

APPENDIX D

Creating and Implementing Developmentally Appropriate Curriculum

A Guide for Public School Audiences

Jason Sachs and Chris Bucco

Most public schools are not set up to meet the unique developmental needs of young children and their families. Because many public schools accommodate large numbers of children of varied ages, systems are put in place to move children in, out, and around schools safely and efficiently. Families are also part of this efficiency and are encouraged (and often required) to drop children off quickly. For the many children who take a bus to and from school, school staff usher children off their buses to cafeterias or another area within the school to wait for their classroom teacher to pick them up. Daily schoolwide schedules are often structured around offering teachers a 50-minute planning time while their classroom of children attends a special (e.g., gym, art) with a nonclassroom teacher. Classrooms also have set times for breakfast, lunch, and recess. Preschool children in public school programs may transition in and out of their classroom up to six times during the course of a six-hour day. Simply stated, teaching is sometimes lost in the administering of necessary rules and regulations to maintain efficiency and safety, which is particularly hard for our youngest learners.

In addition to multiple transitions, the curriculum, while well intended, often misses the mark in engaging younger students (preschool through second grade), who need the most individualized focus. Generic commercial curricula are usually designed for older grades and water down the cognitive complexity to cover more seemingly simplistic

reading and writing skills. Teachers of young students are frequently caught between focusing too much on constrained reading skills or pushing back on the district's or school's central curriculum with little support. Time for guided play and experiential learning is often sacrificed in an effort to maximize time on task. As a result, teachers and schools are faced with difficult choices.

Chapter 5: Guided play retains the joy and active, engaged, iterative, and socially interactive contexts that support meaningful learning.

Why School Leaders Need to Focus on Early Learning

(DAP Connections: For more insight into this discussion, refer to principle 6; guidelines 1, 5, 6; Chapters 4, 9, 10)

Early childhood in schools used to focus on programs for kindergarten only. While many districts now include preschool, thinking about children before they enter school and into the primary grades might appear beyond the scope and capacity of most districts. School districts, however, must get involved

early and often in early childhood education, both before children’s arrival and through efforts to dramatically change the current instruction children in pre-K through second grade receive.

Students arrive in school with varying levels of experience, leaving school leaders and teachers in an unenviable position of trying to simultaneously remediate and advance students’ learning. When institutional bias (unequal funding) and individual bias (misaligned expectations) are layered in, this work is even more challenging. An aligned early learning program that focuses on students in preschool through second grade allows school districts to address a number of common issues, such as the opportunity gap (access to enrichment programs) and the achievement score differences that may exist in a district between groups of children from different demographics, such as between children from underserved communities, which are often communities of color, and children from communities with more resources. It also enables districts to provide a curriculum that has a strong, standards-based scope and sequence and opportunities for meaningful, engaged, culturally relevant learning. Partnerships with community programs and families will also help school districts improve student learning.

Research in early childhood is clear that the early investment pays dividends, but the work must be carefully aligned, research based, and supported at all levels in a district, from teaching staff and families to administrators and school committees (Yoshikawa et al. 2013).

Chapter 4: The foundations of subject-area knowledge are established in the early childhood years. Educators, therefore, must be intentional about supporting children’s content learning. This requires a deep understanding of content within each subject area, the learning progressions in each area, and how to teach each effectively.

Through the formation and expansion of the Department of Early Childhood, Boston Public Schools (BPS) has, for the past 16 years, used the framework of developmentally appropriate practice

to address the challenge of balancing the demand of improving children’s academic performance while assuring that the learning environment encompasses all of what we know to be in the best interest of young children. Our principles include the following:

- › Teaching is grounded in an understanding of how children develop and learn at different stages and in the context of children’s social and cultural experiences.
- › Teaching is informed by ongoing observation and assessment.
- › Content matters and must be engaging, meaningful, and challenging.
- › Reciprocal partnerships between educators, families, and communities are essential.
- › Above all, there must be joy!

Findings from Boston Public Schools

BPS data continually demonstrates that students who attend BPS K1 (preschool for 4-year-olds) perform better on fifth grade standardized tests in English language arts than students who do not (see, for example, Table D.1). In addition to BPS data, we are participating in an IES-funded research partnership with MDRC, University of Michigan, and Harvard University. These studies measure teacher fidelity to curriculum content, quality of implementation, and overall teacher practice in pre-K–first grade (NAEYC.org/DAP/fidelity-tools). Compared with students who experience poor alignment, students who experience an aligned, high-quality pre-K and kindergarten curriculum and responsive, culturally relevant instruction perform better in vocabulary, an important ingredient for conceptual development and later literacy learning (McCormick et al. 2020). Data from these studies demonstrates that it is not enough to invest in a curriculum that has a strong, standards-based scope and sequence. School districts need to commit to supporting teachers to achieve fidelity to aligned curriculum and implement developmentally appropriate practices, or outcomes will not happen. Furthermore, the data shows that high fidelity to

Table D.1. Effects of K1 on Fifth Grade MCAS* Language Arts

	5th graders who attended BPS K1 % Proficient/Advanced	5th graders who did not attend BPS K1 % Proficient/Advanced	Achievement level of 5th graders who attended BPS K1 over those who did not
All Students	50.2%	38.4%	30.6%
F/R Lunch	44.0%	33.9%	27.7%
Asian	71.2%	65.8%	8.2%
Black	44.5%	30.9%	44.1%
Hispanic	37.5%	31.3%	19.9%
White	77.3%	65.5%	17.9%

Note: In the elementary grades, where the proficiency rates have generally stagnated at roughly 30%, the performance of students in fifth grade who attended the K1 program in 2009-07 is markedly better than for students who did not attend.

Results are better for all students, regardless of race or free and reduced-price lunch status.

*Massachusetts Comprehensive Assessment System

Adapted from J. Sachs, "New P-2 Early Childhood Strategic Plan & Update on Boston Universal Preschool" (presentation to BPS School Committee, April 26, 2017).

a curriculum is not an easy process; only a third of students experience a fully aligned pre-K to kindergarten curriculum. Finally, these disparities in students' experience with aligned curriculum are also related to income and race as schools have unequal opportunities for resources, support, and stability.

Chapter 10: Without high-quality curriculum to anchor the sequence of skills and knowledge, learning experiences may not provide an appropriate level of challenge. Teachers may not understand how the skills and competencies required in the present are connected to those that came before and are foundational for future learning.

The BPS Model: Who We Are

BPS created its Department of Early Childhood in 2005 to shepherd in the expansion of K1 across the district. The department has grown tremendously over the past 16 years and has added several initiatives to improve student learning from pre-K to second grade. As of this writing, there are 25 staff members who collaborate to support professional learning for pre-K through second grade teachers and school administrators at BPS, universal pre-K (UPK) programming in community-based centers, NAEYC accreditation, summer school programming, pre-K through second grade curriculum design, and research partnerships. We work with more than 80 elementary schools in Boston and partner with more than 20 community-based programs that provide preschool services.

As part of the Academics Office, the Department of Early Childhood collaborates with other key departments, such as Special Education, English Learners, and Data and Accountability. With direct lines to the superintendent's and mayor's offices and to the BPS school committee, support from leadership at the highest level has been essential in our efforts toward districtwide alignment and expansion.

Our pre-K to second grade work is organized by a strategic plan that focuses on instructional practice, including direct instruction, and then moves to strategic partnerships. Small teams work on developing annual goals and our curriculum plan. (See NAEYC.org/DAP/curriculum-plan and NAEYC.org/DAP/strategic-plan.) We are learning and applying restorative justice (Valandra & Hokšila 2020) practices to increase our capacity to strengthen collaborations, address racial inequities, and positively affect the culture of the department. Our team meetings use team-developed norms (NAEYC.org/DAP/meeting-norms), and we have a budgeting process to make sure teams have the resources they need to complete their projects.

What We Do: How Our Public School System Implemented Developmentally Appropriate Practice

(DAP Connections: For more insight into this discussion, refer to principles 3, 4, 6, 7, 8; guidelines 4, 5, 6; Chapters 4, 5, 8, 10)

The work of the BPS Department of Early Childhood is rooted in curriculum development and professional learning. The need to balance the demand for skill development linked to standards-based content while assuring that the learning happening in early childhood classrooms is meaningful; experiential; culturally relevant; and supportive of choice, exploration, and play was apparent from the department's inception.

In response, we evaluated existing curricula. After the evaluation, we decided to develop our own curriculum to meet our district's specific range of needs. We developed a curriculum called *Focus* (www.bpsearlylearning.org/our-curricula) for each grade level in pre-K through second grade. *Focus* is thematic, integrated, and grounded in fiction and nonfiction texts that support learning of rich academic language, a variety of higher-level vocabulary, and children's background knowledge. *Focus* is intentionally aligned from pre-K through second grade to assure continuity and provide a standards-based guided scope and sequence that builds on children's experiences in prior grades. Components across all four grade levels include "Read Aloud"; "Center" or "Studio," where children self-select activities connected to the books and unit themes; "Thinking and Feedback," where children follow a sharing protocol to give and receive feedback on their work; and "Storytelling and Story Acting," where children dictate stories that are later acted out by their classmates. Grade-specific components, such as small groups, literacy stations, writing, and science and engineering, are included to meet the varied learning needs of each developmental stage. Other curricula have been added to complement *Focus* in specific learning areas, such as *Foundations* for explicit phonological and phonemic awareness learning and *FOSS* for science. While some math content is incorporated into *Focus*, each grade has a distinct daily time for math instruction using *Building Blocks* in pre-K and *Investigations* in K–2.

Chapter 5: Early childhood programs must provide a well-thought-out curriculum for all children, but to support children in becoming happy, successful, lifelong learners, that curriculum must involve playful pedagogies immersed in developmentally appropriate practice and rich curricular learning that is culturally relevant.

Having autonomy over curriculum development has allowed us to be responsive to the needs of our children, families, and communities. It has involved incorporating feedback from teachers, examining our own internal data about what is and is not effective, and looking at research on effective curricula in the early childhood field. What follows are some

examples of how we have revised and adapted our curriculum to be more responsive. These examples are specific to the needs of the BPS community; how a school system revises or adapts curriculum would vary based on the district’s needs and context.

Incorporating Culturally Sustaining Reading Materials

As part of a districtwide initiative around culturally and linguistically sustaining practices, the Department of Early Childhood has engaged in ongoing self-assessment of our work and our curricula materials, particularly culturally sustaining literature. Evaluating materials for seven forms of bias (Sadker n.d.), we added and changed core “Read Aloud” books to incorporate more books that reflect the diversity of the children and families we serve as well as to weed out any books that contain stereotypical images. For example, in response to cultural and gender stereotypes in one of the core “Read Aloud” books from the pre-K curriculum, *The Colors of Us*, by Karen Katz, we issued a statement and provided teachers with guidance on how to have conversations with children about the book’s content:

The Department of Early Childhood is aware of the culturally biased portrayals of the people in this text. As part of BPS’s commitment to being an anti-racist institution, we encourage you to use this book to engage in a conversation about implicit bias with your children. See below for questions to guide this conversation.

Guide children to understand that what people do or like to eat is not connected to the color of their skin:

- › In *The Colors of Us*, Mr. Pellegrino works in the pizza shop. Who makes pizza in your neighborhood?
- › In *The Colors of Us*, Mr. Kashmir sells spices. Who sells spices or groceries in your neighborhood?

As part of your discussion with children after reading this book, encourage children to think about other ways Lena could describe “the colors of us” instead of comparing skin tones to food.

What other things, objects, emotions, and so forth can children think of to help describe the colors of people’s skin?

Guideline 4: Educators design experiences that celebrate the diversity in the experiences and social identities of each group of children and counter the biases in society.

Several BPS schools and UPK programs offer dual language programming, including Spanish, Haitian Creole, and Vietnamese. Members of the Department of Early Childhood have worked with the district’s Office of English Language Learners to develop *Focus* curricula materials in Spanish, Haitian Creole, and Vietnamese. Some of the content has been translated, and some has been replaced with theme-connected books in home languages that meet *Focus* criteria related to concept and vocabulary development.

Chapter 10: Curriculum planning is a responsive and active process, where educators make informed decisions and ongoing adjustments that are responsive and individualized to best support the emerging skills of each child.

Adapting Materials and Activities for Children with Disabilities

Many teachers of children with disabilities have found it challenging for the children to access *Focus*. The complexity of the language in core “Read Aloud” books and “Center” activities requires a level of adult support to help children who may struggle with self-regulation to engage with purpose and meaning. The Department of Early Childhood began to work with members of the district’s Office of Special Education, district speech and language pathologists, and a group of special education teachers to develop adapted “Read Aloud” books and resources. Currently, we are developing an adapted scope and sequence and supplementary materials for *Focus* for pre-K and kindergarten and plan to continue this work in first and second grades in the near future.

Adding Decoding Strategies and Phonics Instruction

Data on children’s reading scores and research on the science of reading have taught us that our children need more explicit instruction around phonological awareness and decoding strategies to become successful readers. Curriculum revisions in K2 (kindergarten) through second grade include the incorporation of *Foundations*, systematic phonics instruction, *Foundations*-aligned literacy station activities, and the development of decodable books connected to curricula themes. For example, *Kip the Owl* (NAEYC.org/DAP/kip-the-owl) is a K2 decodable book that corresponds with what children are learning in *Foundations* at that time and aligns with the K2 study of owls during the unit of study “Animals and Habitats.”

Chapter 8: Assessment processes can be conducted with children to help evaluate which teaching practices are working, what changes educators should make in their teaching, or whether a program is having the intended impact on children.

Considerations for Curriculum

Districts should evaluate their specific needs and capacity in deciding their approach to curriculum adoption or development. As administrators think about all that needs to come together to support developmentally appropriate practice in a public school setting—to bring together joyful learning and play and connect curriculum, assessment, learning goals, and approaches to teaching as a whole—an important starting place is to look at the district’s or school’s curriculum selection across preschool and into the primary grades. Key considerations in choosing a curriculum include

- › A standards-based scope and sequence
- › A strong foundation in the science of reading and mathematics

- › Cultural and linguistic responsiveness
- › Universal design for learning (UDL) considerations for different learning needs
- › Central themes that integrate literacy, science, and social studies
- › Grade-level alignment
- › Coaching and professional learning supports for teachers

Guideline 5: Learning through play is a central component of curriculum, and it incorporates strategies to extend learning through play across the full age and grade span of early education. Ideally, the curriculum is planned in a coordinated fashion across age and grade spans so that children’s knowledge and skills are developed in a coherent, aligned manner, with each age or grade span building on what was learned previously.

Supporting Teacher Growth and Transformation

The BPS Department of Early Childhood (www.bpsearlylearning.org) offers professional development and coaching opportunities to work directly with school teaching and administrative staff in addressing how to best support the needs and expectations of young children in public school environments. Because our coaches and program developers facilitate the majority of the department’s professional development, we foster relationships with teaching staff over time that cater to the needs of specific teachers, schools, and classrooms. Our department offers professional development sessions throughout the school year and summer on grade-level curriculum and topics related to curriculum implementation and teacher practice. (See NAEYC.org/DAP/ec-pd-example.) The department hosts a yearly kindergarten conference (<https://bpsearlylearning.org/kindergarten-conference>) before school starts, where about 400 pre-K and kindergarten teachers and paraprofessionals attend professional

development sessions focused on topics ranging from family engagement to loose parts to science in the early grades. We also offer professional development to meet the specific needs of paraprofessionals within schools as well as at the district level.

Chapter 4: Early childhood teachers need and deserve in-depth preservice and ongoing professional learning to help them explore content and pedagogy.

Curriculum Coaching

Curriculum coaching supports both implementation of the various curriculum components and teacher practice, with a particular focus on discourse, problem solving, and critical thinking. In addition, coaches help teachers and schools keep the developmental trajectories of a particular group of children at the forefront of their expectations. Curriculum coaching may take place with individual teachers in schools or with a group of teachers from the same grade level. School support staff, such as literacy specialists, in addition to administrators, are often included in grade-level group meetings. (See coaching note examples at [NAEYC.org/DAP/coaching-notes](https://naeyc.org/DAP/coaching-notes).)

Supporting Accreditation

Sixty-five percent of elementary schools in BPS are NAEYC accredited. Schools who are pursuing NAEYC accreditation receive the support of one or two BPS early childhood coaches for three years. The accreditation process provides a framework for assuring that classroom-wide and schoolwide practices are aligned with what we know to be best for young children. While coaches work with all pre-K and kindergarten teaching staff, support staff, and administrators, the bulk of their work involves classroom coaching and professional development around accreditation standards and criteria. (See [NAEYC.org/DAP/coaching-notes](https://naeyc.org/DAP/coaching-notes).) Addressing challenges related to schoolwide schedules, practices, and policies, in addition to school environments that require facility updates to meet health and safety criteria, is an integral part of work with administrative staff.

Much like coaching in BPS, the goal of coaching in UPK is to support teachers with curriculum implementation and practice. Additionally, UPK staff can earn credit through the University of Massachusetts Boston by participating in curriculum professional development. All members of teaching teams, including assistant teachers, are included in UPK coaching and professional development, providing opportunities for professional growth to everyone.

Working with School Leaders

(DAP Connections: For more insight into this discussion, refer to principles 3, 6, 7, 9; guidelines 1, 4, 6; Chapters 3, 9, 10)

Strengthening administrative understanding of developmentally appropriate expectations and practices has been an integral part of our work in Boston. Over the years, we have worked on many structures to help principals succeed in improving instruction and engagement of students and teachers alike beyond the curriculum. For example, as noted previously, our NAEYC coaches spend three years working with a school to help staff meet the accreditation standards through classroom, administrative, and facility support. We believe that this process sets the table for high-quality instruction. In addition, we provide specific professional learning communities for principals, most recently on how to use remote learning platforms for feedback.

Chapter 9: High-quality implementation includes collaboration with colleagues. Together, they explore what works; share feedback; discuss what they are learning; and apply new perspectives, insights, and discoveries to curriculum planning and teaching practices.

School leaders are often under a lot of pressure to get too many things done; focusing on instruction can often take a back seat behind other pressing priorities. At BPS, curriculum and NAEYC coaches educate administrators around curriculum content and

coordinate time to meet with teachers to provide team planning, professional development, and coaching. Developing specific common planning time for teaching or grade-level teams offers administrators a place to support their practice and address both learning standards and the cognitive complexity of the work. Coaches can play a central role in facilitating these meetings. Coaches also use “look for” documents (NAEYC.org/DAP/coaching-notes) to conduct classroom walk-throughs with principals to help them get a better understanding of early childhood classroom environments, including how and what children are learning.

Strengthening Family Connections

(DAP Connections: For more insight into this discussion, refer to guidelines 1, 2; Chapter 7)

Countdown to Kindergarten (www.countdownto kindergarten.org) supports teachers in building strong, trusting relationships with children and families. Families of children starting pre-K and kindergarten are invited to attend several “Welcome to Kindergarten” events over the summer in their local neighborhoods. Teachers send home a summer letter and family questionnaire to learn more about the children and their families. (See NAEYC.org/DAP/family-questionnaire.) In addition, pre-K and kindergarten start two days later than the other grades, offering teachers opportunities to host welcome events and schedule one-on-one orientation meetings for children and families.

Focus in all four grade levels includes Homelinks (www.bpsearlylearning.org/family-engagement), weekly activity sheets with curriculum-connected activities for families to implement at home with their children. At the start of each unit, teachers send home a letter describing the unit learning goals. The letter and Homelinks are translated into nine different languages.

The increasing focus on and need for remote learning has provided us with new tools to strengthen home-school connections. In the fall of 2020, BPS began using *Seesaw*, a learning management system that

allows children and families to post photos, videos, drawings, writing, and other artwork. Teachers can also post activity assignments and communicate directly with families in their home languages. In addition, teachers sent home kits to the families of pre-K through second-graders with curriculum-aligned materials for at-home learning. We plan to use these tools beyond remote learning to strengthen our support in assessment/observation, family engagement, and project-based learning.

Finally, we have started a family stakeholder group to guide our UPK and BPS early childhood work. In the group, families from community-based programs and BPS will help to shape early childhood policy for the UPK program and inform and guide BPS around transitions and programming in kindergarten through second grade.

Conclusion

Meeting the needs of young children within the larger structure of most public school settings is a complex endeavor that requires many pieces of the puzzle to be in place to get to child outcomes. In BPS, these key puzzle pieces include the following:

- › An aligned pre-K through second grade curriculum that is linked to standards-based content and skill development; is based on learning experiences that are meaningful, culturally relevant, and supportive of choice, exploration, and play; can be adapted to be responsive to the needs of specific children, families, and communities; and reflects the most recent data around children’s learning across content areas
- › Professional learning for teachers that includes targeted district- and school-based professional development opportunities, classroom coaching to support curriculum fidelity and teaching practice that is responsive to children’s varied learning needs, and weekly common planning time for grade-level and/or classroom teams
- › Administrative support on understanding the importance of play in young children’s learning, assuring that the unique needs of young children are at the forefront of schoolwide planning

considerations, and supporting pre-K through second grade teachers with planning and reflecting on children’s learning

› Systems for building relationships, ongoing communication, and family involvement at the classroom, school, and district levels

Chapter 7: Taking a purposeful approach to growing partnerships with families means that they, like their children, are at the heart of early childhood programs and, as such, are a vital part of ongoing practices used to support children’s learning and development.

We hope that this appendix offers guidance to those in public school leadership positions for putting in place structures, curricula, and practices that address the comprehensive needs of children in pre-K through second grade within the public school structure.

The following resources and other supporting materials can be accessed on the NAEYC DAP resource page ([NAEYC.org/DAP/K-3-resources](https://naeyc.org/DAP/K-3-resources)):

- › Coaching notes
- › Curriculum plan
- › Early childhood professional development plan sample
- › Kindergarten family letter and questionnaire
- › Fidelity tool examples
- › *Kip the Owl*
- › Strategic plan (PowerPoint)
- › Team meeting norms

The following resources can be accessed on the BPS early childhood website (www.bpsearlylearning.org):

- › BPS professional development information
- › Countdown to Kindergarten
- › *Focus* curricula resources (adapted books and activities)
- › *Focus* curriculum
- › Homelinks
- › Kindergarten conference