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# Qualifications and supports for teaching teams in state-funded preschool in the United States

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## Abstract

In the United States, state-funded preschool is a critical component of both K-12 public education and the early childhood education and care system. In 2021, 44 states and the District of Columbia operated 63 school/center-based preschool programs serving over 1.3 million children. The vast majority of state-funded preschool programs require two adults in each classroom: typically, a lead teacher and an assistant teacher, with an expectation for team teaching. This paper examines the trends and variations in state policies that address the qualifications requirements, compensation, and professional development supports for preschool lead and assistant teachers in state-funded preschool programs that provide a foundation for supporting a culture of collective success and potential quality of the classroom.

**Keywords:** Workforce, Teacher, Assistant, Teams, United States, Parity, Professional development

## Introduction

In the United States, the early learning landscape is made up of a patchwork of programs often delineated by funding streams. Most states operate a preschool<sup>1</sup> program for children prior to the year of kindergarten (K) for children aged four, and sometimes aged three, paid for with state dollars. These state-funded preschool programs are a critical component of both K through grade 12 public education and child care in the United States. Internationally, these programs would be comparable to those that operate in the pre-primary sector for children aged three- to six-years-old. In 2021, 44 states and the District of Columbia operated 63 school/center-based preschool programs serving over 1.3 million children (Friedman-Krauss et al., 2022). Most states require two adults in their state-funded preschool classrooms, typically a lead teacher and an assistant teacher, with an expectation for team teaching. However, not all programs require two teachers. The most common exception is “transitional kindergarten” (TK) programs, which are a downward extension of the kindergarten program that serves five- and six-year-old children. Like the United States,

<sup>1</sup> Note: For the purpose of this paper, the terms preschool, pre-kindergarten, and pre-K will be used interchangeably to refer to educational programs for three- and four-year-old children, prior to entering kindergarten.

other countries typically require an assistant or teacher aide, but there are variations in terms of qualifications based on the setting and type of program (Bertram & Pascal, 2016; European Commission, 2021; Peeters, et al., 2016). Internationally, there are some exceptions. For example, in Turkey, the Regulation on Preschool Education Institutions does not require schools to employ staff to help preschool teachers. A 2017 study argues for funding the position since it is critical to address children's developmental areas (Karademir et al., 2017).

Assistant teachers are more likely to know the language and culture and to represent the ethnic backgrounds of young children they serve in many communities, which enhances their potential contributions to teaching teams (Jacoby, 2021; Paschall et al., 2020). This paper does not quantify the impact assistant teachers make in the classroom but rather examines state preschool policies that may encourage the collective efficacy of the educators within the preschool classroom, such as those that require team-focused professional development, salary parity, and training in early childhood. Collective efficacy occurs when teachers view themselves as part of a team impacting student outcomes (Bandura, 1997; Donohoo et al., 2018). To be part of a "team" requires that all members participate in joint professional development, sometimes referred to as social persuasion, in which educators receive mentoring, peer learning experiences, or participate in discussions with peers during meetings (Hoogsteen, 2020). Additionally, to further enhance the collective efficacy of the teaching team, policies should be in place to require salary and benefit parity between all members of the team and their K-3<sup>rd</sup> grade (K-3) counterparts, and each member of the team should have knowledge of and training in early childhood education so their collective expertise can enhance the learning experience of children in the classroom.

Most of the research on collective efficacy occurs at the elementary levels (grades K and up in the United States) and beyond. This limits the ability to analyze the impacts various policies, such as different pre-service qualification expectations and pay equity, may have on building collective efficacy among assistant and lead teachers in early childhood education programs. One of the limitations in an international meta-analysis of 48 studies (1980–2014) that examined the relationship between teacher qualifications and the quality of the early childhood environment was that the studies reviewed only examined the qualifications of lead teachers (Manning et al., 2017).

In this study, we examine the policies states have implemented that support teaching teams. Specifically, we discuss states in which all members of the teaching team, especially assistant teachers, are required to have training in early childhood education. We also identify state examples in which assistant teachers and lead teachers are supported to attend professional learning opportunities which may increase the likelihood of collaboration and a sense of collective efficacy within classroom teaching teams. Finally, we highlight states that require salary parity with their K-3 counterparts for all members of a teaching team. We believe this is the foundation to creating an environment in which preschool educators have the ability to work collaboratively within the classroom.

## Methods

This paper examines the general tendencies and variations in policies across preschool programs in the United States that address the qualifications requirements and professional development supports for preschool lead and assistant teachers in state-funded

preschool programs. It also explores salaries, benefits, and working conditions for these two positions. The paper addresses the implications of all these policies for how staff work together as teams, including provisions for paid planning time and impacts on teacher well-being and retention.

Data for this paper were collected through a variety of sources, beginning with data presented in the National Institute for Early Education Research's (NIEER) 2021 State Preschool Yearbook (Yearbook). The Yearbook is an annual survey of state-funded pre-K programs that provides detailed information on trends in state preschool policies, including the required qualifications of assistant teachers prior to employment in state-funded preschool, policies that support professional development for preschool lead and assistant teachers, and compensation policies for lead and assistant teachers (Friedman-Krauss et al., 2022). In addition to NIEER's narrative Yearbook report, an accompanying appendix provides data tables for each state's preschool program organized by topic. The narrative and data tables were analyzed to understand the degree to which each state pre-K program addressed assistant teacher policies in three areas:

- qualification requirements;
- professional development opportunities; and
- salaries and benefits.

Each state that operates a state-funded preschool program develops policies that specify how a preschool classroom operates, such as the number of children in the classroom and what curriculum, if any is required. In addition, these policies address the workforce, include pre-employment qualifications, minimum degrees, required ongoing professional development support the teaching staff must meet. Teaching staff typically refers to both the lead and assistant teacher in the preschool classroom. During the 2020–2021 school year, 18 state preschool programs met NIEER's professional development benchmark (see Table 1). For the 17 programs that were still in operation during 2022–2023 school year,<sup>2</sup> the authors reviewed their implementation manuals, policy guidance, and/or regulatory legislation in Fall 2022.<sup>3</sup> These states were selected for further review because we believe that these policies exemplified a commitment to developing the whole teaching team, rather than focusing on just lead teachers, which is common (Friedman-Krauss et al., 2022).

These publicly available implementation manuals were examined to determine if there were policies in place that provided or supported opportunities for teaching teams to learn together, supported reducing wage inequities between lead and assistant teachers, and/or provided strategies for them to meet qualification requirements. For each of the 17 programs, the state agency that oversaw the program, the state's licensing agency that regulates the health and safety of nonpublic school settings, and the state's lead education agency were identified with help from the Yearbook. The websites for these various state agencies were reviewed in the fall of 2022 to determine what policies existed

<sup>2</sup> The 2020–2021 school year was the last year of funding for the Missouri Preschool Program. Therefore, it was not included for additional analysis.

<sup>3</sup> Citations for each states' implementation manual(s), policy guidance, and/or regulatory legislation are included in the References section and cited when necessary.

**Table 1** Teacher and assistant teacher professional development requirements in each state-funded preschool program (2020–2021 school year)

State and preschool program(s)	Lead teacher requirements: public schools	Lead teacher requirements: nonpublic schools	Assistant teacher requirement: public schools	Assistant teacher requirement: nonpublic schools	Meets NIEER Yearbook benchmark
Alabama First Class Pre-K	30 h/year PD plans Coaching	30 h/year PD plans Coaching	20 h/year PD plans Coaching	20 h/year PD plans Coaching	Yes
Alaska AK Pre-Elementary Programs	6 credit hours/5 years PD plans for some	6 credit hours/5 years PD plans for some	PD plans for some	PD plans for some	No
Arizona Quality First Scholarships	18 h/year	18 h/year	18 h/year	18 h/year	No
Arkansas Arkansas Better Chance/Arkansas Better Chance for School Success	30 h/year PD plans	30 h/year	30 h/year	30 h/year	No
California*					
CA State Preschool Program (CSPP)	105 h/5 years PD plans for some	105 h/5 years PD plans for some	105 h/5 years PD plans for some	105 h/5 years PD plans for some	No
CA Transitional Kindergarten (TK) Program	PD plans for some Coaching for some	NA	PD plans for some Coaching for some	NA	No
Colorado Colorado Pre-school Program	15 h/year	15 h/year	15 h/year	15 h/year	No
Connecticut*					
CT Child Day Care Contracts (CDCC)	NA	PD 1% of total work hours PD plans for some	NA	PD 1% of total work hours PD plans for some	No
CT School Readiness (SR)	PD 1% of total work hours PD plans for some	PD 1% of total work hours PD plans for some	PD 1% of total work hours PD plans for some	PD 1% of total work hours PD plans for some	No
CT Smart Start	PD plans	NA	-	NA	No
Delaware DE Early Childhood Assistance Program (ECAP)	90 h/5 years PD plans Coaching	18 h/year PD plans Coaching	15 h/year PD plans Coaching	18 h/year PD plans Coaching	Yes
District of Columbia DC Universal Pre-K	25 h/year (DCPS only) Coaching (DCPS only)	30 h/year Coaching	6 days/year (DCPS only)	21 h/year Coaching	No
Florida** FL Voluntary Prekindergarten Program	120 h/5 years PD plans for some	10 h/year PD plans for some	PD plans for some	PD plans for some	No
Georgia GA's Pre-K Program	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes

**Table 1** (continued)

State and preschool program(s)	Lead teacher requirements: public schools	Lead teacher requirements: nonpublic schools	Assistant teacher requirement: public schools	Assistant teacher requirement: nonpublic schools	Meets NIEER Yearbook benchmark
Hawaii*					
HI's Executive Office on Early Learning Public Pre-kindergarten Program	60 h/year PD plans Coaching	NA	25 h/year PD plans Coaching	NA	Yes
HI State Public Charter School Early Learning Program	50 h/year PD plans Coaching	NA	30 h/year PD plans Coaching	NA	Yes
Illinois IL Preschool for All and Preschool Expansion	120 h/5 years PD plans Coaching for some	120 h/5 years PD plans Coaching for some	PD plans Coaching for some	PD plans Coaching for some	No
Iowa*					
IA Shared Visions (SV)	Hours based on program standards PD plans Coaching for some	Hours based on program standards PD plans	Hours based on program standards PD plans	Hours based on program standards PD plans	No
IA Statewide Voluntary Preschool Program (SWVPP)	PD plans Coaching	PD plans	PD plans	PD plans	No
Kansas Preschool Offered by Public School Districts	15 h/year PD plans Coaching for some	15 h/year PD plans Coaching for some	15 h/year	15 h/year	No
Kentucky KY Preschool Program	24 h/year PD plans Coaching for some	24 h/year	18 h/year	18 h/year	No
Louisiana*					
LA 8(g) Student Enhancement Block Grant Program	18 h/year	NA	18 h/year	NA	No
LA Cecil J. Picard LA 4 Early Childhood Program (LA 4)	18 h/year	NA	18 h/year	NA	No
LA Nonpublic School Early Childhood Development Program (NSECD)	NA	18 h/year	NA	18 h/year	No
Maine ME Public Pre-school Program	6 credit hours/5 years PD plans	6 credit hours/5 years PD plans	-	-	No
Maryland MD Prekindergarten Program	6 credit hours/5 years PD plans	6 credit hours/5 years PD plans	24 h/year PD plans	24 h/year PD plans	No

**Table 1** (continued)

State and preschool program(s)	Lead teacher requirements: public schools	Lead teacher requirements: nonpublic schools	Assistant teacher requirement: public schools	Assistant teacher requirement: nonpublic schools	Meets NIEER Yearbook benchmark
Massachusetts*					
MA Universal Pre-Kindergarten (UPK)	NA	20 h/year	NA	20 h/year	No
MA Chapter 70	150 PD points/5 years PD plans	NA	-	NA	No
Michigan*					
MI Great Start Readiness Program (GSRP)	16 h/year PD plans Coaching	16 h/year PD plans Coaching	16 h/year PD plans Coaching	16 h/year PD plans Coaching	Yes
MI Developmental Kindergarten (DK)	150 h/5 years PD plans for some Coaching for some	NA	-	NA	No
Minnesota*					
MN Head Start	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
MN Voluntary Prekindergarten and School Readiness Plus (VPK/SRP)	10 h/year; 125 h/5 years (licensed teachers only) PD plans Coaching	10 h/year; 125 h/5 years (licensed teachers only) PD plans Coaching	10 h/year Coaching	10 h/year Coaching	No
Mississippi MS Early Learning Collaborative	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
Missouri*					
MO Preschool Program (PP)	22 h/year PD plans Coaching	22 h/year PD plans Coaching	22 h/year PD plans Coaching	22 h/year PD plans Coaching	Yes
MO Pre-K Foundation Formula (Pre-K FF)	30 h/year (teachers years 1–4); 15 h/year (teachers year 5 until exempt) PD plans for some Coaching	NA	-	NA	No
Nebraska NE Early Childhood Education Program	15 h/year PD plans Coaching for some	15 h/year PD plans Coaching for some	15 h/year PD plans	15 h/year PD plans	No
Nevada NV Ready! State Pre-K	6 credit hours/5 years	24 h/year	6 credit hours/5 years	24 h/year	No
New Jersey*					
NJ Preschool Expansion Program (Former Abbott Preschool Program)	100 h/5 years PD plans Coaching	100 h/5 years PD plans Coaching	100 h/5 years Coaching	100 h/5 years Coaching	No

**Table 1** (continued)

State and preschool program(s)	Lead teacher requirements: public schools	Lead teacher requirements: nonpublic schools	Assistant teacher requirement: public schools	Assistant teacher requirement: nonpublic schools	Meets NIEER Yearbook benchmark
NJ Former Non-Abbott Early Childhood Program Aid (ECPA)	100 h/5 years PD plans Coaching	100 h/5 years PD plans Coaching	100 h/5 years Coaching	100 h/5 years Coaching	No
NJ Former Early Launch to Learning Initiative (ELLI)	100 h/5 years PD plans Coaching	100 h/5 years PD plans Coaching	100 h/5 years Coaching	100 h/5 years Coaching	No
New Mexico NM PreK (4s) and NM Early PreK (3s) and NM Mixed Age PreK (3s & 4s)	Minimum 20 h/year PD plans Coaching	24 h/year PD plans Coaching	Minimum 20 h/year PD plans Coaching	24 h/year PD plans Coaching	Yes
New York NY State Administered Prekindergarten Program	175 h/5 years Coaching for some	175 h/5 years	–	–	No
North Carolina NC Pre-Kindergarten Program	21 h/year PD plans Coaching	21 h/year PD plans Coaching	5 h/year PD plans	5 h/year PD plans	No
North Dakota ND Early Childhood Education Grant Program	Varies by teaching license held PD plans	Varies by teaching license held	Varies by teaching license held	Varies by teaching license held	No
Ohio OH Early Childhood Education	20 h/2 years PD plans	20 h/2 years PD plans	20 h/2 years PD plans	20 h/2 years PD plans	No
Oklahoma OK Early Childhood Four-Year-Old Program	15 h/year PD plans Coaching	NA	15 h/year PD plans Coaching	NA	Yes
Oregon* OR Pre-Kindergarten (OPK)	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
OR Preschool Promise	20 h/year PD plans for some	20 h/year PD plans for some	20 h/year PD plans for some	20 h/year PD plans for some	No
Pennsylvania* PA Ready to Learn Block Grant (RTL)	180 h/5 years PD plans for some Coaching for some	180 h/5 years	–	–	No
PA Head Start Supplemental Assistance Program (HSSAP)	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
PA Kindergarten for Four-Year-Olds and School-Based Pre-K (K4/SBPK)	180 h/5 years (SBPK public teachers only) PD plans for some Coaching for some	PD plans for some Coaching for some	–	PD plans for some Coaching for some	No

**Table 1** (continued)

State and preschool program(s)	Lead teacher requirements: public schools	Lead teacher requirements: nonpublic schools	Assistant teacher requirement: public schools	Assistant teacher requirement: nonpublic schools	Meets NIEER Yearbook benchmark
PA Pre-K Counts (PKC)	180 h/5 years PD plans for some Coaching for some	180 h/5 years PD plans for some Coaching for some	24 h/year PD plans for some	24 h/year PD plans for some	No
Rhode Island RI State Pre-kindergarten Program	20 h/year PD plans Coaching	20 h/year PD plans Coaching	20 h/year PD plans Coaching	20 h/year PD plans Coaching	Yes
South Carolina SC Child Early Reading Development and Education Program and EIA/4K	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
Tennessee TN Voluntary Pre-K (VPK)	30 h/year PD plans Coaching	30 h/year PD plans Coaching	30 h/year PD plans Coaching	30 h/year PD plans Coaching	Yes
Texas TX Public School Prekindergarten	30 h/year PD plans Coaching for some	30 h/year PD plans Coaching for some	–	–	No
Utah Expanded Student Access to High Quality School Readiness Programs (ESA)	Coaching	Coaching	–	–	No
Vermont VT Universal Prekindergarten Education (Act 166)	9 credit hours/7 years PD plans Coaching for some	15 h/year PD plans Coaching for some	15 h/year PD plans Coaching for some	15 h/year PD plans Coaching for some	No
Virginia VA Preschool Initiative	15 h/school year	15 h/school year	15 h/school year	15 h/school year	No
Washington* Early Childhood Education and Assistance Program (ECEAP)	20 h/year PD plans Coaching	20 h/year PD plans Coaching	15 h/year PD plans Coaching	15 h/year PD plans Coaching	Yes
Washington Transitional Kindergarten (TK)	100 h/5 years PD plans Coaching	NA	N/A	NA	Yes
West Virginia WV Universal Pre-K	15 h/year PD Plans Coaching for some	15 h/year PD Plans Coaching for some	15 h/year PD Plans Coaching for some	15 h/year PD Plans Coaching for some	No
Wisconsin WI Four-Year-Old Kindergarten (4K)	PD plans	Coaching for some		Coaching for some	No

\*The state has multiple programs. Each program's requirement is included

\*\*Data are from the 2019–2020 school year

Friedman-Krauss et al. (2022)



for teaching staff related to qualifications and ongoing requirements in the state-funded preschool programs. These cases are woven into the discussion section to provide contextual examples of ways state preschool programs have supported assistant teachers in particular. Finally, the unique characteristics of assistant teachers and the contribution they make to the teaching team are presented in the last section, *Creating a More Diverse and Responsive Preschool Classroom*. In this section, we describe how the attributes of both lead and assistant teachers contribute to more inclusive environments that are responsive to the children in their classrooms.

## Results and discussion

### Qualification requirements

Lead and assistant teacher qualifications varied widely both nationally and internationally. In the United States in 2021, more than half of the programs (36 of 63, 57%) required lead teachers to have a bachelor's degree, and over 80 percent (51 of 63 programs) required lead teachers to have specialized training in early childhood education, child development, or another related field. However, only 19 out of 63 preschool programs (30%) had policies that required an assistant teacher, in all settings in which the program operated, to have a Child Development Associate (CDA) credential or an equivalent credential prior to employment (see Table 2). Only 11 preschool programs in 10 states required a minimum of a bachelor's degree and specialized training in preschool for lead teachers and required a CDA or equivalent for assistant teachers in all settings.

Similarly, in most European countries, the entity with the highest level of authority does not set minimum qualifications for assistant teachers (Peeters, et al., 2016). The European Commission (2021) acknowledges this lack of requirements gives more flexibility to employers; however, it may also lead to assistants having a weaker attachment to the position, and thus create greater turnover.

The 2018 Organisation for Economic Co-operation and Development (OECD) Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) is an international, large-scale survey of staff and leaders in early childhood education and care (ECEC) programs, including pre-primary settings, which would be comparable to preschool in the United States (Building a High-Quality Early Childhood Education and Care Workforce, 2020). TALIS Starting Strong collects workforce data in nine participating countries: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway, and Turkey. The researchers defined the assistant teachers' role as supporting the group teacher (OECD, 2020).<sup>4</sup> The percentage of teachers and assistant teachers who completed an education or training program focused on working with children as part of their initial preparation is higher among teachers and assistants with more than three years of experience than among new teachers and assistant teachers (OECD, 2020). When comparing assistant teachers to lead teachers, it is more likely that lead teachers (both experienced and novice) completed such coursework. In Germany, this difference was quite small. However, in other countries

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<sup>4</sup> Iceland, Japan, and Turkey did not define assistants in this way and were not included in comparisons.

**Table 2** Teacher and assistant teacher credentials requirements in each state-funded preschool program (2020–2021 school year)

State and preschool program(s)	Lead teacher requirements: public schools		Lead teacher requirements: nonpublic schools		Assistant teacher requirement: public schools (CDA or above)	Assistant teacher requirement: nonpublic schools (CDA or above)
	BA or above	ECE specialized training	BA or above	ECE specialized training		
Alabama First Class Pre-K	✓	✓	✓	✓	✓	✓
Alaska AK Pre-Elementary Programs	✓	✓	✓			
Arizona Quality First Scholarships						
Arkansas Arkansas Better Chance/Arkansas Better Chance for School Success		✓		✓	✓	✓
California*						
CA State Pre-school Program (CSPP)		✓		✓		
CA Transitional Kindergarten (TK) Program	✓		NA	NA		NA
Colorado Colorado Preschool Program		✓		✓		
Connecticut*						
CT Child Day Care Contracts (CDCC)	NA	NA		✓	NA	
CT School Readiness (SR)		✓		✓		
CT Smart Start	✓	✓	NA	NA		NA
Delaware DE Early Childhood Assistance Program (ECAP)	✓	✓		✓	✓	✓
District of Columbia DC Universal Pre-K (DCPS only)	✓		✓			✓
Florida** FL Voluntary Prekindergarten Program						
Georgia GA's Pre-K Program	✓	✓	✓	✓	✓	✓
Hawaii*						
HI's Executive Office on Early Learning Public Prekindergarten Program	✓	✓	NA	NA	✓	NA
HI State Public Charter School Early Learning Program***		✓	NA	NA	✓	NA
Illinois IL Preschool for All and Preschool Expansion	✓	✓	✓	✓		

**Table 2** (continued)

State and preschool program(s)	Lead teacher requirements: public schools		Lead teacher requirements: nonpublic schools		Assistant teacher requirement: public schools (CDA or above)	Assistant teacher requirement: nonpublic schools (CDA or above)
	BA or above	ECE specialized training	BA or above	ECE specialized training		
Iowa*						
IA Shared Visions (SV)	✓	✓		✓		
IA Statewide Voluntary Pre-school Program (SWVPP)	✓	✓	✓	✓		
Kansas Preschool Offered by Public School Districts	✓		✓			
Kentucky KY Preschool Program	✓	✓	✓	✓		
Louisiana*						
LA 8(g) Student Enhancement Block Grant Program	✓	✓	NA	NA		NA
LA Cecil J. Picard LA 4 Early Childhood Program (LA 4)	✓	✓	NA	NA		NA
LA Nonpublic School Early Childhood Development Program (NSECD)	NA	NA	✓	✓	NA	✓
Maine ME Public Pre-school Program	✓	✓	✓	✓	✓	✓
Maryland MD Prekindergarten Program	✓	✓	✓	✓		
Massachusetts*						
MA Universal Pre-Kindergarten (UPK)	NA	NA		✓	NA	
MA Chapter 70	✓	✓	NA	NA		NA
Michigan*						
MI Great Start Readiness Program (GSRP)	✓	✓	✓	✓	✓	✓
MI Developmental Kindergarten (DK)	✓		NA	NA		NA
Minnesota*						
MN Head Start	✓	✓		✓	✓	✓
MN Voluntary Prekindergarten and School Readiness Plus (VPK/SRP)						
Mississippi MS Early Learning Collaborative	✓	✓	✓	✓	✓	✓

**Table 2** (continued)

State and preschool program(s)	Lead teacher requirements: public schools		Lead teacher requirements: nonpublic schools		Assistant teacher requirement: public schools (CDA or above)	Assistant teacher requirement: nonpublic schools (CDA or above)
	BA or above	ECE specialized training	BA or above	ECE specialized training		
Missouri*						
MO Preschool Program (PP)	✓	✓	✓	✓	✓	✓
MO Pre-K Foundation Formula (Pre-K FF)	✓	✓	NA	NA	✓	NA
Nebraska	✓	✓	✓	✓		
NE Early Childhood Education Program						
Nevada		✓		✓		
NV Ready! State Pre-K***						
New Jersey*						
NJ Preschool Expansion Program (Former Abbott Pre-school Program)	✓	✓	✓	✓		
NJ Former Non-Abbott Early Childhood Program Aid (ECPA)	✓	✓	✓	✓		
NJ Former Early Launch to Learning Initiative (ELLI)	✓	✓	✓	✓		
New Mexico	✓	✓		✓	✓	✓
NM PreK (4s) and NM Early PreK (3s) and NM Mixed Age PreK (3s & 4s)						
New York	✓	✓	✓	✓		
NY State Administered Prekindergarten Program						
North Carolina	✓	✓	✓	✓		
NC Pre-Kindergarten Program						
North Dakota	✓		✓			
ND Early Childhood Education Grant Program						
Ohio		✓		✓		
OH Early Childhood Education						
Oklahoma	✓	✓	NA	NA		NA
OK Early Childhood Four-Year-Old Program						
Oregon*		✓		✓	✓	✓
OR Pre-Kindergarten (OPK)						
OR Preschool Promise		✓		✓		
Pennsylvania*	✓	✓		✓		
PA Ready to Learn Block Grant (RTL)						

**Table 2** (continued)

State and preschool program(s)	Lead teacher requirements: public schools		Lead teacher requirements: nonpublic schools		Assistant teacher requirement: public schools (CDA or above)	Assistant teacher requirement: nonpublic schools (CDA or above)
	BA or above	ECE specialized training	BA or above	ECE specialized training		
PA Head Start Supplemental Assistance Program (HSSAP)		✓		✓	✓	✓
PA Kindergarten for Four-Year-Olds and School-Based Pre-K (K4/SBPK)			✓			
PA Pre-K Counts (PKC)	✓	✓	✓	✓		
Rhode Island RI State Prekindergarten Program	✓	✓	✓	✓	✓	✓
South Carolina SC Child Early Reading Development and Education Program and EIA/4K	✓	✓		✓		
Tennessee TN Voluntary Pre-K (VPK)	✓	✓	✓	✓		
Texas TX Public School Prekindergarten	✓	✓	✓	✓		
Utah Expanded Student Access to High Quality School Readiness Programs (ESA)						
Vermont VT Universal Pre-kindergarten Education (Act 166)	✓	✓		✓		
Virginia VA Preschool Initiative	✓	✓		✓		
Washington* Early Childhood Education and Assistance Program (ECEAP)		✓		✓	✓	✓
Washington Transitional Kindergarten (TK)	✓		NA	NA		NA
West Virginia WV Universal Pre-K	✓	✓	✓	✓	✓	✓
Wisconsin WI Four-Year-Old Kindergarten (4K)	✓	✓	✓	✓		

\*The state has multiple programs. Each program's requirement is included

\*\*Data are from the 2019–2020 school year

\*\*\* Even though a BA is required, there were a large percentage of teachers who did not have a BA or higher at the time of reporting

Source: Friedman-Krauss et al. (2022)

surveyed, this difference was notable, such as Norway where novice (41.7%) and experienced (60.1%) assistant teachers participated less often than lead teachers (97.7% and 99%, respectively) (OECD, 2020).

Qualification policies within states and between settings also tend to vary widely, meaning that two children attending preschool in the same state or district could have teachers with dramatically different qualifications. For example, the District of Columbia has three sectors for preschool: DC Public Schools (DCPS), Community-based Organizations (CBOs), and Public Charter Schools (PCS) (Friedman-Krauss et al., 2022). The requirements are different for assistant teachers in each of the three sectors. Assistant teachers working in CBOs are required to have an associate degree and a minimum of nine credit hours in early childhood education; DCPS assistants must hold a high school diploma and pass the Paraprofessional Assessment; and PCS have independent authority to establish requirements for assistants, consistent with their charters (Friedman-Krauss et al., 2022). Of those requirements, only assistant teachers in CBOs would meet the minimum requirements for NIEER's assistant teacher benchmark.

The CDA is a credential that was developed by the Council for Professional Recognition to assess and credential early childhood educators. The CDA is one of the most widely recognized early childhood credentials and is the minimum education requirement for center-based Head Start preschool assistant teachers (USD HHS, 2021). Over the years the CDA-required components have evolved (Davis, 2015). Currently, requirements include formal education training, a verification visit, and an exam. Since 1976, over 800,000 educators have received a CDA (Council for Professional Recognition, n.d.).

In some cases, states allow both lead and assistant teachers to begin working before they achieve the required credentials. Some states in the United States and a few European countries have implemented various pathways to support educators' post-employment as they attain these requirements. Several state-funded preschool programs—such as those operating in Delaware, Minnesota, Oregon, Pennsylvania, and Washington—work in collaboration with or design their programs to model the federally funded Head Start program. The Head Start Performance Standards require programs to implement a professional development program for all staff that is systematic and “attached to academic credit as appropriate.” (USD HHS, 2021, p. 59).

Several states have developed innovative models that address both assistant and lead teachers in developing career pathways and/or providing financial support to complete credentials. The West Virginia Department of Education (WVDE) set policies that all preschool assistant teachers must hold an Early Childhood Classroom Assistant Teacher (ECCAT) authorization (WVDE, n.d.). An assistant may be hired with temporary authorization upon hire, but progress must be made, and it is only valid for three years. To support assistant teachers in meeting qualifications, there are three pathways: (1) obtaining a CDA; (2) attending the WVDE E-Learning Series; and (3) participating in the West Virginia Apprenticeship for Child Development Specialist (ACDS) registered apprenticeship program with the US Department of Labor (WVDE, 2021). The WVDE E-Learning Series is offered at no charge to schools, programs, and assistant teachers, and covers content specifically geared toward

assistants. Finally, while the ACDS program does not directly result in college credits for participants, it has articulation agreements with institutes of higher education that offer an associate degree in early childhood.

The state of Washington developed a set of stackable early childhood certificates that current and future educators can earn. These certificates build upon one another, leading to an associate degree in early childhood education (ECE), and may be transferred to other institutes of higher education throughout the state if a student enrolls at a different school or seeks a different ECE position (Washington State Department of Early Learning, n.d.). Rhode Island's teacher assistant career pathway includes formal education, experience, credentials, and professional activities across three levels (RIDE, n.d.). The pathways are not exclusive to the state preschool program, but the entire birth to kindergarten entry assistant teacher workforce.

New Mexico's *Professional Development Pathway* includes a wage supplement that is offered to anyone earning less than \$16/hour (New Mexico Early Childhood Education & Care Department [NM ECECD], 2022). To address the shortage of early childhood teachers who have completed early education training or certification, Hawaii established a stipend program to cover tuition costs inclusive of both lead and assistant teachers (A Bill for an Act Relating to Access to Learning, 2021). To receive the funding, teachers must fulfill a two-year follow-up commitment to working in an early education program.

Internationally, one of the recommendations of the European Commission's (2021) working group is for countries to create more pathways, including those that lead to "qualified status" for assistants through internships and apprenticeships. Norway, Sweden, and Denmark have not only incorporated work experience into training and education programs but have also connected these strategies to supporting assistants in obtaining bachelor's degrees (European Commission, 2021).

### **Professional development opportunities**

Effective strategies to develop preschool teacher skills should explore the relationship and opportunities between formal and informal learning (NM ECECD, 2020). Ongoing professional development not only allows educators to stay current in implementing best practices but can also serve as a tool to help retrain staff through building a sense of identity and community, promoting opportunities for career advancement, and improving overall job satisfaction (OECD, 2019; Totenhagen et al., 2016; Thorpe et al., 2020).

Similar to lead and assistant teacher qualification requirements, there are differences in expectations for participation in professional development between these two positions. For example, all state preschool programs have an expectation for lead teachers to participate in professional development training or coaching, but nine programs do not have *any* professional development expectations for assistant teachers. In addition, there are variations, such as those states that do not require any ongoing training for assistants (e.g., programs that operate in Alaska, Florida, Illinois, Maine, Massachusetts, Michigan, New York, Texas, Utah, and Wisconsin) or the number of hours is much lower for assistant teachers (e.g., Hawaii requires lead teachers to participate in 60 h per year as compared to 25 h per year for assistant teachers).

NIEER defines comprehensive professional development as having three components: annual in-service training for all teachers and assistants (at least 15 h per year), individual professional development plans for all teachers and assistants, and coaching for at least lead teachers (Friedman-Krauss et al., 2022). In 2021, 18 state preschool programs met NIEER's professional development benchmark (see Table 1). However, there is some variation within the policies, such as the frequency or content of the professional development trainings and supports offered to encourage participation.

For example, Kentucky requires an assistant teacher to have weekly contact and consultations with a *qualified professional* in such as areas as curriculum and teacher performance standards (Preschool Associate Teachers, 2021). New Mexico requires its publicly funded preschool teachers to complete 24 clock hours annually (Friedman-Krauss et al., 2022). The courses are designed at the individual teaching level and are separated by position (NM ECECD, 2022). To support assistant teachers in participating in professional development opportunities, Georgia's state-funded *Pre-K for All* specifies that assistant teachers are paid for 10 days of professional development that may include planning, preschool training, and in-service days (GA DECAL, n.d.).

Examining programs internationally, the TALIS Starting Strong study also found that early childhood staff who are encouraged to collaborate in professional practices are also more likely to participate in training activities (OECD, 2019). Many European Union countries (like states in the U.S.) do not fund non-teaching time for staff (Peeters, et al., 2016). One strategy that may encourage assistant teacher participation in professional development opportunities is to develop policies that fund non-teaching or non-child contact time for teachers, including assistants. Legislation in Slovenia specifies that lead and assistant preschool teachers work 40 h per week, with 30 and 35 h of instruction time weekly, respectively. The remaining hours could be used for other teaching duties, as well as training, professional development, and team planning time (European Commission, 2023).

Some preschool programs in the United States have their professional development structured in a way that not only requires assistant teachers to participate in education opportunities, including coaching, but also encourages a system in which teachers and assistants have a chance to work in multi-professional teams. For example, in Michigan, the *Great Start Reading Program* (GSRP) assigns an Early Childhood Specialist to each classroom who serves as a coach not to individual teachers but rather to intentionally support the teaching team. During classroom visits, the Early Childhood Specialist records the session on a form that specifies the method of feedback for both the lead and assistant teachers (MDE, 2021). Similarly, the Alabama coaching model is designed for classrooms, not individual teachers, separated by position (ADECE, 2021; ADECE, 2022). In Illinois, even though assistant teachers are not required to participate in a set number of training hours, assistant teachers must work under the direct supervision of a licensed lead teacher (Friedman-Krauss et al., 2022).

There are differences in the professional development support that lead teachers are afforded by policy as compared to that for assistants in preschool programs. It is important to note, that programs may implement and be more receptive in practice, however, it is a decision program leaders make, not something that is required of them in order to receive and maintain funding. Lead teachers are more likely than assistants to be



specified in policies that require ongoing professional development, including participation in annual training or workshops, required coaching or job-embedded training, and completion of individualized professional development plans. While assistant teachers may be offered similar professional development opportunities as lead teachers within individual programs, the lack of state-level policy focused on assistant teachers' professional development plans and coaching, for example, likely results in disparities both within and across programs in a state. This is also evident in the TALIS Starting Strong study that found across the nine countries in the survey, fewer assistants than teachers participate in in-service professional development activities, especially in Chile and Israel (OECD, 2020, 2022).

It is concerning that assistant teachers are not always included in ongoing professional development, either in state policy or program practice. Numerous research studies indicate that regular professional learning, including coaching or job-embedded training, supports teaching practices that correlate to high-quality experiences for children (e.g., Biancarosa et al., 2010; Eurofound, 2015; Institute of Medicine and National Research Council, 2015; Kraft et al., 2018; Minervino, 2014; Weber & Trauten, 2008; Whitebook & Bellm, 2013; Weiland, 2016; Yoshikawa et al., 2013). In addition, individualized professional development is also an effective component (Pianta et al., 2016; Weiland, 2016; Yoshikawa, et al., 2013). Jacoby (2021) goes a step further, suggesting the creation of professional development content specifically for assistants, including them in targeted coaching, and creating professional learning communities for assistants. In assessing assistant teachers' job satisfaction, being able to participate in coaching is an important factor, in addition to being part of collegial networks (Cramer & Cappela, 2019).

### Salaries and benefits

In the United States, preschool programs have slowly been moving to provide salary equity between teachers in preschool education as compared to those who work in the early elementary grades (kindergarten to grade 3, or K-3). However, parity in salary, as well as other benefits, is typically limited to lead teachers (see Table 3). Very few state preschool programs can report the average salary for lead teachers and even fewer can report this information for assistant teachers. One exception is Michigan's state-funded *Great Start Reading Program* (GSRP) which not only annually reports salaries for assistants by program location (i.e., public school or nonpublic school setting), but also whether they receive other benefits such as health insurance, sick days, vacation days, etc. (Wu et al., 2022). Unfortunately, this problem is not exclusive to preschool programs in the United States. In many European countries, there is a hierarchy among early childhood workers that views assistant teachers as low-status workers who are compensated accordingly (Van Laere et al., 2012). A study on competence requirements in early childhood education and care, commonly referred to as the CoRe study, consisted of a research project that examined the early childhood system in 15 European Union member countries (Urban et al., 2011). One of the findings from the CoRe study was that assistant teachers were often overlooked, remaining "invisible" in both research and policy. However, to be a competent early childhood system, the working conditions, including wages and supports for all individuals within the system must be considered.



**Table 3** (continued)

State and preschool program(s)	Lead teacher requirements: same starting salary		Assistant teacher requirements: same starting salary		Lead teacher requirements: same salary schedule		Assistant teacher requirements: same salary schedule		Lead teacher requirements: health care		Assistant teacher requirements: health care	
	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic
District of Columbia DC Universal Pre-K	✓ (DCPS only)	✓	✓ (DCPS only)	✓	✓ (DCPS only)	✓	✓ (DCPS only)	✓ (DCPS only)	✓ (DCPS only)	✓ (DCPS only)	✓ (DCPS only)	✓ (DCPS only)
Florida** FL Voluntary Prekindergarten Program												
Georgia GA's Pre-K Program	✓		✓	✓	✓				✓			
Hawaii* HI's Executive Office on Early Learning Public Prekindergarten Program (EOEL)	✓	NA	✓	NA	✓	NA	✓	NA	✓	NA	✓	NA
HI State Public Charter School Early Learning Program (SPCSP)	✓	NA	✓	NA	✓	NA	✓	NA	✓	NA	✓	NA
Illinois IL Preschool for All and Preschool Expansion												
Iowa* IA Shared Visions (SV)	✓ (some)				✓ (some)				✓ (some)			
IA Statewide Voluntary Preschool Program (SWVPP)	✓				✓				✓			

**Table 3** (continued)

State and preschool program(s)	Lead teacher requirements: same starting salary		Assistant teacher requirements: same starting salary		Lead teacher requirements: same salary schedule		Assistant teacher requirements: same salary schedule		Lead teacher requirements: health care		Assistant teacher requirements: health care	
	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic
Kansas Preschool Offered by Public School Districts												
Kentucky KY Preschool Program	✓		✓		✓		✓		✓		✓	
Louisiana*												
LA 8(g) Student Enhancement Block Grant Program		NA		NA		NA		NA		NA		NA
LA Cecil J. Picard LA 4 Early Childhood Program (LA 4)		NA		NA		NA		NA		NA		NA
LA Nonpublic School Early Childhood Development Program (NSECD)	NA		NA		NA		NA		NA		NA	
Maine ME Public Preschool Program	✓				✓				✓			
Maryland MD Prekindergarten Program	✓	✓ (some)			✓				✓			
Massachusetts*												
MA Universal Pre-Kindergarten (UPK)	NA		NA		NA		NA		NA		NA	
MA Chapter 70		NA		NA		NA		NA		NA		NA

Table 3 (continued)

State and preschool program(s)	Lead teacher requirements: same starting salary		Assistant teacher requirements: same starting salary		Lead teacher requirements: same salary schedule		Assistant teacher requirements: same salary schedule		Lead teacher requirements: health care		Assistant teacher requirements: health care	
	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic
Michigan*												
MI Great Start Readiness Program (GSRP)												
MI Developmental Kindergarten (DK)	✓	NA	NA	NA	✓	NA	✓	NA	✓	NA	NA	NA
Minnesota*												
MN Head Start												
MN Voluntary Prekindergarten and School Readiness Plus (VPK/SRP)	✓	✓										
Mississippi MS Early Learning Collaborative	✓		✓		✓		✓		✓		✓	
Missouri*												
MO Preschool Program	✓				✓							
MO Pre-K Foundation Formula (Pre-K FF)		NA	NA			NA		NA		NA		NA
Nebraska NE Early Childhood Education Program												
Nevada NV Ready! State Pre-K	✓	✓	✓		✓	✓			✓			

**Table 3** (continued)[illegible]

**Table 3** (continued)

State and preschool program(s)	Lead teacher requirements: same starting salary		Assistant teacher requirements: same starting salary		Lead teacher requirements: same salary schedule		Assistant teacher requirements: same salary schedule		Lead teacher requirements: health care		Assistant teacher requirements: health care	
	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic
Oklahoma OK Early Childhood Four-Year-Old Program		NA		NA		NA		NA		NA		NA
Oregon*												
OR Pre-Kindergarten (OPK)	✓	✓	✓	✓								
OR Preschool Promise (PP)												
Pennsylvania*												
PA Ready to Learn Block Grant (RTL)												
PA Head Start Supplemental Assistance Program (HSSAP)												
PA Kindergarten for Four-Year-Olds and School-Based Pre-K (K4/SBPK)												
PA Pre-K Counts (PKC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rhode Island RI State Prekindergarten Program												
South Carolina SC Child Early Reading Development and Education Program and EIA/4K	✓		✓		✓		✓		✓		✓	
Tennessee TN Voluntary Pre-K (VPK)	✓				✓		✓		✓		✓	

**Table 3** (continued)

State and preschool program(s)	Lead teacher requirements: same starting salary		Assistant teacher requirements: same starting salary		Lead teacher requirements: same salary schedule		Assistant teacher requirements: same salary schedule		Lead teacher requirements: health care		Assistant teacher requirements: health care	
	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic	Public	Nonpublic
Texas TX Public School Prekindergarten	✓				✓				✓		✓	
Utah Expanded Student Access to High Quality School Readiness Programs (ESA)												
Vermont VT Universal Prekindergarten Education (Act 166)	✓		✓		✓		✓		✓		✓	
Virginia VA Preschool Initiative Washington*	✓				✓				✓			
Washington Early Childhood Education and Assistance Program (ECEAP)												
Washington Transitional Kindergarten (TK)	✓	NA			✓	NA		NA	✓	NA		NA
West Virginia WV Universal Pre-K	✓		✓		✓		✓		✓		✓	
Wisconsin WI Four-Year-Old Kindergarten (4K)												

\*The state has multiple programs. Each program's requirement is included

\*\*Data are from the 2019–2020 school year

Source: Friedman-Krauss et al. (2022)



Very few states offer guidance or develop policies for preschool programs on salary parity comparable to their K-3 counterparts. Tennessee is an exception. The state requires its state-funded Voluntary Pre-K (VPK) programs to “[e]nsure that VPK teachers employed by the Grantee and community-based agencies are provided the same employment rights and benefits available to K-12 teachers (planning time and duty-free lunch may occur outside the scheduled 5.5-h instructional day) [...] Ensure salaries for personnel in community-based agencies are reasonably comparable to those currently in effect with the Grantee where the respective VPK program is located...” (Tennessee Department of Education [TDOE], 2019, p. 4). Similarly, the Oregon Pre-Kindergarten program has created a salary scale (minimum and target) by positions (lead or assistant teacher) and qualifications/credentials (Oregon Department of Education [ODE], 2020). In Arkansas, the intent of the legislation was to create salary parity between preschool teachers and K-3 teachers, but program funding has been flat with minimal increases, thus causing the salary scale to vary across the state (Friedman-Krauss et al., 2022). Other states operate preschool programs in multiple sectors, and parity policies vary among them. For example, in the District of Columbia, salary and benefit parity is required for lead teachers in classrooms that operate in DC Public Schools (DCPS), but lead teachers in Community-based Organizations (CBOs) are only required to have salary parity, and Public Charter Schools (PCS) can set their own policies regarding salaries and benefits, and do not have to adhere to the requirements set by the education agency that oversees preschool (Friedman-Krauss et al., 2022).

In most cases, preschool teachers and assistants in public schools receive higher compensation and better benefits than in nonpublic settings, but on the whole, K-3 teachers are paid higher than preschool teachers in any setting. Rhode Island and Georgia are two exceptions. In Rhode Island, the average annual salary of a preschool assistant in a nonpublic setting is \$10,000 higher than the average annual salary of a preschool assistant teacher in a public setting (Friedman-Krauss et al., 2022). Similarly, in Georgia, the starting salary for all of Georgia’s *Pre-K for All* assistant teachers is higher than the starting salary for K-12 educators who serve in assistant roles (Friedman-Krauss et al., 2022). Updated annually, *Pre-K for All*’s policies outline requirements for salary and benefits for both lead and assistant teachers. To ensure equity, any increase in salaries for K-12 teachers in the state budget is also allocated to the preschool budget. In terms of benefits, assistants in public schools receive the same as the K-12 teachers; however, those programs located outside of public schools may determine benefits at the local level, which allows them to align benefit packages with those of other employees.

In some states, the teachers’ unions play a part in negotiating salaries and benefits. For example, all of Hawaii’s lead and assistant teachers work in public school settings and are members of the union with contracts that ensure pay parity with K-3 teachers and assistants (Friedman-Krauss et al., 2022). In some states such as West Virginia, all teachers (lead and assistant) employed as public school employees receive the same salary and fringe benefits as K-12 teachers, as specified in the state code (Friedman-Krauss et al., 2022). However, in nonpublic school settings, state-funded preschool

lead and assistant teachers receive comparable benefits not with K-12 teachers but rather with other employees in the program.

### **Creating a more diverse and responsive preschool classroom**

An ever-expanding body of research suggests that students perform better academically and socially when they are taught by teachers who share their ethnic and/or racial background, or speak the same language spoken in students' homes (e.g., Dee, 2004; Egalite et al., 2015; Lindsay & Hart, 2017; Paschall et al., 2020). Researchers have also examined how teacher–child ethnicity and race match may positively impact family engagement in a Head Start classroom (Markowitz et al., 2020). A longitudinal study of 701 state-funded pre-k classrooms in 11 states found that for Black and Latino children, the racial/ethnic match of the teachers played an important role in teachers' initial perceptions of children, as well as children's academic and social gains during the preschool year (Downer et al., 2016).

Data from the National Survey of Early Care and Education (NSECE) illustrate that the preschool workforce was more racially diverse in 2019 as compared to 2012 (28.4% vs. 13.7%, respectively, were people of color), but less ethnically diverse for those same years (19.7% in 2012 vs. 18.9% in 2019 were Hispanic/Latino) (Greenberg & Luetmer, 2022). An analysis of state workforce registry data in 14 states found that between January 1, 2019 and January 1, 2021, a greater percentage of center-based assistant teachers (46%) than lead teachers (39%) identified as non-white (Mayfield & Cho, 2022). As the population of preschool-aged children in the United States grows more diverse, it is important to recruit, support, and retain assistant teachers, as they are more likely to reflect the ethnic, racial, cultural, and linguistic backgrounds of the children in their classrooms. New Mexico has instituted an incentive payment for educators who are certified as bilingual or multilingual (NM ECED, n.d.). In California, the Early Care and Education Pathways to Success (ECEPTS) apprenticeship programs support both incumbent and future center-based educators, the vast majority of whom are women of color and/or immigrants, to build their skills by providing no-cost college coursework, cohort learning, coaching, and on-the-job training, accompanied by increased compensation as apprentices meet certain milestones (ECEPTS, 2021). Policies and programs that acknowledge the strengths and contributions of assistant teachers and support their skill-building and career advancement are crucial to retaining these teachers in their programs and within the ECE field.

### **Limitations**

The current study attempted to highlight differences between the pre-employment qualifications, and post-employment professional opportunities (including professional learning and compensation) among lead and assistant teachers. It only briefly discussed the content of the training or coaching approaches. It also did not try to evaluate the effectiveness of types or modes of professional development, but rather the policy-directed opportunities to participate by position and collectively. We hope that future research can better understand how policies and investments can be most impactful on enhancing process quality and, in turn, child outcomes.

## Conclusion

This analysis found great variation in the pre-service qualification requirements, in-service professional development provisions, and compensation policies affecting assistant teachers in state-funded preschool programs. Overall, most states have a considerable amount of work to do to ensure more equitable compensation and professional growth opportunities for assistant teachers; however, many states have structures in place regarding lead teachers that could be built upon to apply to assistants as well.

The field of early learning in the United States is in the midst of a workforce crisis, at the time of this study having lost nearly 90,000 early childhood jobs since the onset of the COVID-19 pandemic (CSCCE, 2022). In a recent study that examined Head Start assistant teacher job satisfaction, one of the stressors in the workplace was low wages (Jacoby & Corwin-Renner, 2022). Low wages, lack of benefits, and stressful work environments continue to contribute to the high turnover of early childhood teaching staff, and program administrators struggle to hire and retain this crucial workforce. To address this vital workforce need, policymakers should consider implementing policies and investing in initiatives to (1) provide streamlined, cohesive career pathways with financial supports to increase access to a diverse body of educators; (2) ensure compensation commensurate with credentials, skills, and experience; and (3) support programs in creating collaborative work environments that allow teaching teams to develop curriculum and lesson plans, engage in reflection together about their teaching, and support one another in their professional growth.

When these policies are put into place, there is more likelihood that preschool classrooms will create cultures of collective success and efficacy that encourages collaboration among all teachers. Including both lead and assistant teachers collectively will most likely lead to more cohesive and supportive experiences for children.

## Abbreviations

TALIS Starting Strong Yearbook	2018 OECD Starting Strong Teaching and Learning International Survey
CDA	2021 NIEER's State of Preschool Yearbook
CBOs	Child Development Associate
DCPS	Community-based Organizations
ECCAT	District of Columbia Public Schools
ECE	Early Childhood Classroom Assistant Teacher
ECS	Early Childhood Education
K	Early Childhood Specialist
NIEER	Kindergarten
Pre-K	National Institute for Early Education Research
PCS	Pre-Kindergarten
VPK	Public Charter Schools
TK	Tennessee Voluntary Pre-K
ACDS	Transitional Kindergarten
WVDE	West Virginia Apprenticeship for Child Development Specialist
	West Virginia Department of Education

## Acknowledgements

Not applicable.

## Author contributions

GW: corresponding author, has made substantial contributions to the conception, design of the work, relevant international literature review, and interpretation of the NIEER Yearbook data. KSH compiled the NIEER Yearbook table, supported the analysis of the NIEER data, and was a contributor in writing the manuscript. ACP reviewed CSCCE research and incorporated into discussion, contributed to writing the manuscript and served as the copy editor and final reviewer. All three authors approve the submitted version of this study.

**Funding**

Not applicable.

**Availability of data and materials**

The State of Preschool Yearbook 2021: [https://nieer.org/wp-content/uploads/2022/09/YB2021\\_Full\\_Report.pdf](https://nieer.org/wp-content/uploads/2022/09/YB2021_Full_Report.pdf).

**Declarations****Competing interests**

The authors declare that they have no competing interests.

Received: 1 December 2022 Accepted: 6 October 2023

Published online: 28 October 2023

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Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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