

# Executive Summary

Participation in high-quality preschool can improve academic, behavioral, social-emotional, and cognitive outcomes for students of varying backgrounds, including students from disadvantaged backgrounds (e.g., Andrews, Jargowsky, and Kuhne 2012; Barnett 2008; Camilli et al. 2010; Karoly and Bigelow 2005; Reynolds et al. 2007). However, some studies have found that some of these benefits do not persist into third grade (e.g., Bogard and Takanishi 2005; Li et al. 2013; Lipsey, Farran, and Hofer 2015; Puma et al. 2012). Without additional and continuous supports as children proceed through the elementary grades, participation in preschool does not inoculate against the potential challenges that children, particularly children at risk for poorer academic outcomes, may face.

To explore how educators might build on and sustain the positive effects of preschool, this study examined two types of strategies that preliminary literature searches revealed as promising practices to support children's learning in early elementary school: (1) aligning instruction from preschool through grade 3 (referred to as P–3 alignment) and (2) differentiated instruction. The P–3 alignment strategy emphasizes coordination among standards, curricula, instructional practices and environments, student assessment, and teacher professional development between the preschool years and the early elementary school years. The differentiated instruction strategy focuses on teachers varying their pedagogical practices to meet the diverse needs and skills of individual students.

To explore how educators use these two strategies, this study conducted a systematic literature review<sup>1</sup> followed by case studies of five programs that used one or both of these two strategies. The case studies focused on the approaches programs used to implement P–3 and differentiated instruction; some of the approaches revealed may be relevant to early elementary strategies beyond the two strategies studied. This report focuses on the findings of the case studies.

## Key Findings

- All five case study programs aligned instruction across grades by aligning or coordinating standards, curricula, instructional practices, and professional development; three sites also used aligned assessments.
- Common elements of P–3 programs included the use of professional learning communities (PLCs), coaches, parent engagement, and play-based or student-initiated learning.
- Although only one site was explicitly nominated for the study for its differentiated instruction approach, teachers in all five programs reported using strategies to accommodate students' different skill levels, including modifying assignments, adapting learning materials, providing different levels of support, or using small-group instruction.
- All five programs focused on increasing students' vocabulary, oral language, and social-emotional skills.

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<sup>1</sup> The U.S. Department of Education published the review in August 2016; it is available at <http://www2.ed.gov/rschstat/eval/disadv/p-3-alignment-differentiated-instruction/report.pdf>, and briefly summarized in the Introduction section of this report.

- Staff in four programs reported that they had observed improvement in students' vocabulary or oral language skills, social-emotional development, and engagement or attendance, as well as increased parent involvement after implementing their programs. Initial evaluations or outcome studies from Chicago Child–Parent Centers (CPC), Early Works, and Sobrato Early Academic Language (SEAL) program support many of these perceived changes.
- Staff in all five programs reported that guiding teachers to change their practices in the context of P–3 alignment (e.g., incorporating student-initiated learning) was a challenge, and staff in all five programs reported concerns about funding sustainability.

## **Case Study Methodology**

The case studies focus on five programs that used one or both of two strategies identified as having the potential to help sustain the initial positive effects of preschool: P–3 alignment and differentiated instruction for children in the early elementary grades. The case studies were designed to answer the following study questions:

1. What approaches did the five programs use to implement P–3 alignment?
2. In programs that implemented differentiated instruction, what approaches did staff use?
3. What were the goals of the five programs?
4. What changes in student and teacher outcomes did staff attribute to their programs?
5. What were the challenges of implementing these programs, and how did staff and leaders try to overcome these challenges?

## ***Programs Studied***

- To select the five programs, the research team considered programs identified through a literature review and solicited recommendations from early childhood organizations and agencies. The five programs, purposively selected based on their approaches to P–3 alignment and differentiated instruction and their geographic diversity, were the Boston Public Schools (BPS), CPC, Early Works, FirstSchool, and SEAL program. All five of the programs selected (see Exhibit ES-1) were focused on students in preschool through third grade. Additional information on enrollment, demographics, and strategies of each program can be found in Section III. BPS is focused on both P–3 alignment and differentiated instruction. BPS's program includes revised curricula in kindergarten and first-grade classrooms, specific differentiated instruction strategies, and coaching and professional development opportunities for staff.
- The CPC "New Generation" Midwest Expansion program incorporates an expanded system of instructional and family support as well as bolstered professional development and coaching for staff.
- The FirstSchool program is a P–3 initiative designed to help schools effectively serve an increasingly younger and more diverse population entering schools. The program focuses on implementing developmentally appropriate instruction in early grade classrooms and professional development for school staff to coordinate and align P–3 instruction.
- The Early Works initiative was selected for its P–3 alignment strategies and family supports that are being implemented at Earl Boyles Elementary School. The program incorporates professional development and PLCs for teachers.

- Finally, the SEAL program focuses on a specific set of aligned practices for English language learners (ELs) in preschool and early elementary grades. This program incorporates a bilingual, academic language and literacy focus and strongly involves parents. All programs have used some type of external funding (e.g., federal grants, private foundation awards) and/or leveraged public bond measures to support the start-up or augmentation of their programs.

#### Exhibit ES-1. Characteristics of Case Study Programs

| Program  | Location                                   | Urbanicity | External funder (purpose)  |
|--|--|------------|--|
| Boston Public Schools (BPS)                    | Boston, Massachusetts                      | Urban      | Barr Foundation (initial curriculum development, National Association for the Education of Young Children (NAEYC) accreditation, principal training) |
| Chicago Child–Parent Centers (CPC)             | Chicago, Illinois, and St. Paul, Minnesota | Urban      | U.S. Department of Education Investing in Innovation (i3) grant (program staff and activities)   |
| Early Works                                    | Portland, Oregon                           | Urban      | Children’s Institute (advocacy efforts and needs assessment)   |
| FirstSchool                                    | Martin County, North Carolina              | Rural      | Frank Porter Graham Child Development Center/ Kellogg Foundation (teacher training and coaching)   |
| Sobrato Early Academic Language (SEAL) program | Redwood City, California                   | Suburban   | Sobrato Family Foundation (model development, teacher training)  |

The intent was to select up to two schools to represent each program; however, one program—Early Works—nominated only one elementary school for the case study. To select specific schools for the other programs, the study team asked the district or program developer to recommend the two schools that would best represent implementation of the program.

### Data Collection and Analysis

Data collection at the nine schools took place between November 2015 and January 2016. Case study data collection activities included interviews with program staff—district-level staff, school administrators, preschool and elementary teachers, and the program funder and evaluator. Site visitors observed program activities (e.g., teacher meetings or classroom instruction) and collected documents about the program. The study team coded interview data and information from documents to examine commonalities across the five programs and nine site locations. Although the report focuses on similarities that emerged across three or more programs, it also mentions findings that were unique to one or two sites if the findings may be helpful for policymakers and administrators to consider.

### Study Limitations

Findings are based largely on self-reports of staff interviewed and limited classroom and activity observations at a small number of purposively selected sites. Therefore, findings are not generalizable to other schools that use the two strategies that we studied. Still, policymakers and administrators may use the study findings to inform their own efforts to use P–3 alignment or differentiated instruction to sustain the effects of preschool education by considering how these five sites implemented these strategies, the challenges they faced, and the steps they took to overcome those challenges.

## Summary of Findings

### *Common Approaches to P–3 Alignment*

**All five case study programs aligned instruction across grades by aligning or coordinating standards, curricula, instructional practices, and professional development; three sites also used aligned assessments.**

In the literature review, nearly all qualitative studies and policy and theory articles on P–3 alignment suggested aligning standards, curriculum, instruction, assessments, environments, and teacher professional development across preschool and grades K–3, to provide additional and continuous supports for students through the early elementary grades to sustain the advantages gained from participating in preschool. In all five case study programs, staff said that their curriculum and standards are aligned from preschool through third grade. Some of the curriculum units and themes in BPS overlap across grades; for example, preschoolers study a friends and family unit, and then kindergarteners study a unit about families and communities, which builds on the preschool content. Staff at all sites reported using consistent instructional approaches across grades; for example, BPS uses play-based learning in early elementary grades, similar to what is used in their preschool classrooms. As another example, SEAL classrooms incorporate specific strategies at all elementary levels (e.g., chants) that students became familiar with in preschool. At BPS, Early Works, and FirstSchool, district officials and teachers reported that their reading assessments are aligned to measure students' reading levels in preschool through third grade. At all sites, teacher professional development was supported primarily through PLCs, which allowed teachers to coordinate instruction across grades.

**Teachers reported that PLCs support consistent instructional practices and aligned curricula across preschool through grade 3 by providing teachers the opportunity to coordinate lessons and strategies.**

In all five case study programs, staff reported that they valued teacher PLCs, during which teachers met as within-grade or cross-grade teams and discussed successes and challenges faced in their classrooms and how to align instructional practices across P–3 grades. Horizontal team meetings, during which teachers met with other teachers from the same grade, provided the opportunity to co-plan and learn about successful strategies that their peers were implementing in their classrooms. Vertical team meetings, during which teachers met with teachers in different grades, provided the opportunity to align curricula and instructional practices across grades. Teachers at all five sites reported benefits of these collaborations. For example, teachers at First School reported that aligning practices helped students know what to expect in the classroom each year, removing an initial barrier to learning. Early Works preschool teachers reported that PLCs encouraged communication between preschool and kindergarten teachers. The PLCs enabled preschool teachers to better prepare students for kindergarten, and kindergarten teachers are better prepared to meet the needs of incoming students.

**All programs used instructional coaches to help teachers understand standards, align the curriculum with earlier or later grades, align instructional practices across and within grades, and adjust instructional practices to match the program model.**

Teachers at BPS, Early Works, FirstSchool, and SEAL reported that coaches helped them align their specific instructional practices with the program and with the instructional practices of other teachers. In BPS, coaches helped preschool teachers coordinate the two different curricula used in their classrooms by creating teacher guides. Administrators from CPC, SEAL, and Early Works reported that they noticed a change in teacher practices as a result of coaching, such as increasing opportunities for student talk in their classrooms, using centers or stations for active learning, and using data more frequently to inform instruction. At each program, teachers and coaches reported effective relationships with each other, and teachers said they were receptive to coaches' feedback. Teachers emphasized that having supportive coaches who were there to help them succeed and not to catch them making mistakes helped them to embrace the risk of implementing a challenging new strategy.

**To provide additional continuity for children's learning across grades P–3, all five programs took a proactive approach to engaging parents by creating a welcoming environment, conducting home visits, providing resources for families, or involving parents in children's education at home.**

All five programs proactively communicated and engaged with parents, families, and the community. Staff from BPS, CPC, Early Works, and SEAL indicated that parent and family engagement was one of the most critical components of the program. For example, teachers at the CPC and Early Works programs conducted home visits; the frequency of these visits was tailored based on the needs of each student and the student's family. Teachers and administrators at Peck School (CPC in Chicago) reported that home visits were an effective way to talk with parents about what was going on in the classroom while also conveying rules and expectations.

**Building on practices used in their preschool programs, kindergarten through third grade teachers in four programs reported focusing on student-initiated and play-based learning.**

Four case study programs—BPS, CPC, FirstSchool, and SEAL—focused instruction in preschool and early elementary grades on student-initiated and play-based learning. In these programs, staff emphasized the importance of building on students' interests and described this practice as developmentally appropriate not only for 4-year-olds but also for students in early elementary grades. Staff at BPS, CPC, and SEAL believed their focus on student-initiated learning resulted in greater student engagement. At BPS, CPC, and FirstSchool, staff reported that students were given choices in the classroom primarily through the use of free-choice centers. Staff at CPC, FirstSchool, and SEAL emphasized the specific importance of hands-on, tactile activities. Overall, staff in BPS and FirstSchool described how their programs were "pushing up" elements of preschool into the early elementary grades through their focus on developmentally appropriate practice in elementary school.

## ***Common Approaches to Differentiated Instruction***

**Teachers in all five programs reported using strategies to accommodate students' different skill levels, including modifying writing prompts or math problems, adjusting rubrics, adapting learning materials, asking different levels of questions, providing different levels of support, or using small-group instruction.**

Although BPS was the only program nominated for the study based on an explicit focus on differentiated instruction, all five programs demonstrated efforts to implement differentiation in the classroom, such as through modifying assignments, rubrics, or supporting materials. For example, one BPS kindergarten teacher described how writing assignments could be modified: Students who have not yet learned to write letter forms practice writing the individual letters, and students who have mastered the letter forms instead write words that begin with that letter.

**Teachers in all five programs used homogenous groupings and teachers in four programs used heterogeneous groupings when differentiating instruction.**

Staff at all five programs reported using homogenous groups for differentiating instruction, and staff in four of the programs reported that they used these homogenous groups for reading instruction specifically, wherein students at the same reading level worked together to read and complete activities on texts of the same level. Staff at BPS, CPC, FirstSchool, and SEAL reported also using heterogeneous groupings for some lessons so that classmates could help one another learn. In heterogeneous groups, students had different levels of academic or social-emotional needs. In addition, staff at BPS, CPC, FirstSchool, and SEAL reported using flexible or fluid groups to allow students to work with different groups of their peers and to be regrouped frequently based on their learning progress.

**Staff in all five programs reported that having extra adult support staff in the classroom enabled them to provide differentiated instruction to more students.**

According to staff from all five programs, a key factor of successful, differentiated, and small-group instruction is having multiple teachers or aides in the classroom. Program models varied in requirements for aides in classrooms; for example, the CPC model specifies aides in each classroom who have received the same training as teachers, but aides are not required in the SEAL program. According to interview respondents, teaching assistants in BPS classrooms made multiple small groups possible, enabling teachers and aides to offer different levels of support or modified assignments according to student need. When asked to discuss challenges with the implementation of the program, respondents from BPS, CPC, Early Works, and FirstSchool all pointed specifically to a need for additional staff support in the classroom. In BPS, the program nominated for the study because of its differentiated instruction approach, kindergarten and first-grade classrooms observed had low student-to-teacher ratios, with ratios ranging from 10.5 to 1 to as low as 3.5 to 1.

**Instructional coaches trained teachers in all five programs to differentiate instruction and group students.**

Staff in all five programs reported that coaches helped teachers effectively implement differentiation strategies. Specifically, coaches played a significant role in helping teachers transition their instructional

practices from didactic, teacher-led instruction to small-group instruction and center-based learning. At BPS, CPC, Early Works, and FirstSchool, respondents reported that coaches specifically helped them analyze student test scores to group students. This finding is consistent with the literature on the implementation of differentiated instruction that found that coaches can be effective in helping teachers improve their practice related to differentiation.

### ***Goals of Programs***

**All five programs focused on increasing students' vocabulary, oral language, and social-emotional skills.**

In all five programs, staff emphasized their program's goal to build students' vocabulary, oral language development, and social-emotional skills. District officials, principals, and teachers in these programs reported that their curriculum focused on building students' reading, vocabulary, and comprehension skills to develop a solid literacy foundation that will allow students to succeed in later grades. Staff at BPS and SEAL reported that they incorporated storytelling to increase students' vocabulary and oral language skills. Staff at SEAL described their practices of creating a language-rich environment in the classroom, especially for English language learners. CPC, Early Works, FirstSchool, and SEAL also reported that they used a curriculum specifically focused on children's social-emotional development.

### ***Program Outcomes and Successes***

**Staff in four programs reported that they had observed improvement in students' vocabulary or oral language skills, social-emotional development, and engagement or attendance, as well as improvement in parent involvement after implementing their program.**

Rigorous evaluations of these programs had not been conducted or were only just underway at the time of data collection. However, BPS, Early Works, and SEAL staff discussed positive changes they had observed in students' vocabulary and oral language skills since implementing their P–3 alignment programs. At BPS, CPC, Early Works, and SEAL, staff reported that they observed positive social-emotional changes in the children who participated in their programs, including students' comfort in the classroom, improved behavior, and improved interactions with other students. At BPS, CPC, and SEAL, case study participants reported that they observed that their students are now more involved in classroom activities and more eager to learn compared with students prior to program implementation. CPC and Early Works staff reported improved student attendance during program implementation, and CPC, Early Works, and SEAL staff reported that they had observed a higher level of parent involvement in their schools since implementing the program. Initial evaluation findings corroborate CPC teachers' reports of improved attendance, SEAL teachers' reports of improved language skills, and Early Works teachers' reports of increased language and social-emotional skills (direct assessment of self-regulation) (see the "[Evaluation Results](#)" box in Section II).

## ***Challenges and Lessons Learned***

**Staff in all five programs reported that guiding teachers to change their practices (e.g., incorporating student-initiated learning) can be difficult, and teachers and principals suggested addressing this challenge through in-depth teacher training, staff voice in choosing to implement new practices, additional classroom resources, and effective leadership.**

Staff in all five programs emphasized the critical role that training played in securing staff buy-in to the program. For example, teachers at BPS, CPC, Early Works, and FirstSchool all expressed a desire for (and appreciation of existing) thorough training that addressed not only exactly how to implement the strategies but also why the strategies were being put into place. Staff choice helped several sites to create buy-in. Teachers and principals in the BPS, CPC, and SEAL programs all chose to be a part of the program, which staff reported had facilitated staff commitment to changing their practices. Staff in CPC, FirstSchool, and SEAL reported that securing teacher buy-in to the new program was easier when the program was accompanied by additional resources for teachers, such as coaching. At BPS, CPC, Early Works, and FirstSchool, participants reported that it was important for school leaders to be committed to early childhood education, more generally, for the program to be successful.

**Staff in all five programs reported concerns that sustaining staffing levels required for faithful implementation of the program after external funding support ends would be a challenge, and district leaders have begun work to allocate district or public preschool funds to continue program activities.**

Because all programs have used some type of external funding, staff including district officials, funders, and principals in all five case study programs expected challenges to arise when the funding they received to implement the program decreases or ends. All five programs received external support that enabled schools to hire teaching aides, support staff, parent engagement coordinators, and coaches or to purchase materials. The Sobrato Family Foundation currently provides all teacher training for the SEAL program. The Barr Foundation awarded several grants to BPS to support NAEYC accreditation of early elementary classrooms as well as kindergarten and first-grade curriculum development. The federal i3 grant is funding some staff salaries to expand the CPC program into new districts. In Oregon, the Children's Institute raised money for Earl Boyles' community needs assessment, new building, and principal and teacher training. Finally, Frank Porter Graham Child Development Center, supported by grants from the Kellogg Foundation, provides model information and coaching to FirstSchool sites.

Without these additional resources, staff said they feared that they would not be able to continue implementing the programs as intended. Early Works has worked carefully to braid existing funding sources for Oregon's public preschool to support their preschool program. Districts implementing the other four programs are currently working to allocate district funds to sustain some or all of the staff required for the program activities.