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INTRODUCTION

Learning experiences from birth to age five are critical to children’s development and later educational success.1 The School Superintendents Association (AASA) asserts its commitment to improving early learning with the vision: “ALL children must engage in high-impact early learning to prepare them to function as co-authors of learning in their K-12 journey.” As such, AASA would like to identify ways to support districts in implementing high-quality early learning programs that facilitate long-term student achievement.

To support this work, Hanover Research (Hanover) reviews secondary literature and case studies on early learning programs to offer implementation guidance for districts. This report includes the following sections:

- **Section I: Early Childhood Education in the U.S.** summarizes the benefits of early learning, defines common terminology in the field, and provides an overview of the current early childhood education (ECE) landscape across the country.
- **Section II: Early Childhood Education Program Guidance** identifies the barriers to implementing high-quality programs and describes potential accelerators that increase program effectiveness and support positive outcomes. This section also reviews state and school district examples of program implementation.

PRACTICAL APPLICATIONS

Based on our findings, Hanover presents the following practical applications of this research:

- **Prioritize investments in improving compensation and working conditions for early childhood educators.** Ensure funding prioritizes a competitive educator compensation and adjust schedules to build in paid planning time during work hours. As ECE educators are key to program quality, state and district leaders must recognize the role of compensation in educator retention.

- **Support outreach to identify and build external partnerships to expand pre-K program accessibility and quality.** Partners can serve as program providers or support funding, professional development opportunities (e.g., coaching), or other components of high-quality ECE. Sample partners can include community organizations and local non-profits.

- **Assist program leaders in developing a written plan that outlines the roles and responsibilities of different leaders, groups, and partners.** Laying a foundation for program implementation can mitigate political tensions and support buy-in from relevant parties.

KEY FINDINGS

Research provides sufficient evidence for multiple short-, medium-, and long-term benefits of ECE related to both student achievement and wider community outcomes. Children’s experiences from birth to age five are critical to their development and build the foundation for later educational success. Researchers consistently demonstrate positive outcomes for students, indicating that students who attend high-quality ECE programs are less likely to repeat a grade or be identified for special education, and are more academically prepared for later grades, more likely to graduate, and more likely to be high earners in the workforce. ECE programs also close opportunity and achievement gaps for underserved student groups and contribute to a stronger economy.

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Despite significant evidence and widespread support for ECE programs, federal, state, and local governments have failed to provide high-quality options for all children. Across the country, federal and state education agencies have not established a standard approach to ECE or concluded to what extent ECE is a public or private responsibility. This fragmented approach results in funding and accessibility challenges, leaving many families with limited and poor-quality options for ECE.

The terms “early learning” and “early childhood education” are often used interchangeably to refer to formal or informal learning for children from birth to age five. Often, early learning is used broadly by education researchers and policymakers to refer to experiences that support child development prior to formal K-12 schooling. In contrast, ECE is typically used to describe various formal programs and specific structures and systems used to teach young children. Quality indicators for effective ECE include factors such as interpersonal interactions, physical environment, and program support structures. Notably, different states and departments may have different definitions of early learning and ECE or use one more readily than the other.

ECE program types vary by funding sources, service delivery method, and children’s age ranges. For example, programs may be funded publicly, privately, or through a combination of funding sources, and many programs use a combination of federal and state funding and resources. ECE providers vary and can include public school districts and community-based organizations. States operate or support Pre-K programs more frequently than preschool programs, and several states offer universal pre-K, which increases accessibility by opening enrollment to all children in a given age range. States use diverse funding mechanisms and strategies to increase support for state-level pre-K implementation.

Common barriers to ECE program implementation for superintendents include inadequate funding, strict program quality requirements, uncoordinated data systems, and misaligned educator qualifications and compensation. The financial contributions from federal and state funding sources are lower than the costs to provide high-quality ECE programs, creating financial barriers to programs and communities. ECE programs also face varied quality within states and localities, which increase implementation expenses and create challenges with aligning standards across providers and education agencies. In addition, systems for collecting and reporting ECE data are uncoordinated and inconsistent across programs, offering limited information to inform improvement, program evaluation, and comparisons across programs. Furthermore, while early childhood educators are one of the main factors in the quality of ECE programs, they receive limited professional support and compensation.

Leaders should take steps to support educator retention, family engagement, and ECE system coordination. Specifically, education agencies and program leaders must increase opportunities for professional training and leverage funding sources to ensure compensation reflects the value of early childhood educators. Additionally, programs should engage family members in their child’s development through culturally responsive two-way communication and ensure families can navigate resources to support their basic needs. Further, state and local leaders should strengthen data systems, ensure vertical alignment between ECE, K-12, and postsecondary data, and support horizontal alignment across other systems serving children and families.

Examples of state and school district pre-K implementation provide similar considerations for navigating political, legal, and logistical challenges. For example, Vermont established a universal pre-K program accessible to all four-year-old children; however, the state struggled with coordinating guidelines and data across groups involved in its operation. Georgia supports its pre-K program by offering free professional development opportunities, including classroom-embedded coaching, family supports, and universal and targeted approaches. Additionally, two locally run pre-K programs—Boston Public Schools and the city of San Antonio—offer competitive compensation to encourage highly qualified educators to join the program and reduce turnover. These programs also leverage community partnerships to expand program access. To reduce political tensions, San Antonio outlined guidelines describing roles and responsibilities.
SECTION I: EARLY CHILDHOOD EDUCATION IN THE U.S.

In the following section, Hanover summarizes the benefits of ECE and describes the current state of early learning across the country, including the common program types and state trends.

BENEFITS

Education research indicates that children’s development is heavily dependent on experiences from birth through age five, with strong evidence around the benefits of implementing ECE programs. High-quality ECE programs demonstrate positive short-, medium-, and long-term impacts for enrolled students. Positive and responsive interactions with program staff can facilitate secure attachments and build a foundation for establishing successful relationships as children grow older. The most effective programs provide these crucial experiences as early as possible, when children’s brain development is at its peak. Programs also support academic development and kindergarten preparedness for children from all backgrounds, especially those from low-income or disadvantaged homes. ECE programs can also reduce opportunity gaps and support long-term benefits for students’ educational trajectories, such as those highlighted in Figure 1.1.

![Figure 1.1: Positive Outcomes for Students](image)

<table>
<thead>
<tr>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less likely to repeat a grade</td>
</tr>
<tr>
<td>Less likely to be identified as having special needs</td>
</tr>
<tr>
<td>More prepared academically for later grades</td>
</tr>
<tr>
<td>More likely to graduate from high school</td>
</tr>
<tr>
<td>Higher earners in the workforce</td>
</tr>
</tbody>
</table>

Source: National Education Association

In addition to positive outcomes for students, ECE programs lead to positive societal and community outcomes. Specifically, high-quality programs can “contribute to a stronger economy, increased caregiver job stability, and a reduction in the cost for special education, healthcare, and criminal justice spending later in life.”

THE CURRENT LANDSCAPE

Despite significant evidence and widespread support for ECE programs, the United States has failed to provide high-quality options for all children. The country has not established a standard approach for ECE or concluded to what extent ECE is a public or private responsibility. Private options are typically only available to high-income families, leaving low-income families to rely on publicly funded programs. These publicly funded programs, such as Head Start or state-funded pre-K programs, often lack sufficient resources, which impedes access and quality. Since publicly funded programs are targeted toward lower-income families, moderate-income families are often ineligible but cannot afford the high cost of private ECE programs. The most effective programs are both publicly and privately funded, but insufficient state or federal resources make it difficult for programs to thrive.

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2 Ibid.
6 Figure content taken verbatim from: “Early Childhood Education,” Op. cit.
programs. This results in many families facing difficult financial decisions. Although there are diverse ECE programs offered by the state and federal government, these programs are “uncoordinated, insufficient in scope, inaccessible, and of variable quality.” Figure 1.2 describes several organizational issues that have hindered the effectiveness of ECE for children across the country.

**Figure 1.2: Organizational Issues in ECE Program Structures**

- **Families lack access to integrated, inclusive ECE programs**
  - Federally supported programs are only accessible to a fraction of families due to eligibility requirements (e.g., income) and program components (e.g., hours or operation).
  - According to a 2021 report by the Learning Policy Institute, only 54 percent of three- and four-year-olds participate in any preschool, 35 percent of eligible children participate in Head Start, and only a small portion of eligible infants and toddlers receive subsidized, licensed childcare.
  - Despite evidence suggesting the importance of inclusive practices and diverse early learning environments, the ECE system is socioeconomically segregated due to eligibility, testing, and reporting requirements.

- **Quality is variable and insufficient across programs**
  - Program types vary widely in their quality standards, creating differences in curriculum, assessment, workforce qualifications, and other factors associated with high-quality program implementation.
  - Early childhood educators have limited access to coaching and high-quality professional development leading to disparities in instructional quality.
  - The quality rating and improvement system (QRIS), supported by federal legislation, has attempted to increase overall quality but funding is limited, participation is burdensome, and involvement is voluntary in most states.

- **There is an incoherent approach to federal and state administration of ECE programs**
  - The federal and state ECE systems consist of a “patchwork” of programs that creates complex funding streams and requirements.
  - Different programs have their own income eligibility, quality standards, and monitoring systems that make creating a holistic, equitable early learning system complicated.

Source: Learning Policy Institute

The nation’s fragmented ECE delivery system creates a severe lack of reliable data on children’s early learning experiences and program effectiveness. The information gap is even more evident following the COVID-19 pandemic, which significantly impacted ECE participation and funding. In 2020-2021, nationwide preschool participation dropped from 61 to 36 percent of eligible students. With the lack of comprehensive or disaggregated data, policymakers cannot effectively address early learning challenges exacerbated by the pandemic. Data systems for early learning are also not aligned across program types or connected to the K-12 education system. Although decision-makers are aware of the importance of ECE, improvement is difficult without a reliable method to identify areas of improvement and progress. For example, one study found that no state has a data system that provides transparent measures of student access to quality early childhood programming.

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10 Figure content taken verbatim and adapted from: Ibid., pp. 2–4.
DEFINING EARLY LEARNING AND EARLY CHILDHOOD EDUCATION

The terms early learning and ECE are often used interchangeably to refer to formal or informal learning for children from birth to age five. Early learning tends to be used more broadly by education researchers and policymakers to refer to various experiences that support child development prior to formal K-12 schooling. In contrast, ECE is typically used to describe different formal programs and specific structures and systems to teach children. When developing policies and programs, decision-makers often use ECE to describe the implementation. ECE can be thought of as a mechanism to support early learning. However, it is important to note that different states and departments may have different definitions of early learning and ECE or use one more readily than the other.12

ECE emphasizes the structures and components that facilitate positive experiences in childhood. Quality is particularly important in the discussion of ECE, including factors such as interpersonal interactions, physical environment, and program support structures. Figure 1.3 identifies the six components necessary for high-quality ECE programs.13

Figure 1.3: High-Quality ECE Components

- Professional and stable teacher workforce
- Effective leadership
- Age-appropriate curriculum
- Comprehensive family engagement activities
- Multilevel continuous quality improvement system
- Sustainable and sufficient set of funding mechanisms

Source: Center for American Progress14

Within these components, there are effective practices and standards to facilitate successful implementation. For example, Figure 1.4 identifies the 13 components from the National Center on Quality Teaching and Learning that should be present for a high-quality curriculum.15

Figure 1.4: Components of an Effective Curriculum

- Grounded in child development principles
- Evidence-based
- Shows effects on child outcomes
- Comprehensive across learning domain
- Depth for each covered learning domain
- Specific learning goals
- Well-designed learning activities
- Responsive teaching
- Supports for individualized instruction
- Culturally and linguistically responsive
- Ongoing assessments
- Professional development opportunities
- Family involvement materials

Source: Center for American Progress16

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14 Figure content taken verbatim from: Ibid.
15 Ibid.
16 Figure content taken verbatim from: Ibid.
PROGRAM TYPES

This subsection clarifies terminology regarding ECE program types and discusses state and federal ECE programs.

TERMINOLOGY

ECE programs may use varying terms according to the age of children supported in different programs. Typically, preschool is a broader term used to refer to ECE for children between two and five years old. Preschool programs are mostly available through the private sector or outside of the public school system (e.g., a religious center or community center). Students learn basic social, emotional, and academic skills that build a foundation for later education. Preschool programs—especially those serving younger students—may be less focused on preparation for kindergarten than other program types such as pre-K and transitional Kindergarten (TK).\(^\text{17}\)

Pre-K programs serve a narrower age range (i.e., ages three through five) and focus on kindergarten readiness. Pre-K may be offered through daycares and private providers, Head Start programs, and public schools.\(^\text{18}\) Although there are several conceptual differences between the terms pre-K and preschool, the most commonly used term for ECE programs, especially at the state level, is pre-K. Notably, this report focuses on pre-K program implementation guidance.

Similarly, TK is associated with the public school system and is targeted toward students who turn five in the fall and may not be ready to enter kindergarten yet. California implemented the first universally available TK program which has supported student engagement and achievement for those who did not meet the age requirement for kindergarten or required additional support.\(^\text{19}\)

FEDERAL AND STATE PROGRAMS

In general, the types of ECE programs vary by funding sources, delivery of services, and children’s age ranges. ECE programs are either publicly funded by the federal or state government or privately funded, requiring tuition from families. There is a range of publicly funded or supported ECE programs, including subsidized childcare for children birth to age three and preschool for children three to five years old. Although federal agencies financially support various ECE programs, implementation is not centralized and states often use funds in various ways.\(^\text{20}\) Figure 1.5 summarizes federally funded ECE programs, which states and local agencies use in various ways to support ECE.

### Figure 1.5: Federally Funded ECE Programs

<table>
<thead>
<tr>
<th>PROGRAM NAME</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| Head Start   | ▪ Comprehensive early education program for preschool-age children from low-income families, including young children with disabilities.  
                 ▪ Provides physical health, mental health, nutrition, and family engagement services and links families to additional social services.  
                 ▪ Funding from several federal offices goes to local contractors and regional offices provide monitoring services. |


Local nonprofit organizations, community action agencies, and school districts operate these programs.

**Early Head Start**
- Comprehensive early education program for low-income pregnant women, infants, and toddlers, including young children with disabilities.
- Participants receive home visiting and licensed childcare in addition to the services in Head Start.

**Child Care Development Block Grant (CCDBG)**
- This grant provides states with funding for families to use at various private or publicly operated childcare and early learning programs for children birth to age 12.
- States have some autonomy to allocate funds to support different childcare assistance and early education programs for underserved families.

**Individuals With Disabilities Act (IDEA) PART C**
- Provides funding for states' early intervention services for infants and toddlers with special needs and their families and for resource centers that provide parent education and early intervention services (e.g., language therapy, physical therapy, home visits).

**IDEA Part B-619**
- Provides funding for states' preschool special education services for children ages three to five, focusing on children's cognitive, physical, speech and language, psychosocial, and self-help skills.

**Preschool Development Grant Birth Through 5 (PDG-B5)**
- Grant program that is part of the Every Student Succeeds Act is intended to align existing ECE programs, expand parental choice, build out successful programs, foster partnerships, and leverage data.

Source: Learning Policy Institute

States develop different systems for ECE programs implemented across various environments, including school districts, childcare centers, faith-based organizations, or home-based settings. Most states have pre-K or preschool programs, but the eligibility, delivery of services, and age ranges vary across states. For example, fewer states have publicly funded programs that support three-year-olds. Figure 1.6 summarizes the variability in program implementation.

**Figure 1.6: Program Implementation Options**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>LENGTH OF PROGRAM DAY</th>
<th>PROGRAM FREQUENCY</th>
<th>PROGRAM LENGTH</th>
<th>PARTICIPANT AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public school</td>
<td>Part day</td>
<td>Several days a week</td>
<td>Summer</td>
<td>Birth to 5</td>
</tr>
<tr>
<td>Childcare center</td>
<td>School day</td>
<td>Every day</td>
<td>Academic year</td>
<td>3- and 4-year-olds</td>
</tr>
<tr>
<td>Home-based setting</td>
<td>Working day</td>
<td></td>
<td>Year-round</td>
<td>4-year-olds</td>
</tr>
</tbody>
</table>

Source: Washington Office of Superintendent of Public Instruction, Washington State Department of Children, Youth & Families

Some pre-K (or TK) programs are considered universal, but this term can vary in meaning across states. Fully universal pre-K must include two components—eligibility defined only by age and an intent to enroll all children. Some programs have universal eligibility only by opening the program to all children in the age range regardless of other child or family characteristics like income. Programs with only universal eligibility do not

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21 Figure content taken verbatim and adapted from: Ibid., pp. 13–14.
22 Ibid., pp. 1–8.
23 Figure content taken verbatim with minor modifications from: “Integrated Pre-k–Aligning and Integrating Early Learning Programs,” Op. cit., p. 4.
actually intend to enroll all children. When programs are fully universal, they provide sufficient funding and require districts to offer programs so that caps on spending and enrollment do not limit the number of children who can be served. Fully universal programs ensure the implementation of the program reaches all students who need services.24

Among the states that support ECE programs, there are three states and the District of Columbia that administer fully universal pre-K programs (see Figure 1.7). Nine additional states have universal eligibility policies—regardless of income or demographic characteristics—for at least one ECE program that serves 4-year-old children (see Figure 1.8).25

### Figure 1.7: Universal Pre-K Program Participation

<table>
<thead>
<tr>
<th>STATE</th>
<th>PERCENTAGE OF 4-YEAR-OLDS ENROLLED</th>
<th>PERCENTAGE OF SCHOOL DISTRICTS THAT OFFER PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>Florida</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>76%</td>
<td>99%</td>
</tr>
<tr>
<td>Vermont</td>
<td>78%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Education Commission of the States26

### Figure 1.8: Universal Eligibility Program Participation

<table>
<thead>
<tr>
<th>STATE</th>
<th>PERCENTAGE OF 4-YEAR-OLDS ENROLLED</th>
<th>PERCENTAGE OF SCHOOL DISTRICTS THAT OFFER PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>32%</td>
<td>100%</td>
</tr>
<tr>
<td>California TK</td>
<td>21%</td>
<td>100%</td>
</tr>
<tr>
<td>Georgia</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td>Iowa Statewide Voluntary Preschool Program</td>
<td>64%</td>
<td>98%</td>
</tr>
<tr>
<td>New Jersey Abbott Preschool Program</td>
<td>25%</td>
<td>19%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>38%</td>
<td>79%</td>
</tr>
<tr>
<td>New York</td>
<td>54%</td>
<td>71%</td>
</tr>
<tr>
<td>West Virginia</td>
<td>59%</td>
<td>100%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>72%</td>
<td>99%</td>
</tr>
</tbody>
</table>

Source: Education Commission of the States27

For state programs that do not have universal eligibility, there is a range of requirements based on state and local policies. Some key trends across state ECE programs with income requirements are presented on the next page as follows:28

26 Figure replicated verbatim from: Ibid.
27 Figure replicated verbatim from: Ibid.
Thirty-six percent (i.e., 12 out of 33) of state pre-K programs with income requirements use income as the only criterion for eligibility, with some exceptions for programs with greater availability.

Sixty-one percent (i.e., 20 out of 33) of programs use income as one of many criteria in determining eligibility (e.g., English learner status, disability status). The exact determination of how these factors relate to eligibility varies. Some states include income along with other factors, any one of which qualifies a student for eligibility. Other states allow local school districts or entities to identify which factors beyond income are prioritized. Still, others require all students to meet the income requirement but may prioritize students with additional eligibility factors.

Among states with income requirements, Utah’s program is the only one that requires an additional characteristic beyond income to establish initial eligibility.

South Carolina has an innovative webpage designed to support families in determining their eligibility, not just for pre-K but other birth-to-age-five programs and services.

States develop different strategies to fund ECE programs, particularly, state pre-K programs. Some states use their K-12 education funding formula to fund pre-K. The K-12 funding formula is based on per-student funding levels, with additional funds allocated toward high-need student groups (e.g., English learners, students with disabilities). Additional funding sources vary and may change over time due to legislature or other factors. Figure 1.9 highlights several funding mechanisms and associated state examples.

Figure 1.9: State Funding Examples for ECE Programs

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>STATE EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-K tax credit</td>
<td>• In Mississippi, individuals or corporations who contribute to the local matching fund of an approved early learning collaborative may be eligible to receive a 1:1 state tax credit for the donated amount of up to one million dollars. In 2021, the legislature appropriated 16 million dollars for this fund.</td>
</tr>
<tr>
<td>Lottery funds</td>
<td>• Georgia, Nebraska, North Carolina, and Tennessee use a portion of the proceeds from the lottery funds to support pre-K programs in their state. These states vary in the logistics of appropriating and disbursing funds.</td>
</tr>
<tr>
<td>Sports Betting Taxes</td>
<td>• New York is still determining the tax rate (not less than 12%) of which a percentage will go to the general fund, supporting grant programs through the Office of Children and Family Services.</td>
</tr>
<tr>
<td></td>
<td>• In Tennessee, the Lottery for Education account inherits 80% of the sports betting tax funds.</td>
</tr>
<tr>
<td>Tobacco taxes</td>
<td>• Arizona created the Early Childhood Development and Health Fund, consisting of revenues generated by a state tax on tobacco products.</td>
</tr>
<tr>
<td></td>
<td>• California’s First 5 California imposes a tobacco tax to fund early learning and other areas.</td>
</tr>
<tr>
<td></td>
<td>• In Colorado, Proposition EE imposes a tax on nicotine liquids used in e-cigarettes and other vaping products to enhance and expand the voluntary Colorado Preschool Program.</td>
</tr>
<tr>
<td></td>
<td>• Connecticut, Kansas, Kentucky, and Missouri all leverage funding from the Tobacco Master Settlement Agreement to finance early childhood programs.</td>
</tr>
<tr>
<td>Appropriating federal funds</td>
<td>• Washington D.C. dedicated 47 million dollars of the Fiscal Recovery Funds (American Rescue Plan) to access and expansion of pre-K, workforce supports, and childcare subsidies.</td>
</tr>
<tr>
<td></td>
<td>• New York used 195 million dollars from the Elementary and Secondary School Emergency Relief (ESSER) 1 and 2 for multi-year extension and expansion grants for new, full-day pre-K.</td>
</tr>
</tbody>
</table>

Source: Education Commission of the States

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31 Figure content taken verbatim with modifications from: Ibid.
SECTION II: EARLY CHILDHOOD EDUCATION PROGRAM GUIDANCE

In the following section, Hanover reviews common barriers and accelerators to implementing ECE programs for superintendents and highlights several state and school district examples of pre-K programming.

IMPLEMENTATION BARRIERS

The following subsection describes common barriers to implementing effective ECE programs for education leaders, including funding and program quality considerations.

FUNDING ALLOCATION

The financial contributions from federal and state funding sources are lower than the costs to provide high-quality ECE programs. In many states, funds for ECE programs, particularly pre-K, are not intended to cover the full costs. Rather, programs must combine state funds with federal or local (e.g., school district) funds. For example, the Child Care and Development Block Grant (CCDBG) is one primary source of federal funding for early learning and childcare, targeted toward low-income families. According to the Center for American Progress’s 2021 report, only one in nine eligible children under the age of six benefit from this system due to a lack of funding. Even with multiple sources of funding from various state and federal departments, ECE and other early learning programs lack sufficient funding to implement high-quality components.

PROGRAM QUALITY REQUIREMENTS

There are significant differences in minimum quality standards for ECE programs operated by federal, state, and local agencies. Different programs, especially across states, establish robust or extensive quality standards for providers. For example, state programs typically identify quality standards for teacher credentials, maximum class sizes, and adult-to-student ratios (additional requirements relate to the components highlighted in Figure 2.1). While intended to benefit students and increase program quality, these extensive standards create more expenses for program leaders. At the same time, low per-pupil funding from state and federal programs creates financial challenges that inhibit many programs from effectively meeting these standards.

Figure 2.1: Program Quality Standards

![Figure 2.1: Program Quality Standards](source)

Source: Thomas B. Fordham Institute, National Alliance for Public Charter Schools

ECE programs are responsible for meeting a variety of requirements due to state policies, program structures, and providers (e.g., Head Start vs. school district). Some requirements may place greater emphasis on inputs, such as teacher qualification, whereas others may focus on measures of student learning and growth. The range of requirements, frameworks, and program types makes it difficult to maximize the use of limited funding and resources. Even within states, ECE programs are not clearly aligned and integrated. For example,

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35 Figure information taken verbatim from: Mead and Mitchel, Op. cit., p. 23.

36 Ibid., p. 24.
in Washington, school districts offer several types of programs with varying requirements surrounding quality programming and processes, which creates barriers to implementing integrated, inclusive classrooms. Concurrently, school districts use multiple frameworks and continuous improvement processes to support improvements, making accountability highly complex.\textsuperscript{37}

**UNCOORDINATED DATA SYSTEMS**

Data collection and reporting systems are inconsistent and uncoordinated across ECE programs, making program evaluation and improvement increasingly difficult.\textsuperscript{38} ECE program decision-makers face a prevalent information gap regarding the quality and success of different programs in supporting young learners. Since ECE is heavily disconnected from the K-12 sphere and consists of many different governing bodies and competing requirements, data is difficult to collect and track in a standardized way.\textsuperscript{39} States struggle to determine whether children are well-served in ECE programs due to the following issues:\textsuperscript{40}

- The lack of comparability across different early learning providers;
- The low quality of early learning assessments;
- The disconnect between pre-K and K-12 data;
- The lack of P-20W (i.e., preschool through workforce) data systems; and
- The lack of detailed racial and income data for ECE programs.

To address some of the challenges associated with the fragmented ECE systems and lack of actionable data, several states have been taking steps to improve data systems coordination. Specifically, states like Virginia are expanding the use of high-quality early learning assessments, strengthening their early childhood education data systems, and linking them to information about K-12 schooling.\textsuperscript{41} The following spotlight highlights Virginia’s approach to the information gap in ECE.

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**SPOTLIGHT: VIRGINIA**

In 2021, Virginia combined the early childhood and K-12 education departments under one public agency to better coordinate services, share data, and communicate with parents. This change established a central point of accountability for all publicly funded programs, including childcare centers, pre-K programs in public schools, Head Start, early childhood special education, and family or home-based providers. The law created a new Early Childhood Advisory Committee representing the diversity of early childhood providers, advocates, and experts in the state.

In addition, the legislature required the state board of education to develop a uniform measurement and improvement system for all ECE programs supported by public funding. The system—Virginia Quality Birth to Five (VQB5)—uses an early learning curriculum aligned with state standards and a nationally recognized classroom observation system (CLASS). This system standardizes the measurement tools, quality indicators, and reporting for all ECE programs regardless of provider.

Furthermore, Virginia is developing a new data system, called LinkB5, that aims to support providers and policymakers in understanding the ECE landscape across the state. LinkB5 includes data on participation rates, funding sources, educator workforce, and quality inputs and measures (e.g., curricula and classroom observations). The system compiles and analyzes data to facilitate decision-making to improve program quality. The state is partnering with the University of Virginia (UVA) to develop these measurement and data systems. Virginia has also partnered with UVA to address other challenges in ECE such as turnover in the workforce.

Source: FutureEd\textsuperscript{42}

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\textsuperscript{38} Ibid., p. 8.


\textsuperscript{40} Bulleted text quoted verbatim from: Ibid., p. 3.

\textsuperscript{41} Ibid., p. 1.

\textsuperscript{42} Figure information taken verbatim and adapted from: Ibid., pp. 1–10.
**Educators’ Qualifications and Compensation**

Early childhood educators represent a main contributor to the quality of ECE programs, yet they are significantly undervalued. 43 ECE programs that employ qualified educators with specialized training are associated with strong positive outcomes for children. However, qualification requirements are inconsistent and low across ECE programs, and compensation and working conditions for ECE educators are poor. 44 Early childhood educators receive low wages, nearly at the bottom of all U.S. occupations, when ranked by annual pay. This leaves many educators to rely on public income support programs and contributes to high turnover in the field. 45

Although federal and state ECE programs have increased qualification requirements requiring ECE educators to attain higher levels of education in recent years, compensation levels have not been adjusted to reflect this change. Early childhood educators face structural barriers to attaining higher qualifications, and when they do achieve additional qualifications, they are not compensated accordingly. Accordingly, ECE programs struggle to hire and retain qualified educators due to the low wages and stressful work environment. 46 In addition, staff certificates and credentials for each role typically have different requirements, which makes it challenging for educators to transition across programs or roles. 47 Figure 2.2 highlights some of the recent trends from the Center for American Progress regarding early childhood educator qualifications and compensation, including the wage gap.

**Figure 2.2: Qualification and Compensation Trends**

| | 
|---|---|
| | Childcare providers and early educators in almost every state make a fraction of what kindergarten teachers with similar education and experience earn. |
| | 76% of early childhood educators have some kind of professional credential—either a postsecondary degree or a certification in early childhood education. |
| | Early childhood educators are 97 percent women and are more racially diverse than the general population; 38 percent are women of color. |
| | Full-time teachers are paid 14 dollars an hour on average and the wage gap between white and Black educators has widened since 2012 from 84 to 76 percent. |

Source: Center for American Progress 48

**Implementation Accelerators**

The following subsection identifies common accelerators for implementing effective ECE programs.

**Educator Retention**

Education researchers suggest that the workforce of ECE educators is the most essential component of a high-quality ECE program. Early childhood educators build the foundation for children’s development and future academic success. Therefore, education agencies must support the professional development of early educators and provide compensation and benefits that reflect the value of this role. However, programs often struggle to attract and retain qualified educators due

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to the lack of support and investment given to this workforce. Education leaders must work to professionalize the field and retain qualified educators through the steps outlined in Figure 2.3, which emphasize improving compensation, providing paid planning time, and implementing access to coaches and job-embedded professional support.\textsuperscript{50}

**Figure 2.3: Educator Retention Strategies**

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve early educator compensation</td>
<td>Early childhood educators and leaders should receive compensation and benefits comparable to elementary school educators. Demonstrating the value of this workforce through fair compensation helps recruit and retain effective educators and promotes a stable learning environment for children. To work toward this goal, some states are experimenting with wage supplements and tax credits and others have increased the minimum wage.\textsuperscript{51}</td>
</tr>
<tr>
<td>Provide early childhood educators with paid planning time</td>
<td>Many early childhood educators do not have adequate planning time which contributes to an unsupportive work environment. Leaders in the field should provide additional staff to cover non-instructional duties, streamline paperwork, and adopt models that provide staff with planning time within their paid work hours.\textsuperscript{52}</td>
</tr>
<tr>
<td>Ensure access to coaching and other job-embedded supports for all ECE providers</td>
<td>Coaching from a mentor has been linked to improved child-teacher interactions, less teacher burnout, and increased teacher retention.\textsuperscript{53} As coaching can be expensive, providers can combine various professional learning strategies such as workshops and professional learning communities. Professional learning should be aligned with the most recent research and quality standards.\textsuperscript{54}</td>
</tr>
</tbody>
</table>

Source: Multiple cited in the figure

**FAMILY ENGAGEMENT**

ECE programs must provide supportive resources to ensure families are engaged in their children’s learning. Programs should provide parents with accessible information and resources to cover their basic needs and engage in two-way communication with families. Family involvement can support positive learning experiences for children and empower parents to support their child’s development. Leaders in the early childhood sector should seek feedback from families in the community, as they are well-positioned to identify barriers and propose solutions that will meet their diverse needs. Two-way communication supports the alignment of learning activities in the program and at home.\textsuperscript{55}

Similarly, providers should leverage two-generation strategies by integrating family resources and providing accessible structures for families to navigate the resources required to support their child’s development. Engagement strategies must be responsive to family needs and the increasing diversity of the child population. Family engagement can ensure parents’ basic needs are met and improve the interactions between educators and families.\textsuperscript{56}

**COORDINATION OF SYSTEMS**

As early education systems are fragmented across federal, state, and local systems, education agencies and leaders must work to coordinate and collaborate across departments and providers. Specifically, state and local leaders should strengthen data systems, ensure vertical alignment between ECE, K-12, and


\textsuperscript{52} Bornfreund et al., Op. cit., p. 22.


postsecondary data, and support horizontal alignment across other systems serving children and families. Figure 2.4 describes several strategies to increase coordination across early learning supports and data systems.

**Figure 2.4: System Coordination Strategies**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promote regional and community hubs to improve efficiency and coordination</strong></td>
<td>States often offer a variety of programs led by health, human services, and education agencies, each with different eligibility criteria and enrollment processes. Creating a regional or community hub is a strategy to streamline and coordinate a family-centered system. Regional hubs can help support coordinated policies, systems, and funding opportunities. For example, Oregon employs regional hubs to coordinate early childhood systems and link education systems with health care and human services. Community-level organizations often have the benefit of being staffed by people with the cultural and linguistic competence to serve their own community. When housed at community-based organizations, hubs can provide an important perspective on system-level and organization-level barriers families face accessing services.</td>
</tr>
<tr>
<td><strong>Use high-quality data to promote continuous quality improvement and continuity across systems</strong></td>
<td>States should be intentional about sharing data across government agencies and use data as a critical tool to deliver the best possible services to families. Families should have the option to share their personal information with other programs so that once they provide data, they can be notified of all services for which they are eligible regardless of their entry point and assisted with enrollment. Agencies should employ technologists to ensure applying for and using government benefits is efficient and user-friendly. States and school districts can facilitate data sharing at the provider level when children transition from early learning settings to schools. Elementary schools receiving children from childcare providers, Head Start, or state pre-k should have access to student information that they can use for individualized planning and staffing to better support incoming students.</td>
</tr>
<tr>
<td><strong>Standardize quality rating systems and increase data literacy</strong></td>
<td>States and providers should work to establish comprehensive and centralized quality indicators and data-sharing systems to inform improvement more effectively. Leaders should use disaggregated student data and program indicators to inform decision-making at a high level. Similarly, states and districts should provide educators and staff with technical and content training on using formative and observational student data to inform instructional practices. Data systems should align across ECE and later education institutions.</td>
</tr>
</tbody>
</table>

Source: New America

**EXAMPLES OF ECE PROGRAM IMPLEMENTATION**

This subsection spotlights the ECE program implementation practices of several states and school districts, which are noted for their high-quality ECE programs. In addition, Figure 2.5 provides resources that showcase the pre-K programming of all 50 states, providing relevant data to understand how the early learning landscape differs across states.

**Figure 2.5: State Pre-K Landscape Resources**

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://nieer.org/state-preschool-yearbooks-yearbook2021">National Institute for Early Education Research (NIEER) State of Preschool Yearbook 2021</a></td>
<td>Provides profiles for each state summarizing pre-K programming, including a program overview detailing the history and recent changes. Profiles also offer data and indicators on access (e.g., eligibility) and resources (e.g., spending). NIEER compares each state’s program using a quality standards checklist to identify which states are meeting benchmarks and consider areas for improvement.</td>
</tr>
</tbody>
</table>

57 Bornfreund et al., Op. cit., p. 34.
58 Figure content taken verbatim and adapted from: Ibid., pp. 34–39.
<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Hunt Institute: 2020 Early Childhood Landscape Narratives</td>
<td>Interactive U.S. map with profiles for each state. Profiles summarize the early childhood landscape in each state, including demographic data, expenditures, and outcomes. These profiles highlight key trends for state pre-K and related services (e.g., childcare and family leave policies). Specifically, superintendents can use these profiles to compare pre-K policies regarding statistics for access, funding, program requirements, standards, and educators. Each profile also offers questions to consider on each topic.</td>
</tr>
</tbody>
</table>

Source: Multiple, cited in the figure

**STATE EXAMPLES**

The following examples spotlight the ECE practices of Vermont and Georgia, two states highlighted by the National Institute for Early Education Research (NIEER) for their efforts in ECE.

**VERMONT**

Vermont passed new pre-K legislation in 2014 (Act 166), which provides a fully universal state pre-K system (i.e., all children of a certain age are eligible and able to enroll due to funding and program requirements). This legislation serves all three- and four-year-olds (and five-year-olds who are not yet eligible for kindergarten). Families can enroll their children in any qualified pre-K program for free regardless of location. Vermont emphasizes choice for families by offering pre-K across public schools, private providers, and family childcare providers in and out of the child’s school district boundaries. Local education agencies (LEAs) are required to provide ten hours of pre-K each week but about 68 percent of providers offer full-day pre-K.

Following the legislation, Vermont was recognized for its increase in access to pre-K and early learning by NIEER, which highlights the state of early learning across states in its annual yearbooks. From 2014 to 2018, the number of three-year-olds in publicly-funded programs in Vermont increased from 39 percent to 62 percent, while the number of four-year-olds in publicly-funded programs grew from 57 to 76 percent. The most recent 2021 Yearbook profile for Vermont is available here.

In addition to increasing access, the law also aims to increase quality. Pre-K providers must receive accreditation from the National Association for the Education of Young Children or earn at least three out of five stars on the state’s quality improvement rating system. The system uses data from the Environmental Rating Scale and the Classroom Assessment Scoring System (CLASS).

Although Vermont’s universal pre-K has increased access and established greater accountability, there are additional steps the state can take to improve implementation. Data reveals disparities between LEAs, especially for children who are eligible for free or reduced-priced lunch (FRPL). The program also faces challenges in coordinating systems and guidelines across governing agencies. Accordingly, several recommendations to improve Vermont’s system include the following:

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63 Ibid.
66 Ibid.
The Vermont Agency of Education should create guidelines that encourage uniform expectations for data sharing and collaboration across ECE and K-12;

Increase pre-K programs’ use of online assessment systems to support robust evaluation overtime; and

Using community input, leaders should streamline paperwork requirements, including invoicing, attendance, and pay schedules to increase efficiency in enrollment and funding distribution between LEAs and providers.

**GEORGIA**

Georgia’s state-funded pre-K program establishes universal eligibility for all four-year-olds. The program is not considered fully universal because the program is voluntary for both families and providers. As participation is voluntary, there may not be enough spaces in every community for all four-year-olds who would like to enroll. 68 Across the state, pre-K services are available at various settings, including the following:69

- Public and private elementary and secondary schools;
- Postsecondary vocational and technical institutes;
- Private and state colleges and universities;
- Private childcare centers;
- Head Start sites;
- Department of Family and Children’s Services offices;
- Hospitals;
- Military bases;
- YMCA/YWCAs; and
- Faith-based organizations.

Multiple state departments collaborate to provide supports for early childhood educators. The SEEDs for Success State Leadership Team comprises state-level partners including the Georgia Department of Education, Department of Behavioral Health and Developmental Disabilities, Department of Public Health, get Georgia Reading, and Higher Education. This group offers free training and technical assistance through the Department of Early Care and Learning (DECAL) using the Pyramid Model—an evidence-based model for social, emotional, and behavioral supports. The Pyramid Model includes classroom-embedded coaching, family supports, and universal and targeted approaches. Further, DECAL ensures educators have access to an inclusion specialist to support coaching and training for difficult classroom behavior and management.70

Georgia reports race and ethnicity data for all state-funded pre-K programs, revealing that the state provides high access for Black and Latino four-year-olds (60 percent)—a historically underserved group.71 NIEER’s 2021 yearbook profile for Georgia also shows that the state pre-K program meets eight out of ten benchmarks for quality.72 However, several recommendations to improve Georgia’s program are highlighted in Figure 2.6, on the following page.

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70 Ibid.

71 Ibid.

## SCHOOL DISTRICT SPOTLIGHTS

In addition to state pre-K programs, high-quality district- and city-run pre-K programs, such as those in Boston Public Schools (MA) and San Antonio (TX), can offer valuable insights to superintendents.

### BOSTON PUBLIC SCHOOLS

Boston Public Schools' (BPS) district-led universal pre-K program serves all four-year-old children in the city and recently expanded to serve a limited number of three-year-old children. The program has won repeated recognition from early childhood experts regarding its quality, and researchers have validated the implementation as being student-centered, learning-focused, and developmentally appropriate. BPS's program also exceeds the quality standards set by NIEER, a particularly challenging accomplishment for school districts.

Error! Reference source not found. provides an overview of the program and implementation components of BPS' pre-K program, including reported results and challenges.

### Figure 2.7: Pre-K Implementation at Boston Public Schools

<table>
<thead>
<tr>
<th>PROGRAM OVERVIEW</th>
<th>OUTCOMES AND IMPROVEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Serves four-year-olds likely to enroll in public Kindergarten.</td>
<td>▪ The partnership program demonstrated improvements in children's literacy and math skills when educators received more training, but some center-based educators did not use the district's curriculum. In response, the district worked to improve its training model.</td>
</tr>
<tr>
<td>▪ Provides one-on-one coaching and a customized curriculum.</td>
<td>▪ Even with the pay increase for lead teachers, the program still had high staff turnover. In response, BPS extended the pay increase to assistant teachers.</td>
</tr>
<tr>
<td>▪ Uses public and private funding sources, including Boston-based philanthropy funds, federal grant money, and local funds</td>
<td></td>
</tr>
<tr>
<td>▪ Leverages funds from the Preschool Expansion Grant to support teacher professional development and compensation. Lead educators learn how to teach the public school curriculum and receive a pay increase, bringing their salary equivalent to a typical starting salary in the school district.</td>
<td></td>
</tr>
<tr>
<td>▪ Expanded programming through community-based partnerships including the Boys and Girls Club. Partnerships between districts and private providers offer a more efficient and less expensive method to expand program access.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Boston Public Schools and Mongeau

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73 Figure content taken verbatim from: Gillispie, Op. cit.
**San Antonio**

San Antonio’s pre-K program, **Pre-K for San Antonio** (Pre-K 4 SA), is operated by the city of San Antonio with the participation of seven of San Antonio’s 15 independent school district partners.77 San Antonio provides an example of navigating legal and political tensions to implement a city-funded pre-K program.78 Pre-K 4 SA is recognized as one of the best early childhood programs in Texas, receiving the H-E-B Excellence in Education Award.79 Several research organizations—including NIFER—review the outcomes for children in the program using the Teaching Strategies GOLD, CLASS, and other measures.80

Figure 2.8 provides an overview of the Pre-K 4 SA’s program and implementation components, including reported results and challenges.

<table>
<thead>
<tr>
<th>Program Overview</th>
<th>Outcomes and Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pre-K 4 SA program began with seven of the city’s independent school districts, which are operated separately from local government entities and funded by the state and their own fundraising efforts. These school districts joined a tax-funded plan to implement high-quality pre-K across the city.</td>
<td>- Initial results demonstrated significant growth in student outcomes (using the six GOLD outcomes) after the second year of implementation.</td>
</tr>
<tr>
<td>- To mitigate political conflicts, program leaders identified foundational rules in writing, including who is responsible for recruiting students and tracking attendance (program leaders), who certifies them as qualified and reports to the state (districts), and how state pre-K funds are distributed (districts take a percentage and provide the rest to the program). Leaders also set regular meetings for superintendents and program administrators to share updates and discuss necessary adjustments.</td>
<td>- Program leaders emphasize the importance of building transparency with the public school system and improving access to data to evaluate student performance in relation to the pre-K program.</td>
</tr>
<tr>
<td>- Some districts resisted the new program as they were doing well with their current half-day pre-K or viewed the city as overstepping its role.</td>
<td>- Student outcome data consistently demonstrate that the program helps students overcome gaps in kindergarten readiness and that children perform above the national norm in cognition, math, and language.</td>
</tr>
<tr>
<td>- Pre-K 4 SA enticed educators to join the program with a minimum starting salary of $70,000. This created further political tensions as it pulled away some K-12 teachers from the public school system. The program also offered free professional development for educators within and outside participating districts, which encouraged some districts to see the benefits of the program.</td>
<td></td>
</tr>
<tr>
<td>- The professional learning program offers no-cost seminars, workshops, coaching, and credentialing to increase the number of skilled educators.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Lantigua-Williams and Pre-K for San Antonio81

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78 Ibid.


80 Ibid.

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