, fiscal year 2014*. Retrieved from <http://eclkc.ohs.acf.hhs.gov/hslc/data/factsheets/docs/hs-program-fact-sheet-2014.pdf>

- U.S. Department of Health and Human Services. (n.d.). *OCC fact sheet*. Retrieved from http://www.acf.hhs.gov/sites/default/files/assets/FS_OCC_0.pdf
- U.S. Government Printing Office (2015). *An act to reauthorize the Elementary and Secondary Education Act of 1965 to ensure that every child achieves*, S. 1177. Retrieved from <https://www.gpo.gov/fdsys/pkg/BILLS-114s1177enr/pdf/BILLS-114s1177enr.pdf>
- Whitebook, M., & Austin, L. J. E. (2015, November). *Early childhood higher education: Taking stock across the states*. Retrieved from <http://www.irle.berkeley.edu/cscce/wp-content/uploads/2015/11/Cross-state-Brief-Final.pdf>
- Whitebook, M. (2003). *Early education quality: Higher teacher qualifications for better learning environments—A review of the literature*. Retrieved from http://www.irle.berkeley.edu/cscce/wp-content/uploads/2003/01/Early_Ed_Quality.pdf
- Whitebook, M. (2014). *Building a skilled teacher workforce: Shared and divergent challenges in early care and education and in grades K–12*. Retrieved from http://www.irle.berkeley.edu/cscce/wp-content/uploads/2014/09/Building-a-Skilled-Teacher-Workforce_September-2014_9-25.pdf
- Whitebook, M., (2015). *Center for the Study of Child Care Employment*. Berkeley, CA: University of California, Berkeley.
- Whitebook, M., Gomby, D., Bellm, D., Sakai, L., & Kipnis, F. (2009, May). *Preparing teachers of young children: The current state of knowledge and a blueprint for the future* [Executive Summary]. Retrieved from http://www.irle.berkeley.edu/cscce/wp-content/uploads/2009/01/teacher_prep_summary.pdf
- Whitebook, M., Austin, L. J. E., Ryan, S., Kipnis, F., Almaraz, M. & Sakai, L. (2012). *By default or by design? Variations in higher education programs for early care and education teachers and their implications for research methodology, policy, and practice*. Retrieved from http://www.irle.berkeley.edu/cscce/wp-content/uploads/2012/01/ByDefaultOrByDesign_FullReport_2012.pdf
- Whitebook, M., Phillips, D., & Howes, C. (2014). *Worthy work, STILL unlivable wages: The early childhood workforce 25 years after the National Child Care Staffing Study*. Retrieved from <http://www.irle.berkeley.edu/cscce/wp-content/uploads/2014/11/ReportFINAL.pdf>
- Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M., Espinosa, L., Gormley, W., ... Zaslow, M. J. (2013). *Investing in our future: The evidence base on preschool education* [Policy Brief]. Retrieved from the Foundation for Child Development website: <http://fcd-us.org/sites/default/files/Evidence%20Base%20on%20Preschool%20Education%20FINAL.pdf>
- Zero to Three. (n.d.). *Strengthening the early childhood and school-age workforce: A tool to improve workplace conditions, compensation, and access to professional development*. Retrieved from https://childcareta.acf.hhs.gov/sites/default/files/public/strengtheningworkforce_tool.pdf

APPENDIX A: Institute of Medicine and National Research Council ECE Workforce Recommendations

- Recommendation 1:** Strengthen competency-based qualification requirements for all care and education professionals working with children from birth through age 8.
- Recommendation 2:** Develop and implement comprehensive pathways and multiyear timelines at the individual, institutional, and policy levels for transitioning to a minimum bachelor's degree qualification requirement, with specialized knowledge and competencies, for all lead educators working with children from birth through age 8.
- Recommendation 3:** Strengthen practice-based qualification requirements, including a supervised induction period, for all lead educators working with children from birth through age 8.
- Recommendation 4:** Build an interdisciplinary foundation in higher education for child development.
- Recommendation 5:** Develop and enhance programs in higher education for care and education professionals.
- Recommendation 6:** Support the consistent quality and coherence of professional learning supports during ongoing practice for professionals working with children from birth through age 8.
- Recommendation 7:** Develop a new paradigm for evaluating and assessing professional practice for those who work with children from birth through age 8.
- Recommendation 8:** Ensure that policies and standards that shape the professional learning of care and education leaders [elementary school principals and directors in early care and education settings] encompass the foundational knowledge and competencies needed to support high-quality practices for child development and early learning in their organizations.
- Recommendation 9:** Improve consistency and continuity for children from birth through age 8 by strengthening collaboration and communication among professionals and systems within the care and education sector and with closely related sectors, especially health and social services.
- Recommendation 10:** Support workforce development with coherent funding, oversight, and policies.
- Recommendation 11:** Collaboratively develop and periodically update coherent guidance that is foundational across roles and settings for care and education professionals working with children from birth through age 8.
- Recommendation 12:** Support comprehensive state- and local-level efforts to transform the professional workforce for children from birth through age 8.
- Recommendation 13:** Build a better knowledge base to inform workforce development and professional learning services and systems.

Source: IOM & NRC, 2015. These recommendations are publically available at <http://www.nationalacademies.org/hmd/Reports/2015/Birth-To-Eight.aspx>

APPENDIX B: Data Tables

Table 1. NIEER State of Preschool 2014 and 2008 Data

Minimum teacher degree requirement	Any preschool program requires BA, 2014	All preschool programs require BA, 2014 ³	Any preschool program requires BA, 2008	All preschool programs require BA, 2008
Alabama	Y	Y	Y	Y
Alaska	Y	Y	NA	NA
Arizona	N	N	N	N
Arkansas ⁴	N	N	N	N
California	N	N	N	N
Colorado	N	N	N	N
Connecticut	N	N	N	N
District of Columbia	Y	Y	NA	NA
Delaware	N	N	N	N
Florida ⁵	Y	Y	N	N
Georgia	Y	Y	N	N
Illinois	Y	Y	Y	Y
Iowa ⁶	Y	N	Y	N
Kansas	Y	Y	Y	Y
Kentucky	Y	Y	Y	Y
Louisiana	Y	Y	Y	Y
Maine	Y	Y	Y	Y
Maryland	Y	Y	Y	Y
Massachusetts	Y	N	Y	N
Michigan	Y	Y	Y	Y
Minnesota	Y	N	Y	N
Missouri	Y	Y	Y	Y
Nebraska	Y	Y	Y	Y
Nevada	Y	Y	Y	Y
New Jersey	Y	Y	Y	Y
New Mexico	Y	N	Y	Y
New York	Y	^{~7}	Y	Y
North Carolina	Y	Y	Y	Y
Ohio	N	N	N	N
Oklahoma	Y	Y	Y	Y
Oregon	N	N	Y	N
Pennsylvania	Y	N	Y	N
Rhode Island	Y	Y	NA	NA

Minimum teacher degree requirement	Any preschool program requires BA, 2014	All preschool programs require BA, 2014 ³	Any preschool program requires BA, 2008	All preschool programs require BA, 2008
South Carolina	Y	N	Y	N
Tennessee	Y	Y	Y	Y
Texas	Y	N	Y	Y
Vermont	Y	N	Y	Y
Virginia	Y	N	Y	N
Washington	Y	N	N	N
West Virginia	Y	Y	Y	N
Wisconsin	Y	N	Y	N
Total	33	21	28	18

Sources: <http://nieer.org/sites/nieer/files/2008yearbook.pdf> (p.192); http://nieer.org/sites/nieer/files/Yearbook2014_full3.pdf (p. 200)

- 3 To meet the “all programs” criterion, all state pre-K programs required a minimum of a BA. In most cases where the state did not meet the criterion, the state required a BA for public pre-K programs, but nonpublic pre-K programs were exempt from the BA requirement and, instead, required a minimum of an AA or CDA. In some instances, a state had multiple pre-K programs and one or more did not require a BA.
- 4 In 2014, Arkansas required one teacher with a BA in ECE or CD per center and required an AA in ECE or CD for other classrooms. In 2008, the state required one teacher with a BA/BS in ECE in every three classrooms. Because the state did not require a BA for lead teachers in every classroom, the state is coded as “N” for no.
- 5 For both 2014 and 2008, a minimum of a BA was required only during summer sessions. During the academic school year, the minimum requirement was a CDA.
- 6 Iowa has two programs: For 2014 and 2008, Iowa SVPP required a BA for both public and nonpublic settings; Iowa Shared Visions required a BA for public and CDA for nonpublic.
- 7 New York requires nonpublic teachers to be on a five-year plan working towards a BA but does not require completion of a BA.

Table 2. Responses to Survey Q1: CEELO 2015 Survey Data: State-funded early childhood programs requiring ECE teachers to have bachelor's degrees with an early childhood concentration

Do any of your state-funded early childhood programs require infant/toddler or pre-K teachers to have a bachelor's degree with a concentration in early childhood?	Number of states (n=15)
Legislation requires bachelor's degree	7
Legislation requires certification	7
Policy encourages/requires bachelor's degree	3
Policy encourages or requires certification or specialization	4
Incentives encourage degree and/or specialization	3

Table 3. Responses to Survey Q2: CEELO 2015 Survey Data: Actions to assist teachers in obtaining a degree (n=15)

How is the state assisting teachers in state-funded programs to obtain a bachelor's degree with a concentration in early childhood education?	Bachelor's degree only	Bachelor's degree with some credits in early childhood	Bachelor's degree with concentration in early childhood
Provide incentives through the QRIS	1	1	2
Offer scholarships to teachers	3	2	6
Offer T.E.A.C.H. or similar incentive	2	2	7
Offer increased salaries for teachers who have this level of education	1	1	2

**Table 4. Responses to Survey Q3: CEELO 2015 Survey Data:
Funding to support teachers in obtaining a degree**

What funding sources are used to provide incentives for teachers in state-funded programs to obtain a bachelor's degree with concentration in early childhood? (Select all that apply.)	Response Percent	Response Count (n=11*)
Federal Race to the Top—Early Learning Challenge funds	63.6%	7
Federal Preschool Development and Expansion Grants	9.1%	1
Federal Head Start	27.3%	3
Federal Child Care and Development funds	63.6%	7
State Child Care and Development funds	18.2%	2
Foundation funds	18.2%	2
Tobacco taxes	9.1%	1
Lottery taxes	18.2%	2
Tax credits	18.2%	2
State earmark for pre-K programs	18.2%	2
State general funds	27.3%	3

*Only 11 states out of 15 answered this question.

Table 5. Responses to Survey Q4: CEELO 2015 Survey Data: Funding to support teachers in obtaining a degree

What structures or methods exist in the state that could be used to retain teachers who hold a bachelor's degree or otherwise meet staff qualification requirements? (Check all that apply.)	Response Percent	Response Count (n=12*)
Tiered reimbursement through the state QRIS	16.7%	2
Incentives to programs employing teachers who have a bachelor's degree	33.3%	4
State systems that encourage blended-funding models	41.7%	5
Guidance and information to programs about how to blend funds	41.7%	5
Guidance and information about shared-services agreements	16.7%	2
Guidance and information to support pay equity between early childhood and K–12 systems regardless of setting (school, community-based, etc.)	16.7%	2
Laws or regulations that require degrees to teach in state-funded pre-K programs	75.0%	9
Workforce registry	25.0%	3
Unions	8.3%	1

*Only 12 states out of 15 answered this question.

Table 6. Responses to Survey Q5: 2015 CEELO Survey: Structures to retain teachers (n=12*)

How is the state using the structures noted above to retain teachers in state-funded pre-K programs who hold a bachelor's degree or otherwise meet staff qualification requirements?	Yes for teachers in public school settings	Yes for teachers in community-based settings
Offering tiered reimbursement through the state QRIS and granting points for programs that retain teachers	1	2
Enhancing salaries for degreed teachers working in pre-K programs	3	3
Enhancing benefits packages for teachers working in pre-K programs (such as health insurance)	3	1
Ensuring pre-K programs have small class sizes and appropriate ratios	10	7
Ensuring that pre-K teachers in state-funded settings are equitably compensated for degree and certifications or credentials	4	1
Offering additional funding to programs employing teachers who have a bachelor's degree	3	3
Encouraging programs to blend funds from multiple sources (such as pre-K, child care subsidy, and Head Start)	9	10
Providing information to programs about how to blend funds to enhance salaries	2	1
Encouraging programs to engage in shared-services agreements so there are additional funds for salary increases	0	1
Notifying teachers that if they do not attain degrees, they will no longer be qualified to teach in state-funded pre-K programs	2	3

*Only 12 states out of 15 answered this question.

Table 7. Responses to Survey Q7: CEELO 2015 Survey Data: Capacity of higher education institutions (n=12*)

What is the capacity of the higher education institutions in your state to provide pre-K teachers with coursework needed for bachelor's degrees with a concentration in early childhood? (Select all that apply.)	Not sufficient to meet need of existing workforce	Sufficient to meet some of need of workforce	Sufficient to mostly meet need of workforce	Sufficient to meet need of existing and future workforce
Offer pre-K teachers courses in early childhood	0	1	6	5
Offer bachelor's degree courses at times that pre-K teachers can access	0	6	5	1
Offer bachelor's degree courses in locations that pre-K teachers can access	0	4	5	3
Offer courses in format (such as hybrid or online) that pre-K teachers can access	1	4	5	3
Offer a bachelor's degree with a concentration in early childhood	0	4	3	4
Offer an early childhood credential	0	3	4	6
Offer "stackable" credentials	2	0	2	2
Offer counseling to ensure matriculation in a degree-granting institution	4	2	3	1
Provide articulation for teachers pursuing degrees in early childhood across institutions of higher education	2	5	3	1

*Only 12 states out of 15 answered this question.

APPENDIX C: CEELO 2015 Survey Instrument

1. Do any of your state-funded early childhood programs require infant/toddler or pre-K teachers to have a bachelor's degree with a concentration early childhood? (Select all that apply.)

	Bachelor's degree	Some credits in early childhood	Concentration in early childhood	Certification in early childhood	Credential (non- certification)
Legislation requires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legislation encourages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy encourage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Court order requires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incentives encourage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

2. How is the state assisting teachers in state-funded programs to obtain a bachelor's degree with a concentration in early childhood education?

	Bachelor's degree only	Bachelor's degree with some credits in early childhood	Bachelor's degree with concentration in early childhood
Provide incentives through the Quality Rating and Improvement System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer scholarships to teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T.E.A.C.H. or similar incentive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer increased salaries for teachers who have this level of education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

3. What funding sources are used to provide incentives for teachers in state-funded programs to obtain a bachelor's degree with concentration in early childhood? (Select all that apply.)

- ☐ Federal Race to the Top Early Learning Challenge funds
- ☐ Federal Preschool Development and Expansion Grants
- ☐ Federal Head Start
- ☐ Federal Child Care and Development Funds
- ☐ State Child Care and Development Funds
- ☐ Foundation funds
- ☐ Tobacco taxes
- ☐ Lottery taxes
- ☐ Tax credits
- ☐ Local funding sources
- ☐ Business contributions
- ☐ State earmark for pre-K programs
- ☐ State general funds
- ☐ State education cost share formula

Other (please specify)

4. What structures or methods that exist in the state that could be used to retain teachers who hold a bachelor's degree or otherwise meet staff qualification requirements? (Check all that apply.)

- ☐ Tiered reimbursement through the state QRIS system
- ☐ Incentives to programs employing teachers who have a bachelor's degree
- ☐ State systems that encourage blended funding models
- ☐ Guidance and information to programs about how to blend funds
- ☐ Guidance and information about shared services agreements
- ☐ Guidance and information to support pay equity between early childhood and K-12 systems regardless of setting (school, community-based, etc.)
- ☐ Laws or regulations that require degrees to teach in state-funded pre-K programs
- ☐ Workforce registry
- ☐ Unions

Other (please specify)

5. How is the state using the structures noted above to retain teachers in state-funded pre-K programs who hold a bachelor's degree or otherwise meet staff qualification requirements?

	Yes for teachers in public school settings	Yes for teachers in community- based settings	Not offered in state funded pre-K
Offering tiered reimbursement through the state QRIS system and granting points for programs that retain teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhancing salaries for degreed teachers working in pre-K programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhancing benefits packages for teachers working in pre-K programs (such as health insurance, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensuring pre-K programs have small class sizes and appropriate ratios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensuring that pre-k teachers in state-funded settings are equitably compensated for degree and certifications or credentials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offering additional funding to programs employing teachers who have a bachelor's degree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging programs to blend funds from multiple sources (such as pre-K, child care subsidy, and Head Start)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing information to programs about how to blend funds to enhance salaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging programs to engage in shared services agreements so there are additional funds for salary increases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notifying teachers that if they do not attain degrees, they will no longer be qualified to teach in state-funded pre-K programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supporting unionization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

6. Please let us know what other specific actions your state is taking to enhance the quality of the state-funded early childhood workforce.

Higher Education Questions

7. What is the capacity of the higher education institutions in your state to provide pre-K teachers with coursework needed for bachelor's degrees with a concentration in early childhood? (Select all that apply.)

	Not sufficient to meet need of existing workforce	Sufficient to meet some of the need of the workforce	Sufficient to mostly meet need of workforce	Sufficient to meet need of existing and future workforce
Offer pre-K teachers courses in early childhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer bachelor's degree courses at times that pre-K teachers can access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer bachelor's degree courses in locations that pre-K teachers can access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer courses in format (such as hybrid or online) that pre-K teachers can access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer a bachelor's degree with a concentration in early childhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer an early childhood credential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer 'stackable' credentials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer counseling to ensure matriculation in a degree granting institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide articulation for teachers pursuing degrees in early childhood across institutions of higher education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

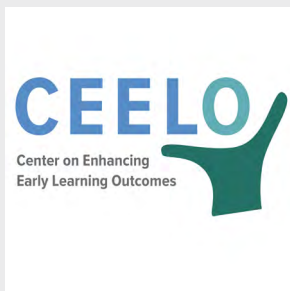
Other (please specify)

8. Please describe other approaches you are taking to support bachelor's degrees with concentrations in early childhood. Please include any links that describe your system, links to legislation or policy, examples of local efforts, challenges you have experienced, etc.

9. If you are willing to participate in a follow up interview please let us know.

- ☐ Yes
- ☐ No
- ☐ I would like to but I don't have time

Other (please specify)



Center on Enhancing Early Learning Outcomes (CEELO)
National Institute for Early Education Research
Rutgers, The State University of New Jersey
73 Easton Avenue
New Brunswick, NJ 08901-1879
info@ceelo.org
<http://www.ceelo.org>

The Center on Enhancing Early Learning Outcomes (CEELO) is a partnership of the following organizations:



This policy report was produced by the Center on Enhancing Early Learning Outcomes (CEELO) with funds from the U.S. Department of Education under cooperative agreements S283B120054 and S283B120015, respectively. The content does not necessarily reflect the position or policy of the Department of Education, nor does the mention or visual representation of trade names, commercial products, or organizations imply endorsement by the federal government. For other CEELO policy reports, policy briefs, and FastFacts, go to <http://ceelo.org/ceelo-products>.

One of 22 Comprehensive Centers funded by the U.S. Department of Education's Office of Elementary and Secondary Education, the Center on Enhancing Early Learning Outcomes (CEELO) will strengthen the capacity of State Education Agencies (SEAs) to lead sustained improvements in early learning opportunities and outcomes. CEELO will work in partnership with SEAs, state and local early childhood leaders, and other federal and national technical assistance (TA) providers to promote innovation and accountability.