Commonwealth Coaching: A Proposed System for Supporting Massachusetts's Early Educator Workforce

STATEWIDE INFRASTRUCTURE AND DELIVERY MODEL FOR COACHING AND TECHNICAL ASSISTANCE TO THE EARLY EDUCATION FIELD

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1. Introduction

Increasingly, early education, regardless of setting type, is considered to be an educational intervention that sets the stage for children's long-term school success. Accordingly, policymakers are focused on how to develop and support educators who have the skills and capacity to deliver high-quality programming to children. A pressing question for EEC and the driving question behind this report is: **what kinds of coaching supports are effective at building the capacity of early childhood educators and, as a result, improving the quality of early education programming for children**?

The Case for Coaching

While the research on professional development encompasses an array of delivery strategies and content areas, one strategy that has gained more attention in the early childhood literature is the use of coaching as a way to increase the effectiveness of professional development for early childhood educators.

As defined in the sidebar at right, coaching is characterized by an ongoing, relationship-based process led by an expert with specialized and adult learning knowledge and skills. Coaching is typically employed where there is a behavioral goal for individual educators—that is, a change in their practice or skills. For this reason, for the purpose of this report, coaching is defined as distinct from other technical assistance efforts, and which is focused on building educators' instructional skills.

Compared with coursework, classes, or group training, coaching is a more intensive technical assistance strategy, both in the investment of time and resources and in the relationship of an educator with a content expert. States, including Massachusetts, are looking to the evidence base to help them develop effective coaching models and systems that will be the best use of limited resources for supporting educators.

Definitions

While coaching, mentoring, training and consulting are all forms of technical assistance, the definitions can vary greatly, and some of these terms are used interchangeably. To clarify the terms used in this report, the following definitions are provided:

Coach – An expert with specialized and adult learning knowledge and skills who engages in an *ongoing, relationship-based process* designed to build the capacity of individual educators or groups of educators to improve classroom and program quality. Coaching often occurs after other technical assistance, such as training, and its focus may be determined *collaboratively*, or it may be *assigned based on needs*. Coaching is not supervisory.

Consultant – A professional with expertise in a specific content area who engages in a *problem-solving* process within a collaborative relationship between the consultant and one or more educators. Consultants aim to address a particular issue and to build the capacity of those to whom they are consulting. A consultant might also be a supervisor.

Mentor – An experienced professional (or colleague) who possesses adult learning knowledge and skills, provides guidance and serves as a model for a less-experienced mentee to increase the mentee's capacity and effectiveness with children. A mentor engages in a relationship-based process that may be unplanned, as-needed and focused on an *individual* mentee's goals, which are *mutually determined* by mentor and mentee.

Trainer – The provider of a learning experience or series of experiences (training program) designed to develop attendees' content knowledge and/or skills. Trainers possess subject matter and adult learning knowledge and skills. They provide content that is typically *based on standards* or a defined curriculum. The experience provided might have an *evaluative component* leading to certification or credentialing.

Source: Adapted from NAEYC & NACCRRA, 2011.

About This Report

In April 2017, Abt Associates was hired by the Massachusetts Department of Early Education and Care (EEC) to support the Department in the design of a system for the delivery of coaching-based technical assistance to early education and out-of-school time providers across Massachusetts.

To accomplish this, Abt conducted four activities:

1. **Reviewed recent and relevant research and policy literature** to determine the features and elements of a coaching model that evidence might support (literature review and annotated bibliography appear in Appendix A).
2. **Scanned statewide coaching models** operating in other states (scan of state models appears in Appendix B).
3. **Inventoried Massachusetts's current state-level initiatives** that have a coaching component (inventory appears in Appendix C).
4. **Conducted a gap analysis**, comparing findings from the review and scan versus Massachusetts's current coaching initiatives captured in the inventory.

This report summarizes that work and provides recommendations, based on evidence and practice, for a proposed statewide model of coaching for early educators in Massachusetts. **Chapter 2** summarizes findings from the three information-gathering activities and the gap analysis. The report concludes with recommendations for a proposed statewide coaching model (**Chapter 3**) and a preliminary implementation plan (**Chapter 4**).

2. Analysis of Massachusetts Early Educator Coaching

The Abt team worked in stages, first collecting and analyzing information from the **literature review, scan** of coaching models in other states, and **inventory** of current coaching practices in Massachusetts. (For descriptions of the information-gathering activities and their products, see Appendixes A, B, and C, respectively.) Next we conducted a **gap analysis,** synthesizing the findings from the review and scan, and then comparing them with the findings from the inventory. The following sections describe findings from this analysis.

Information Gathering and Analysis

Findings of the Literature Review

The Abt team conducted both a review of rigorous empirical studies related to coaching and a review of policy reports produced by leading national early education policy organizations. Abt's review revealed several relevant findings for EEC's consideration regarding the delivery of a coaching model, the characteristics of coaches, and the systems that can support coaching.

Delivery of Coaching. Research related to the delivery of coaching revealed the following:

- The most successful coaching models are those that are specific, targeted, and evidence-based.
- The more coaching that occurs, the more positive outcomes occur for educators.
- Coaching may be effective whether delivered in-person, remotely, or through a combined approach.
- Effective coaching includes a systematic cycle, including planning, observation of practice, reflection, and feedback.
- There is evidence that effective coaching depends on positive coach-educator relationships.

Characteristics of coaches. The characteristics of the coaches included in the studies reviewed included coaches with at least a BA, usually in an early childhood related field and prior experience as early educators.

Individual supports for coaches. Policy and practice reports recommended providing coaches with ongoing supports for their own effective practice, including:

- Training, other forms of professional development, and supervision.

System supports of coaching. Several policy reports recommended system supports, including:

- Creating goals, action plans, targets, outcomes, and scope, as well as identifying the general purpose of the coaching.
- Building a tiered career lattice for coaches, with clear career pathways and avenues to credentialing and formal recognition as well as appropriate compensation to incentivize recruitment and retention of high quality staff.
- Building data systems (e.g., coaching logs, feedback forms, evaluations, etc.), as a means to identify effective coaching techniques, and to enable coaches and supervisors to track progress of the coaching.

Findings of the Scan of Statewide Coaching Models

The Abt team's scan of other statewide models reviewed promising coaching initiatives in 14 states and then classified states' coaching efforts into two main categories: statewide structures to support coaching and features of the statewide coaching model.[1]

Statewide Structures. The Abt team identified five categories of statewide structures to support coaching:

- Systems for identifying coach characteristics
- Established career pathways for coaches
- Initial training and ongoing supports for coaches
- Advisory/oversight bodies
- Data systems specific to coaches.

The scan revealed four states with comprehensive statewide coaching models that included each of the five of these statewide support structures identified for this study. All 14 states had both some systems that identify coach characteristics and a career pathway for coaches, 11 states had established coach competencies, 9 states provided initial training for coaches and/or common ongoing supports for them, 10 had a statewide advisory group to oversee coaches and 5 had data systems to capture coach-specific data.

Coaching Features. Abt's analysis found the following regarding the aspects of a coaching model in place in other states:

- Most of the 14 states:
  - connected their statewide coaching system to their Quality Rating and Improvement System (QRIS),
  - clearly defined the features of their coaching cycle (needs assessment, planning, observation, reflection and feedback), and
  - use a tiered coaching approach to provide different levels of coaching to programs based on coaches' content expertise and/or on educators' areas of need.

- A few states set guidelines or requirements for coaching dosage or coach caseload.

- Some states required coaches to collect and use data as a way to monitor their progress.

Findings of the Inventory of Current Massachusetts Coaching Initiatives

For the inventory of existing coaching initiatives, the Abt team reviewed five coaching programs currently operating in Massachusetts and/or funded by EEC: Educator and Provider Support (EPS) grants, Early Childhood Mental Health Consultation (ECMH) grants, Head Start Practice-based Coaching (PBC), Preschool Expansion Grant (PEG) coaching, and Pyramid Model coaching.

Through reviews of document and interviews with state leaders, grantees and coaches/consultants, the Abt team identified the following findings related to supports for coaches:

[1] These 14 states were selected based on the results of Abt's initial 50-state scan and nominations from EEC and Abt's partner, the University of Virginia's Center for Advanced Study of Teaching and Learning (CASTL; specifically, Drs. Robert Pianta and Bridget Hamre). See Appendix B for more methodological detail.

- All of the coaching-focused initiatives provided or linked coaches to training specific to their initiatives.
- Opportunities for grantees and coaches/consultants to interact with one another and share information and best practices within and across coaching initiatives were infrequent and generally informal.
- Some grantees regularly supervised and monitored coaches' impact; for most, this was informal and infrequent.
- Most coaches had no access to coaching for themselves – either from peers or from some type of master coach.
- Most current Massachusetts initiatives that included coaching required coaches to have a bachelor's degree, teacher or director experience, professional development experience and knowledge of state standards and tools.
- There were some common delivery-related elements across current initiatives – including needs assessments, observation, and feedback.
- Initiatives did not share common thresholds for the "dosage" (duration and frequency) of coaching sessions. Some grantees had established their own tiered systems as well as their own data collection practices and analysis capacity.

Data Synthesis and Gap Analysis

Next, the Abt team synthesized findings from the review, scan, and inventory to determine where there might be opportunities and gaps in Massachusetts's current supports and approaches. The goals of the gap analysis were to identify:

- structures and features of current EEC coaching initiatives supported by research literature or policy recommendations or in place as part of other states' coaching models; and
- structures and features of coaching models supported by research literature or policy recommendations, or in place in other states, but *not* included in EEC's current coaching initiatives.

The analysis was designed to generate further findings that could yield recommendations for aspects of a statewide model that were either supported by evidence, in place in other states' coaching models, or both. These further findings are summarized below.

Supported/recommended statewide structures and features of coaching that are included in Massachusetts's current coaching initiatives

Research Evidence Supports . . .	Current Massachusetts Initiatives
Professional development that includes coaching is effective at changing the skills/behavior of early childhood educators.	Massachusetts currently has in place several statewide models that include a coaching component, including EPS, ECMH, Head Start, PEG, and Pyramid Model.
Coaching models/approaches that have reported impacts on teachers vary in how coaching is	Current Massachusetts coaching initiatives provide coaching using a combined approach of in-person

delivered and what the content of the coaching is about. Effective coaching may be delivered in-person, remotely, or through a combined approach.	meetings plus emails and phone calls.
Adding a feedback component to coaching may make the coaching more effective, although the evidence to date is limited. Many of the states scanned require the use of feedback as part of their statewide models.	Most current Massachusetts coaching initiatives include a feedback component, though the state does not require it.
There is some evidence that the intensity of coaching matters, with weekly or biweekly coaching being more effective than lower dosages. Only a few states have established a requirement related to the intensity (duration and frequency) of their coaching models.	Massachusetts's current coaching initiatives vary in terms of the intensity of coaching provided. Some initiatives (Head Start) or programs within initiatives (some but not all of the ECMH, EPS, and PEG grantees) provide coaching weekly or biweekly, but others provide it less frequently. This variation within and across programs may be due to the content being coached, the levels of need of the programs and/or educators, or the availability of resources (time, funding). This type of variation is not necessarily negative if coaches are matching the intensity and frequency of their coaching to the needs of recipients, resulting in more efficient use of resources.
Policy Reports Recommend . . .	**Current Massachusetts Initiatives**
Although they do not cite an evidence base, policy and practice reports recommend two additional features of coaching that may be important – the use of data and the communication of the goals of coaching. Several of the scanned states require coaches to collect and/or use data as part of their coaching models, and some require goal setting.	Practice varies within and across Massachusetts's current coaching initiatives regarding their capacity to capture and use data. Some grantees require coaches to use and submit coaching logs (EPS, Head Start, PEG), but efforts to use those data to inform decisions and customize coaching vary among the programs.

Promising statewide structures and features of coaching that <u>are not</u> included in Massachusetts's current coaching initiatives:

Promising Practices	**Current Massachusetts Initiatives**
Only descriptive information is available to help inform the characteristics of coaches that are most important for effective coaching: • 11 states have established coach competencies that lay out what effective coaches should know and be able to do.	Currently, Massachusetts does not require coaches or other TA providers to be approved to support early educators. Instead, grantees or programs are responsible for ensuring the qualifications of their own coaches, resulting in some variation within and across programs.

• 14 states have approval processes and/or provide a career pathway for coaches as a means to ensure the high quality of coaching.	
Only descriptive information is available to help inform which supports for coaches are most important for effective coaching: • 9 states provide some type of standardized initial training for coaches and/or formalized ongoing support.	Currently, EEC does not provide any systematic initial training or orientation, nor many statewide, standardized supports for coaches.
The field is starting to recognize the need for a formal "career lattice" for coaches that defines and rewards progress along career pathways.	Massachusetts has developed competencies for coaches and other TA providers, and a career lattice for educators is in development. But the state has not yet developed a career lattice or career pathways specifically for early educator coaches or other early educator TA providers. The Abt team has proposed a potential outline for an early educator coach career pathway as part of this report.

3. Proposed Vision for Statewide Early Education Coaching Model and System

Drawing from an analysis of research, policy reports and promising coaching initiatives in other states, Abt Associates developed a vision for what a statewide system of coaching for early education could look like in Massachusetts. The vision sets ambitious goals for the state; if this type of coaching system were implemented in its entirety, it would involve increased investments in the coaching system and reorganization of the current piecemeal approach to early educator coaching. This is the time for stakeholders to engage in intensive discussion of what the final vision of a coaching system should look like and priorities and timelines for implementation. However, we believe it is crucial to develop a consensus about the mission for coaching and the key elements of such a system.

We envision a coaching **model** built upon evidence-based approaches that have been shown to improve educator practice (interactions with children and instruction) and better achieve desired outcomes for children. This model would clearly describe the *how* and *what* of coaching. A statewide coaching **system** would support the model by providing standards for, supporting, and monitoring coaches. Our vision for a state coaching system focuses simultaneously on (1) developing an evidence-based coaching process that provides clear instructions and guidance for coaches for the actions they implement to improve specific educator competencies that improve outcomes for children, and (2) establishing and strengthening statewide structures to support effective and efficient coaching.

We propose six key principles for a statewide coaching system:

1. **The learning and development of the children in the state should be at the center of the system**. Our vision of what we want children to know and be able to do by the time they enter the formal schooling needs to be at the heart of the system and should drive priorities and decisions going forward.

2. **Coaching can be an important and effective support for helping programs and educators develop key competencies that promote critical types of development and learning for children**. The coaching system should implement coaching models that (a) are aligned with key educator and program competencies which, in turn, (b) are aligned with Massachusetts learning guidelines and standards for children.

3. **The coaching system should support educator competencies shown to promote the development of children's skills and knowledge embodied in the state learning standards for children**. Coaching should focus on educator practices that promote children's learning and development as defined by Massachusetts learning guidelines and standards.

4. **The coaching system should support program practices shown to promote the development of children's skills and knowledge embodied in the state learning standards for children.** The coaching system should focus on program practices that support children's learning and development as defined by Massachusetts learning guidelines and standards.

5. **The coaching system should be built on evidence-based models that develop educator competencies and program quality and are linked to children's learning.** Based on our literature review and interviews with other states, we have identified a set of coaching models that would be the initial content of the coaching system in the state. These include My Teaching

Partner and the Pyramid Model. The state needs to continue to search for additional evidence-based models that extend the breadth of the content of the coaching supported by the state.

6. **The coaching system should include a clearly articulated career ladder for coaches.** This includes (a) breadth of coaching models coaches are certified in, (b) experience and skill at implementing these models, and (c) coaches' level of knowledge about the theoretical basis of the models, which may be related to specific college-level coursework and/or internships.

Driven by these principles, elements of a new statewide coaching system are described below.

Elements of A Proposed Coaching System

An overarching goal of the proposed coaching model is to provide clarity and focus about what coaches will do to ***change educator practice (interactions with children and instructional approaches) and program structures with the goal of achieving our desired outcomes for children***. A visual depiction of this proposed coaching system is shown in Exhibit 1 and key elements of the system are described below.

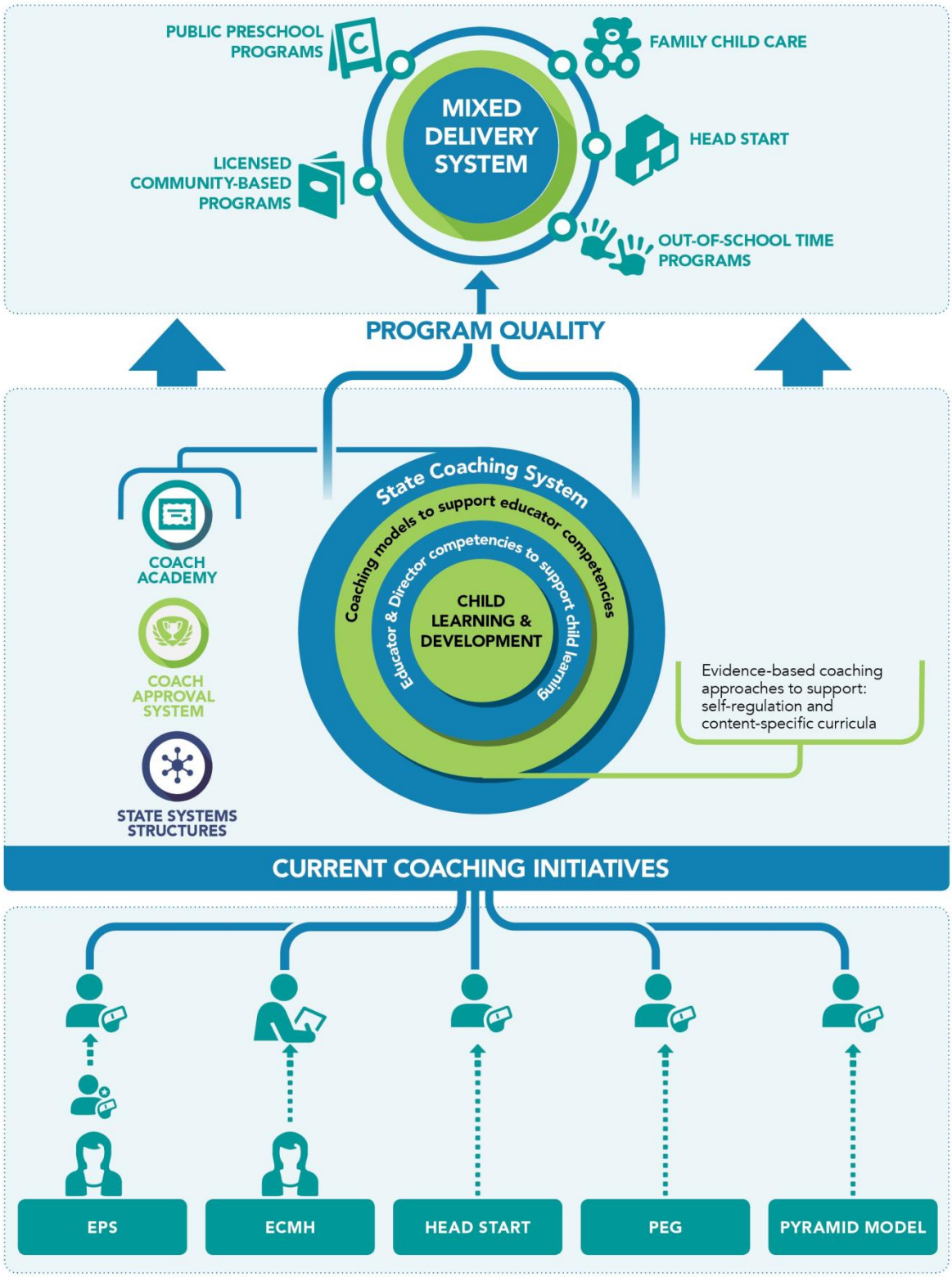
Focus the system on expectations for child learning and development. The coaching system should be guided by expectations for children's learning and development. These expectations are currently articulated by Massachusetts's guidelines for infants, toddlers and preschool learning as well as preschool and kindergarten standards in the domains of social-emotional development and approaches to play and learning, literacy, math and science.

Focus on building educator competencies that have shown to be effective at promoting children's learning and development. Building from the expectations established for children's learning and development, the coaching system should provide clear descriptions of what educators and program directors should know and be able to do to meet the expectations for children's learning and development. Although early educator competencies are currently undergoing revisions, the coaching system will likely focus on helping educators become competent in domains that have been shown to improve children's learning and development, such as high quality interactions between educators and children, language development, cognition and self-regulation, and social and emotional competence.

Select and implement evidence-based coaching models that result in coaching that is clear in its focus and that aligns with our goals for educators. The coaching system should include both 1) foundational training for all coaches, as well as 2) additional certification in the use of evidence-based approaches or models that are aligned to the six categories of key educator competencies listed above.

- **Foundational training for all coaches**. The proposed coaching model will require all coaches to be trained in (a) MyTeachingPartner (MTP) and (b) relationship based professional development (in addition to qualifications described in the Sample Coach Career Pathway below).
  - MyTeachingPartner training – MTP will provide coaches with web-based professional development that includes support for the use of video exemplars and one-on-one consultation with educators on specific dimensions of interactions with children. Training all coaches in MTP will establish a common language among educators and coaches about effective teaching practices across subject areas and across the mixed delivery system. Using MTP will also provide EEC with reliable information about educators' effectiveness and enable consistent documentation of improvements in educators' effectiveness over time.

Exhibit 1. Commonwealth Coaching: A Proposed Statewide Coaching System



  - Adult learning and relationship-based professional development – This training will build on current EPS Coaching for Change training to provide coaches with support for tailoring their delivery of content for adults to help these educators focus on improving their practices.

- **Evidence-based models**. EEC is already supporting some evidence-based coaching models (e.g. the Pyramid Model) which can provide coaches with structured, defined programs and clear outcome goals. The Abt team will work with EEC throughout FY18 to define criteria for selecting additional evidence-based coaching models that align to and help support the expectations for children's learning and development.

Align Coaching System with Existing Coaching Initiatives in the State. More than half of the states that we interviewed (9 of 14) have coaching initiatives that are part of their Quality Rating and Improvement Systems (QRIS), which focus on helping programs move up in their QRIS rating. In Massachusetts, the EPS coaches are helping to serve this function. Though they give priority to helping programs as they move through QRIS, EPS coaches also coach on topics not related to QRIS. The inventory of current Massachusetts coaching initiatives in Appendix C might help inform EEC about how to align its various existing structures and supports and to determine how much and in what ways the coaching model should integrate with the new QRIS.

Explore minimum thresholds for coaching dosage. EEC might explore establishing guidelines or requirements for all coaching initiatives for minimum thresholds of coaching duration and frequency and/or maximum thresholds of coach caseload. Because Abt's review of the literature and scan of practices in other states didn't reveal much relevant information regarding coaching dosage or caseload, EEC might want to convene a Coaching Advisory Group to review the literature, practices in other states, and current coaching initiatives in Massachusetts regarding thresholds and caseloads specifically. The purpose would be to make a set of recommendations, each of which could be aligned to ensure the most effective delivery of coaching content (i.e., foundational, social-emotional, mental health, etc.).

Establish a tiered coaching system. As described in more detail in the Sample Coach Career Pathway below, several states have established approval processes for coaches and trainers, the classifications of which are based on a coach or trainer candidate's qualifications and the content they have been trained to coach on. These classifications then dictate the complexity and type of coaching the coaches are permitted to provide. The more advanced the certification coaches receive, the more complex the content on which they may coach. Some states use a tiered approach to provide different coaching to programs based on their levels of need. For example, a master coach would provide more intense (and expensive) coaching to educators within programs who need help improving the quality of the interactions that teachers are having with children. This coaching may occur over several months to help educators improve the way they observe children, interact with them, and focus on them as thinkers and learners. Adopting a tiered coaching system might allow EEC to more effectively use its limited resources. In collaboration with stakeholders and advisors and with support from a Coaching Advisory Group, EEC could develop criteria to incorporate the type of content being provided (foundational, social-emotional, mental health) in the context of the needs of the program or provider.

Establish a Process for Program/Educator Needs Assessment as Part of the Coaching System. The state could designate staff to be trained as Planning Consultants in the coaching system. EEC might consider requiring each program to engage with an EEC Planning Consultant as a first step in participating in the coaching system. The Consultant could serve as the point person for initial needs-

assessment to educator program directors about the coaching system and determine levels and areas of need in order to match coach/coaches with requisite skills and experience to meet those needs.

Statewide Structures in a Comprehensive Coaching System

This section describes several types of structures that EEC could develop as part of a robust statewide system of coaching: (1) a Coach Approval Process, (2) a Coach Academy that is a central mechanism for providing ongoing professional support for coaches, and (3) State Systems Structures (data systems and advisory structures) to track and monitor the delivery and outcomes of coaching.

1. Coach Approval System

The Abt team recommends that EEC develop policies and procedures that will provide more oversight than the current system regarding the competencies and qualifications expected of coaches. Massachusetts can build on those current competencies for TA providers to develop a system for approving coaches and other TA providers as a means for ensuring the high quality of coaches. Ensuring that EEC-funded coaches are competent and effective will help persuade educators and programs that receiving coaching is a valuable tool for continuous improvement.

For EEC to establish a coach approval process will require several steps, as described below. Some steps can build on existing structures, while others require the creation and funding of new positions/programs.

Create a standard job description for coaches. A first step would be for EEC to build on the descriptions and qualifications established for Educator and Provider Support (EPS) and Early Childhood Mental Health (ECMH) grantees (described in Appendix C) to develop a statewide job description for coaches/consultants. Common job descriptions would provide a standard level of expectations across coaches in the system. These job descriptions could be tailored to fit the nuances of different types of coaches and different content areas, but ensure that the essential qualifications, knowledge and skills to be a successful coach are consistent across regions of the state and EEC-funded coaching initiatives.

Revisit coach competencies. Because the new model of coaching will have child learning and development at the center, EEC should review its current competencies from two perspectives: 1) to ensure that current coach competencies are clear, concise and measureable, and 2) to ensure that the competencies include a focus on coaches' content knowledge. Based on Abt's review of competency documents in other states, EEC should consider developing a streamlined version of the current competencies to make them more focused on evidence-based practices and content knowledge as well as simpler and easier to measure.

Establish career pathways specific to coaches. Building on and aligned with the educator career lattice that is under development, EEC should establish and refine a coach career lattice that makes clear the pathways and career trajectories for coaches and other technical assistance providers. As a starting point for EEC consideration, below is a draft set of tiers of coaches and commensurate qualifications and expertise. Exhibit 3 includes references to other states, where appropriate. Please note that this draft pathway aligns with the categories of qualifications currently included in the draft educator career lattice, which is still in development and likely to change. Abt will work with EEC to continue to revise the coach lattice to ensure it stays aligned to the educator lattice.

Exhibit 2. Sample Coach Career Pathway

Components	Trainer	Coach	Master Coach/ Coach Supervisor
Competencies	[link to updated competencies]	[link to updated competencies]	[link to updated competencies]
Common Formal Training and Professional Development	• 30-hours of training (9 online modules) (WA) • MA Foundational Training: – Pre-service Health and Safety Training – Pre-licensee process and required provider/educator orientations – Ongoing foundational core knowledge	1 to 4 day trainings for all coaches: • Relationship-based Professional Development (CO, MN, WA) • Reflective Practice • MyTeachingPartner Training (30 hours)[2]	Ongoing training based on current evidence-based practice[3]
Degrees	Minimum ECE associate's degree or credit equivalent (EPS, WA)	Minimum ECE bachelor's degree or credit equivalent (AZ, CO, MN, WA)[4]	Minimum ECE bachelor's degree or credit equivalent (CO)[5]
Classroom Experience	Minimum 3 years classroom/director experience (EPS) Including 1820 hours[6] (CO) direct work with young children or families	Minimum 3 years classroom/director experience (EPS) Including 1820 hours direct work with young children or families (CO)	Minimum 3 years classroom/director experience (EPS) Including 1820 hours direct work with young children or families (CO)
Professional Development Credits	20 hours documented experience teaching adults (WA)	Minimum 2 years of experience providing coaching/consultation/training and/or mentoring (EPS) with 300 direct coaching hours (CO)	Minimum 2 years of experience providing coaching/consultation/ training and/or mentoring (EPS) with 600 direct coaching hours (CO)
Renewal	After 3 years (CO, WA)	After 5 years (CO)	After 5 years (CO)
Training to Be Provided	Foundational, licensing (MN, OR)[7]	QRIS (CO, MN, WA)	QRIS (CO, MN, WA) Coach Supervision (MN) Train the Trainer (CO, MN)

[2] MN provides 30 hours of CLASS training free of charge to all its QRIS coaches. Similarly, MA may consider providing MTP to all its coaches.

[3] In MN, all state-approved trainers are eligible to receive a $200 stipend annually to support the cost of their own professional development, curriculum development and training delivery.

[4] EPS currently allows a minimum threshold of ECE associate's degree or credit equivalent, other states (AZ, CO, MN, WA) require coaches to have an ECE BA.

[5] AZ, CO, MN, WA require Coach Supervisors or Master/Advanced Trainers to have a minimum of a master's degree.

[6] Minnesota requires 2080 hours direct work with young children.

[7] OR's Standardized Trainers are approved to deliver Standardized Training Curricula, which are packaged curricula that have been developed to meet the training needs of professionals statewide.

Add coaches as a category in the current Professional Qualifications (PQ) Registry. EEC can consider mirroring the way the current system captures information on educators' qualifications to capture coaches' qualifications. These include education, experience, and competencies as well as the professional development that trainers have taken and have provided. In the same way that educators now find professional development offerings, they could also find a trainer or coach whose expertise matches their needs and/or the needs of their program. Coaches and master coaches could develop their own approved trainings and register these in the system, as well.

Consider providing Continuing Education Units (CEUs) for coaching. The evidence base makes clear that professional development is more effective when it includes a coaching component, so EEC should consider providing CEUs for educators who receive coaching. Allowing educators to earn credit for their engagement in coaching could prove a more effective means for ensuring educators' professional growth than the current practice of only awarding CEUs for training, workshops, conferences and courses.

Build on the work of current grantees to establish systems and roles for monitoring coach effectiveness statewide. EPS and ECMH grantees have established procedures for monitoring and supervising coaches. EPS grantees use Lead Coaches who are responsible for overseeing coaches, and the Lead Coaches and non-lead coaches interviewed reported that they are in contact frequently. ECMH grantees use Clinical Supervisors who meet with consultants regularly. EEC might consider building on the roles of Lead Coaches and Clinical Supervisors to create a small cadre of state-level master coach/observer positions within each evidence-based model as a way to support coaches and ensure the same level of quality in coaching across regions and across the state. A coach monitoring system could include two components:

1. **A standard tool for measuring coach competencies**. Once clear and specific competencies have been established for what coaches are expected to know and be able to do, EEC should develop a system for measuring these competencies. Similar to the Coaching for Change self-assessment tool and the EPS (Region 5) Coaching Rubric for Coaching, EEC could develop a scoring rubric and observation protocol (AZ) to use both as a feedback mechanism and as a quality assurance tool.
2. **EEC Coach Supervisors to monitor coach competencies**. EEC might consider hiring Master Coaches (WA) or Coach Observers (MN) who could use the coach competency rubric as well as standardized observation protocols to monitor coach effectiveness for each coaching model. These monitors could be selected from among those coaches who are approved as master coaches through the coach approval system.

Establish a Coach Approval Team to oversee the approval of coaches statewide, which could convene regularly to review and approve technical assistance providers (coaches, trainers). Over time, EEC might consider selecting some advisors from different coaching initiatives who could provide oversight of the approval process (WA). Establishing such a team would help build leadership pathways among technical assistance providers and would establish a peer review model for approving new coaches.

Identify partners to support development of coaching structures. In several states with statewide coach support systems – AZ, CO, MN, WA – their state agencies fund partners to lead and oversee their coaching initiatives. For example, Arizona's First Things First Board has partnered with the Valley of the Sun United Way to oversee and administer its statewide coaching system. The Minnesota Department of Human Services has partnered with the Achieve Minnesota Center for Professional Development to approve its trainers and coaches and with Child Care Aware Minnesota to train and support its coaches.

Washington's Department of Early Learning has partnered with the Childcare Quality and Early Learning Center for Research and Professional Development at the University of Washington to develop and support its statewide coaching framework and with Child Care Aware of Washington to provide professional development for coaches.

2. Coach Academy

Develop and offer a common, statewide new coach orientation and training for educators and program directors. This recommendation draws on EEC's Coaching for Change trainings, Head Start's Practice-Based Coaching (PBC) training, and the work of some EPS and ECMH grantees as well as the practices in some other states (AZ, CO, MN, WA). This type of orientation/training might include courses that would be relevant to all coaches across content areas and help build key skills, such as relationship-based coaching, practice-based coaching and/or reflective practice. EEC could consider drawing lessons from the new coach programming in other states, which require and support coaches to participate in relationship-based professional development (RBPD) training. Similarly, Head Start requires coaches and directors to participate in an initial training session. Head Start also requires a team, including program directors/leaders, to attend the initial training for its PBC model to ensure that program directors understand, buy-into, and support the coach role in their programs. RBPD and PBC share common elements that were found in the literature review: planning, practice, observation, reflection and feedback.

Develop a coaching manual. Building on the work of EPS grantees (Region 3), EEC might consider developing a coaching manual as other states (AZ, MN) have done provide coaches with resources and information they could readily access on an ongoing basis. This manual would need to be developed to reflect the coaching model(s) that EEC decides to invest in. EPS Region 3 has developed a manual that includes topics such as definitions of coaching and mentoring (what each is and is not), coach qualifications and characteristics, advice for dealing with conflict and resistance from educators, guidelines for the coach/mentor relationship, guidelines for reflective conferencing, and strategies for effective feedback. It also provides standard forms, including a coach contract and coaching log.

Provide ongoing supports for coaches. EEC could consider building on its current work with EPS coaches to expand opportunities for ongoing support for coaches, such as regional networks, coach professional learning communities (PLCs), and a network of peer-to-peer coaches. EEC might consider hiring state level master coaches, who could perform several functions: (1) meet with coaches regularly (similar to ECMH's Clinical Supervisors) and provide consultation (problem-solving focus) for coaches, (2) facilitate monthly webinars that focuses on a particular topic or practice, and (3) serve as "matchmakers" connecting coaches to one another to share ideas and strategies. Webinars could help facilitate dialogue among coaches, establish supportive relationship building, provide new information on specific topics, and share new tools or resources – and can be recorded and posted to EEC's website, thus serving as ongoing resources. In addition, peer coaches could coach each other on mutually determined topics – or on issues suggested by master coaches. EEC might consider establishing a statewide coach network like Colorado's Coaching Consortium, which provides ongoing support to its coaches through regular training and monthly PLCs on coaching-related topics.

Create an online toolkit to support coaches. Current EEC initiatives (such as EPS, ECMH, Head Start's PBC and the Pyramid Model) provide grantees and coaches with robust and useful online resources and guidance. EEC should consider establishing one online space for all coaching-related resources, guidance, and standardized forms, including coach approval instructions, orientation materials,

webinars, standardized needs assessments, partnership agreements and feedback forms, and coaching-specific resources related to QRIS, licensing, CLASS, ERS and other common coaching tools.

3. Other State Structures

As EEC continues to build new data systems and a learning management system, it would be helpful to incorporate ways to collect data about the implementation of coaching statewide and engage experts in the ongoing development of the system.

Create standardized electronic coaching logs. EEC might consider developing an electronic coaching log as part of its forthcoming learning management system and then requiring all state-funded coaches to use the electronic log to document their coaching efforts. These logs could record information such as the amount of time each coach spends with each provider, the number of coaching sessions and visits, and the content of the coaching provided.

Develop a dashboard for coaches. EEC could develop a dashboard to display program and state level data regarding: the types of coaches who have provided services, the dosage of the coaching (duration and frequency of visits to achieve coaching goals), and coaches' caseloads. Being able to review the prior coaching that an educator or program has received would provide incoming coaches with useful information as they initiate new coaching relationships and allow coaches to build upon previous efforts. Eventually, it would be preferable for the dashboard to be linked to each coach's profile in the PQ Registry so that EEC could see which coaches were serving which programs over time.

Establish a Massachusetts Coaching Advisory Group. As previously described, EEC might consider establishing a group of experts from across coaching initiatives. The group could convene quarterly and provide feedback and guidance on the development of the new coaching system as well as its evolution and refinement over time. In addition to including coaching experts from a diverse range of coaching initiatives (QRIS, ECMH, PEG, Pyramid Model), this group might include licensors, researchers and other experts in the field. This group could help EEC establish criteria for selecting evidence-based coaching models, thresholds for coaching dosage and coach caseloads, and levels of tiered coaching.

4. Implementation Plan

The Implementation Plan below outlines potential next steps for implementing the statewide coaching model recommendations over FY18 and FY19.

Phase One: July–December 2017

Over the summer of 2017, Abt envisions that EEC will make key model decisions, establish a group of advisors, engage stakeholders, collaborate and integrate with other workforce development efforts, and explore data systems. Each is described in more detail below.

1. **Make Key Decisions**. As a starting point for beginning to build a statewide coaching system, there are some key questions that EEC will need to consider, in collaboration with stakeholders. Some of these questions are described below.

- *How closely aligned will the coaching model be to QRIS?* The revisions to QRIS that are underway present both a need for additional coaching and support and an opportunity to rethink how coaching is provided in Massachusetts. There are arguments to be made both for and against making the statewide coaching model a piece of the QRIS system, as many states have done. EEC might consider building its statewide coaching model around its QRIS system, so that coaching becomes a dissemination and support mechanism for the new QRIS standards. But providing coaching that is solely a feature of QRIS would leave providers that do not participate in QRIS without access to needed supports. Furthermore, there may be some areas of program need that are not reflected in the QRIS.
  - Abt, with its partners from UVa will work with EEC to provide recommendations and convene stakeholders to determine the preferred approach.

- *What will the cycle of coaching be in the new model*? UVa partners Drs. Pianta and Hamre have encouraged EEC to keep things as simple and clear as possible when guiding coaches on what they are expected to do and how they are expected to do it. As several other states have done, EEC might consider prescribing both the content (the what) and the coaching cycle (the how) as part of its new model. Though EEC has not yet established a set of required coaching features, some EEC-funded grantees (EPS, ECMH, Head Start, future Pyramid Model demo sites) have identified or established their own coaching cycles.
  - Abt and UVa will work with EEC and other stakeholders to inform and make recommendations about a coaching cycle, which can then be required of all state coaching initiatives and training provided to all new coaches.

- *What will the content of the new model be? How will the content covered in existing coach initiatives be integrated and aligned?* Current coaching initiatives in Massachusetts primarily consist of coaching for QRIS and licensing (EPS), for mental health issues (ECMH), and for social-emotional skills (Pyramid Model). Other states have established pools of coaching experts related to academic content areas such as literacy and math. The needs assessment that EPS grantees administer each year might help guide EEC in determining which content areas which programs are most interested in receiving coaching on.

- The Abt team can help in this: (1) It can provide information, make recommendations based on evidence and practice, and help engage with stakeholders to determine how best to integrate and align the existing coaching provided by the various initiatives. (2) It can conduct research (under its FY18 contract with EEC) regarding new, evidence-based coaching models that align with current gaps in Massachusetts's coaching content (e.g., self-regulation, social emotional development) and make recommendations regarding which content-based coaching models are the most promising for EEC to bring into its statewide coaching system.

2. **Establish a Coaching Advisory Group.** Abt recommends the timely identification of key state and local participants in and leaders of Massachusetts's current coaching initiatives and grants, as well as researchers and other coaching experts, to help guide the development of the coaching model.

   - Abt can help EEC to establish this Coaching Advisory Group in its FY18 contract, drawing in part from the stakeholders who have already participated in this project. The Abt team also can help facilitate regular meetings.

3. **Implement Statewide Coaching Structures**

Assuming EEC follows Abt's recommendation that the new coaching model be supported by three statewide structures – coach approval system, coach academy, state systems structures:

- The Abt team will work with EEC to support the development of action steps for each of the three components.

4. **Prepare for Stakeholder Engagement**

The coaching model will affect many stakeholders across the mixed delivery system. It will be important to engage those stakeholders in the development of the model because of the expertise they bring and their ability to suggest improvements or identify weaknesses.

- The Abt team will use most of Phase One (July–December 2017) to collaborate with EEC, and its partners Early Childhood Associates and the UMass Donahue Institute, to develop materials that communicate the coaching model to stakeholder groups, and then use those materials to conduct stakeholder engagement in Phase Two (#7 below).

5. **Align Coaching Model with Related Projects**

- The Abt team will collaborate with Early Childhood Associates regarding the TA competencies, development of a Coach career lattice, and planning for coach training. Abt will continue to meet with the UMass Donahue Institute to track the progress of the Educator career lattice, which will in turn inform the development of the Coach career lattice. Abt will communicate with staff involved with the development of the QRIS to make sure the coaching model is responsive to and aligned with the evolving revised QRIS.

6. **Explore Data Systems**. EEC has several IT projects currently underway.

- The Abt team will meet with leaders of the PQ registry and LMS projects to determine what features of these systems are already underway and to determine the feasibility of adding coaching related components to the scope of work for existing projects.

Phase Two: January–June 2018

In Phase Two of implementation, we envision three activities: engaging stakeholders, aligning the coaching model with other workforce development efforts, and revising and refining the model based on stakeholder feedback. Each is described in more detail below.

1. Engage Stakeholders

EEC's priority during Phase Two should be to meet with and gather input from stakeholders across the mixed delivery system on the proposed coaching model, as well as stakeholders who participate in EEC's current coaching initiatives.

- Abt will support EEC by systematically collecting feedback from stakeholders through focus groups and brief online surveys. It will analyze these data to develop findings that can inform revisions to the coaching model.

2. Align Coaching Model with Related Projects, cont.

- Abt will continue to meet with Early Childhood Associates regarding the TA competencies, Coach career lattice development, and planning for coach training; with the UMass Donahue Institute to track the progress of the Educator career lattice; and with QRIS leaders, to adjust the coaching model in response to changes in QRIS, to ensure the model can support programs as they implement the new QRIS system.

3. Revise and Refine Model

EEC leaders may wish to convene and gather input from the Coaching Advisory Group, state leaders, and EEC Board, and then to revise the model based on this feedback. The goal of Phase Two is to have the features and content of the model defined, as well as priorities established for what types of coaching will be provided.

- Abt will collaborate with EEC to incorporate revisions to the model that fit within the scope of its FY18 contract.

Phase Three: July–December 2018

Phase Three of the implementation plan focuses on planning for the initial implementation of the model and establishing a timeline for developing the statewide structures to support coaching, as well as ongoing collaboration with other workforce development efforts and stakeholders, and refinement of the model based on stakeholder feedback.

1. Plan to Pilot the Coaching Model

The Abt team recommends EEC take an incremental approach to implementing a statewide coaching system in FY19. Based on the lack of research supporting large-scale coaching models, as well as EEC's limited resources and capacity, Abt proposes that EEC begin with a small pilot of a coaching model with a specific focus. This model could be piloted either across the mixed delivery system, to assess the model's effectiveness with different types of programs, or with a subset of a single provider type, to determine the impact of the model before tailoring and scaling it for different provider types. In addition, the Abt team recommends that the pilot include continuous tracking of progress and an implementation study.

- The Abt team will work with EEC to develop a plan for the pilot.

2. Engage Stakeholders, cont.

- Abt will continue to meet with and gather input from stakeholders, especially those who will participate in the pilot. Abt will systematically collect feedback from these stakeholders through focus groups and brief online surveys. It will analyze these data to develop findings that can inform revisions to the coaching model.

3. Align Materials with Related Projects

- Abt will collaborate with Early Childhood Associates to develop a coach orientation that is aligned with the TA competencies and to plan coach training tailored to the new model. It also will collaborate with staff involved with implementation of the new QRIS system.

Phase Four: January–June 2019

Phase Four will focus on implementation of the pilot.

1. Develop Statewide Structures

- The Abt team will work with Early Childhood Associates and EEC to develop some of the new components of the statewide structures to support coaching, such as the Coach Academy ongoing supports for coaches (e.g., networks, PLCs), , drawing from EEC's current grant initiatives as well as models in other states.

2. Plan to Pilot the Coaching Model, cont.

EEC and its partners will need to identify potential sites for the pilot and develop a pilot site selection process.

- Abt will support this work by incorporating the stakeholder feedback it collected, providing evidence-based recommendations for the content of coaching model, and working with QRIS staff to plan for the role the coaching model will play in supporting programs as they implement the new QRIS system.

3. Engage Stakeholders, cont.

- Abt will continue to meet with and gather input from stakeholders, both those who will participate in the pilot and those who are using the new statewide structures. Abt will conduct focus groups, administer brief online surveys, and analyze these data to develop findings that can inform revisions to the coaching model.

Appendix A. Literature Review

Summary of Findings

- **Delivery**
  - Several literature reviews indicate that the most successful coaching models are those that are specific, targeted, and evidence based. Many models in reviewed studies, however, either did not indicate or did not have a theoretical underpinning.
  - Most of the reviewed studies paired coaching with a training, workshop, course, or curriculum, and they found that trainings, workshops, and coursework are more beneficial *with coaching* than without.
  - More coaching may result in more positive outcomes. However, there is no guidance or consensus on the optimal intensity of coaching.
  - Coaching can be effective whether delivered in person, remotely, or through a combined approach.
  - One critical feature of effective coaching seems to be a systematic cycle, including planning, observation of practice, reflection, and feedback. Also, there is evidence that effective coaching depends on a positive coach-educator relationship. Yet there is virtually no research systematically isolating these features to better understand how, when, and with what fidelity they need to be implemented, nor which features are needed to take a coaching program to scale.
- **Coaches**
  - In reviewed studies, coaches typically had at least a bachelor's degree, usually in an early childhood–related field, and prior experience as an early childhood teacher. Both the degree and the experience are recommended by policy and practice reports.
  - Policy and practice reports agreed that a strong coaching system needs to assume responsibility for providing coaches with ongoing supports for their own effective practice, including training, other forms of professional development, and supervision. Again, the research does not indicate which types or amounts of training make coaches effective.
  - No studies explicitly tested coaches' caseloads versus their impacts on educators coached, but it seems that coaching effectiveness may decline with larger caseloads.
- **System**
  - Many policy reports recommend identifying goals, action plans, targets, outcomes, and scope, as well as the general purpose of the coaching, as the first step in effective coaching.
  - Several policy reports called for building a tiered career lattice for coaches, with clear career pathways and avenues to credentialing and formal recognition, as well as compensation adequate to recruit and retain high-quality staff.
  - Policy and practice reports recommend building systems to collect data about the delivery of coaching and its outcomes (e.g., via coaching logs, feedback forms, evaluations, etc.) as a foundation for targeting coaching, as a means to identify effective coaching techniques, and to enable coaches and supervisors to track the progress of the coaching.

Introduction

Research indicates that coaching is a promising strategy for building teacher skills and competencies and improving child outcomes in an array of early childhood settings. To support Massachusetts in its development of an early education coaching system, the Abt team conducted a review of research related to the delivery of coaching, coach characteristics, and the systemic components needed to support coaching. The review revealed that the bulk of the evidence, albeit slim, focused on coaching delivery. As a result, information in the research about coach characteristics and the coaching system is supplemented with recommendations about best practices drawn from articles, reports, and policy briefs produced by state and nationally recognized experts in early education.

This chapter begins with a description of the literature on the delivery of coaching, followed by a summary of the descriptive information available regarding coach characteristics. It concludes with an overview of the literature and policy recommendations related to large-scale coaching systems.

Methodology

Abt's literature search leveraged four previous literature reviews and four meta-analyses published between 2010 and 2017 on coaching and/or early childhood professional development. All meta-analyses except one (Fukkink & Lont, 2007) included only rigorous studies that could support causal inferences, such as randomized control trials, quasi-experimental designs, and regression discontinuity designs (generally, designs with a treatment and very similar comparison group). Randomized control trials are considered to be the gold standard for assessing the efficacy of interventions given the ability of such studies to attribute observed effects to the intervention.[8] Quasi-experimental designs, a rigorous design that creates treatment and comparison groups through a non-random process, can be used as evidence to attribute observed effects to the intervention, but cannot rule out with certainty the contribution of other factors to study results.[9] Although the meta-analysis conducted by Kraft, Blazar, and Hogan (2016) focused on K-12 literature, we included it with the other meta-analyses given its focus on coaching and its inclusion solely of studies using rigorous designs.

We summarized a subset of studies cited in the literature reviews or the meta-analyses or both to use as examples in the literature review and to obtain additional nuance about findings. Those summaries are provided in the annotated bibliography attached to this appendix.

Finally, because the study of coaching in the early childhood context is an emerging body of research, we also included 23 policy- and practice-related articles to supplement the findings discussed in the research.[10] In total, the literature review included 461 citations.

On Delivery of Coaching

Coaching Model

Aiken and Akers (2011) noted there is a growing consensus that specific and targeted coaching efforts are most successful, and highlighted the importance of aligning coaching with standards. Hamre (2017) indicated that ensuring that educator professional development (PD) is based on theories of change that

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8 See, e.g., https://ies.ed.gov/ncee/pubs/evidence_based/randomized.asp

9 See, e.g., https://ies.ed.gov/ncee/wwc/Glossary

10 Three of these articles were also included in the research review.

target evidence-based practice is fundamental to effective PD. Similarly, Zaslow et al. (2010) concluded that early childhood PD is most successful when it has articulated objectives. Several reviews noted that one way to accomplish the alignment of an explicit focus and evidence-based teacher practice is the use of validated observational measures linked to positive child outcomes (Hamre, 2017; Zaslow et al., 2010). Despite these calls for linking coaching efforts to theory and evidence, reviews found that not all studies indicated or had a theoretical underpinning (Aiken & Akers, 2011; Hamre, 2017).

Integration with Coursework

Most of the reviewed studies paired coaching with a training, workshop, course, or curriculum (Aiken & Akers, 2011; Artman-Meeker et al., 2015; Markussen-Brown et al., 2017). For example, Artman-Meeker et al.'s literature review, which focused only on rigorous studies of coaching within an early childhood context, found that 90 percent of their studies included an initial training session prior to the start of the coaching. Similarly, Kraft, Blazar, and Hogan's (2016) review of causal studies of coaching found that 81 percent combined it with group trainings, including summer workshops and team trainings during the school year. Others added coaching to established PD models or coursework: Lonigan, Farver, Phillips, & Clancy-Menchetti (2011) explored the impacts of adding coaching to the Literacy Express Preschool Curriculum (LEPC), and Landry and colleagues (Landry, Anthony, Swank, & Monseque-Bailey, 2009; Landry, Swank, Anthony, & Assel, 2011) assessed the addition of coaching to the online Center for Improving the Readiness of Children for Learning and Education (eCIRCLE) training. Coaching has also been paired with credit-bearing PD courses (Neuman & Cunningham, 2009; Neuman & Wright, 2010).

One drawback of pairing coaching within a larger PD model is that it limits the ability to isolate the effects of coaching from the effects of the professional development. A small body of literature, however, has used planned variation research designs to compare, for example, the effects of a workshop versus those of a workshop and coaching. These studies generally found that coaching in addition to coursework, workshops, or trainings is more beneficial than the coursework, workshops, or trainings alone (Hamre, 2017; Markussen-Brown et al., 2017; Werner, Linting, Vermeer, & Van IJzendoorn, 2016). For example, Neuman and Cunningham (2009) randomly assigned participants to a control group, a group that only received professional development in the form of a community college course, or a group that attended the community college course and received continuing coaching. There were no significant changes on teacher language and literacy practices for the group participating only in coursework, but there were significant, and large, effects for the group assigned to the course/coaching combination. Further, Markussen-Brown et al.'s (2017) meta-analysis found that including coaching in a PD model resulted in significantly better teacher practices (coaching effect size = .68 versus no coaching effect size = .22).

Coaching Dosage

The intensity of coaching across reviewed studies varied widely. For example, the total number of hours of coaching received by educators in the reviewed studies (where reported) ranged from 18 *minutes* to 450 *hours* (Aiken & Akers, 2011; Artman-Meeker et al., 2015; Kraft et al., 2016; Werner et al., 2016). Fewer reviews systematically examined the role of coaching duration (i.e., a 10-week versus a 20-week program). The only study to include an analysis of duration found no association between coaching duration and teacher practice (Markussen-Brown et al., 2017).

With few exceptions (Kraft et al., 2016), studies found that additional hours of coaching (and professional development more broadly) were associated with more positive outcomes (Hamre, 2017; Markussen-Brown et al., 2017; Mashburn, Downer, Hamre, Justice, & Pianta, 2010; Zaslow et al., 2010). For

example, building on Neuman and Cunningham's (2009) work, Neuman and Wright (2010) implemented a similar study, but with coaching delivered at a lower dosage (45-hour college course plus weekly 1- 1.5-hour coaching sessions through the school year for 32 weeks versus 30-hour college course plus weekly 3-hour coaching sessions throughout the school year for 10 weeks). The effects of the coaching delivered at a lower dosage were smaller than the effects in the prior study, where the same coaching was delivered at a higher dosage. The authors hypothesized that the lower coaching dosage could be responsible.

Blazar and Kraft (2015) examined two cohorts of coaching cycles, the first of which provided observation and feedback every three weeks and communication between coaches and teachers every one to two weeks between cycles. The second cohort, which also scaled up the number of teachers coached and coach-to-teacher ratios, reduced the coaching observation and feedback to every four weeks. The authors found significant impacts of the intervention on teaching practices for the first cohort of participants but not the second. They speculated that the reduction in the number of coaching cycles in the second cohort may partially explain the lack of effects.

Despite the evidence suggesting that additional coaching is associated with more positive outcomes, guidelines for optimal intensity are scant (Hamre, 2017; Zaslow et al., 2010). One tactic was to look at the adult learning methods literature, which suggests that these methods are most successful when applied to a small number of learners (less than 30) across several sessions lasting more than 10 hours (Trivette et al., 2009). There was also suggestive evidence that the amount of coaching needed may depend on the objectives of the professional development (Artman-Meeker, 2015; Zaslow et al., 2010). Indeed, as Pianta, DeCoster, et al. (2014) found, educators needed more coaching to change the instructional components of their teaching (up to 13 coaching cycles) than to change their classroom management strategies (up to seven coaching cycles).

Further, it is important to note that one of the studies with the smallest coaching dosage still found significant impacts on socio-emotional instructional practices. Coaching in Mattera, Lloyd, Fishman, and Bangser's (2013) study included two to three 60-minute coaching sessions per year, supplemented by four to six training sessions and 30-minute weekly meetings with coaches throughout the year. Unlike Blazar and Kraft (2015), Mattera et al. provided a four-day summer training workshop. Thus, it may be that fewer coaching sessions can be effective, but only when paired with more intensive, sustained supports throughout the school year.

Modality

Though the literature suggests that effective coaching may be delivered in person, remotely, or through a combined approach, there is no research that directly compares the relative effectiveness of different forms of coaching of the same content. Therefore, the evidence of the effectiveness of coaching using different modalities confounds modality and content, which limits its usefulness as guidance for Massachusetts. According to Artman-Meeker et al.'s (2015) review, the majority of coaching occurs in person (80 percent; e.g., Dickinson & Caswell, 2007; Domitrovich, Cortes, & Greenberg, 2007; Kretlow, Cooke, & Wood, 2012; Lonigan et al., 2011), whereas only 8 percent of their reviewed studies used remote coaching exclusively. One such model, *MyTeachingPartner*™ (MTP), which features prominently in the literature, was delivered remotely, with teachers sending videos of themselves to coaches in lieu of an in-person observation session (Downer, Hamre, & Justice, 2008; Early, Maxwell, Ponder, & Pan, 2017; Pianta, Mashburn, et al., 2008). Twelve percent of studies reviewed by Artman-Meeker et al. (2015) used a combination of in-person and remote delivery. Some interventions toggled between in-person and remote mentoring sessions (e.g., Diamond & Powell, 2011), whereas others combined online

training sessions with in-person mentoring (Landry et al., 2009; 2011). Notably, Kraft, Blazar, and Hogan's (2016) meta-analysis found no effect of virtual coaching on teacher or student outcomes; nor did several studies that compared in-person mentoring with remote mentoring, which found no significant differences in their efficacy (Ruble, McGrew, Toland, Dalrymple, & Jung, 2013; Powell, Diamond, & Koehler, 2010).

Coaching Process

A converging body of literature indicates the importance to effective coaching of a comprehensive coaching cycle with positive coach/educator relationships – moving from planning, to demonstration, to observation of teacher practice, to shared reflection and feedback (Aiken & Akers, 2011; Artman-Meeker et al., 2015; Hamre, 2017; Zaslow et al., 2010); although the extent to which these features are used varies widely (Artman-Meeker et al., 2015). Indeed, in Artman-Meeker et al.'s (2015) review, only 4 percent of reviewed studies included a "comprehensive" coaching model, defined as having a focus on partnership, planning, observation, reflection and feedback, and action. Perhaps one of the most systematic conclusions across the literature review and meta-analyses was that despite the growing convergence on the efficacy of coaching and what the critical features likely are, there is virtually no research systematically isolating these features to better understand how, when, or with what fidelity they need to be implemented, nor which features would be needed to take a program to scale (Aiken & Aikers, 2011; Artman-Meeker et al., 2015; Hamre, 2017; Kraft et al., 2016; Zaslow et al., 2010).

In the sections below, we review the small body of literature available on each hypothesized key component of coaching.

Planning

Aiken and Akers (2011) called out the importance of planning in particular – noting that implementation of teaching strategies was more successful if a plan had been made, and that planning was associated with more positive outcomes. Artman-Meeker et al. (2015) reviewed two components of planning, and found that one-third of the studies featured an action plan that was used throughout the coaching sessions and more than half (55 percent) integrated planning for the use of new skills in between coaching sessions.

Practice and Observation

Artman-Meeker et al. (2015) reviewed multiple facets of practice and observation, including the use of a manual, assistance from coaches to prepare the materials needed to implement new skills, coach modeling, video modeling, coach/teacher role play, and the opportunity for educators to practice new skills while coaches observe. Most prevalently, their reviewed studies included the use of a manual to support teachers during coaching (53 percent), followed by the practice of new skills (31 percent) and coach modeling (27 percent). Fewer studies reported that coaches assisted in the preparation of instruction materials (20 percent), included video modeling (16 percent), or role played (4 percent).

Reflection and Feedback

Most prevalently, the coaching interventions reviewed included a feedback component, whether checklist based, in person, or written (Artman-Meeker et al., 2015). In Artman-Meeker et al.'s review, this coaching strategy was present in 86 percent of the reviewed studies, whereas other reflection and feedback strategies were used less frequently. About two-fifths (39 percent) of reviewed studies used collaborative progress monitoring, which entails coaches and educators jointly tracking educator progress

on new skills. Only 14 percent of Artman-Meeker et al.'s studies explicitly integrated a self-reflection component.

The feedback component of coaching may be particularly important to its efficacy. Landry et al. (2009) explored the value of coaching with and without a feedback component. They found that when coaching was paired with detailed feedback, there were significant, positive impacts on teacher language and literacy instruction. When teachers were coached but given only limited feedback, there were no significant impacts on language and literacy instruction. Further, teachers who received both coaching and detailed feedback had the largest gains in the quality of teaching behaviors, and their students' school readiness improved, indicating that combining the two components may be most effective.

Note that in addition to variation in the presence of these features in the coaching intervention, there was also variability in their timing. For example, feedback might be delivered immediately following an in-person observation or might be given a week after reviewing a video observation. Artman-Meeker et al. (2015) found that in their review, 41 percent of feedback occurred immediately after observation, 27 percent occurred on the same day as observation, and 27 percent occurred at least one day following observation. In 8 percent of the studies, there was a combination of immediate, same day, or delayed feedback.

Coach/Educator Relationships

Several reviews stressed the importance of building the interpersonal relationship between the coach and educators (Aiken & Akers, 2011; Artman-Meeker et al., 2015). Aiken and Akers found that positive, collaborative, and supportive relationships were one of the most important features of a successful coaching intervention. However, Artman-Meeker et al. found that only 12 percent of their reviewed studies explicitly reported that building the coach/educator relationship was an intentional focus.

On Coach Characteristics

Only descriptive information was available to help inform the characteristics of coaches and supports that are most important for effective coaching. As such, the bulk of this discussion on coaches draws from policy and practice reports that make recommendations about features of coaching that may be important – although they do not cite an evidence base to support these recommendations.

Coach Skills and Competencies

Despite the centrality of the coach to a coaching model, there is scant research about the effectiveness of coaches with different characteristics, and many studies do not provide information about coach characteristics. Among those that did provide information on the coaches themselves, coaches typically had at least a bachelor's degree, usually in an early childhood–related field (Artman-Meeker et al., 2015; Early et al., 2017; Lonigan et al., 2011; Mattera et al., 2013; McCollum, Hemmeter, & Hsieh, 2011; Neuman & Cunningham, 2009; Neuman & Wright, 2010). They also typically had prior experience as an early childhood teacher (Blazar & Kraft, 2015; Neuman & Wright, 2010; Pianta et al., 2008).

Other characteristics of coaches highlighted in studies included experience managing educational organizations/programs (Blazar & Kraft, 2015; Neuman & Wright, 2010); coaching (McCollum et al., 2011); adult education (Mattera et al., 2013; Neuman & Cunningham, 2009; Neuman & Wright, 2010); working with teachers from diverse backgrounds; and for coaching delivered remotely, proficiency in technology (e.g., Pianta, DeCoster, et al., 2014). Some of the coaching interventions used very highly trained staff. In one coaching intervention, coaches had a doctoral degree in early childhood special

education or were working toward it and had experience as university practicum supervisors in early childhood professional development (McCollum et al., 2011).

The International Reading Association guide *Standards for Reading Specialists/Literacy Coaches,* like other policy and practice reports reviewed, suggested that coaches have previous teaching experience, as well as a master's degree with a content-related concentration (in this case, reading and writing education). The guide also recommended that degrees should include coursework that develops expertise in leadership and teacher coaching in addition to working with children (Heineke & Polnick, 2013). The National Association for the Education of Young Children (NAEYC) report *Strategic Directions* (Young, 2012) noted that though standardization of qualifications could provide consistency in the preparedness of TA providers, setting minimum requirements could exclude certain professionals from multi-disciplinary fields and limit diversity. The report suggested allowing for different entry points into the system and the use of either a statewide or other system process to verify qualifications and credentials, so that the information on provider backgrounds is at least readily available.

In their book *Coaching Matters*, Killion et al. (2012) went into detail about important personality and behavioral characteristics of effective coaches. These include a willingness to learn and belief in others' capacity to progress, as well as teaching expertise in areas of instructional planning, in their own teaching, in reflection on their own practice, in use of multiple student assessment methods, in classroom organization and management, and in delivering instruction in multiple ways. Effective coaches also exhibit interest in being part of a team and attention to fostering trust, being respected by their peers, having patience for the learning process, and using effective questioning techniques.

Coach Training and Supports

In the reviewed studies, there was little information provided about the necessary training and supports for the individuals doing the coaching. Policy and practice reports agreed that a strong coaching system needs to assume responsibility for ensuring coaches receive the training, professional development, and ongoing support they need to be effective (Pemberton et al., 2016). Gallucci, Van Lare, Yoon, & Boatright (2010) found that coaches tend to feel a lack of support. They often learn new material at the same time as the teachers they are supposed to be guiding, without any chance to build expertise and familiarize themselves with this new knowledge before covering it in coaching sessions.

The policy and practice reports made recommendations about best practices in supporting coaches and coaching programs. A key recommendation was that to be effective, coaches need both initial training that includes specific guidance on coaching content and ongoing support throughout the coaching intervention. The Center for the Study of Child Care Employment report *Mentoring and Coaching* (Whitebook, 2016) stated that coaches should specifically be prepared with knowledge of adult learning, culture, teacher development, and reflective practices. Other publications also recommended that coach training should include adult learning principles to augment other early childhood education qualifications coaches might already have (Byington & Tannock, 2011; Hanover Research, 2015; Killion et al., 2012). Practice documents pointed to the value of practical applications and hands-on classroom work in helping coaches realize strategies before they begin regular coaching sessions (Lesaux, Jones, Harris, & Kane, 2014).

Reports also suggested that coaches benefit from having a supervisor or mentor themselves with whom they have regular check-ins to discuss any challenges, share ideas, and assess progress (Trach, 2014; Walpole, McKenna, Uribe-Zarain, & Lemitina, 2010; Whitebook & Bellm, 2014). For example, school

leaders such as principals can fulfill this role and discuss goals and needs with coaches, as well as actively support lesson plan writing (Trach, 2014; Walpole et al., 2010). Some authors reported that coaches need to know that the administration respects and supports the work that they are doing and that they have access to materials and professional development opportunities (Early Childhood Associates, 2014; McGroder, Howard, Fishman, Rankin, & Helsel, 2014; Hanover Research, 2015).

Several policy reports recommended establishing communities of learning for coaches, to facilitate peer learning, sharing, and feedback, as well as connection in a field that can often have isolating work environments (Bacevich & Salinger, 2006; Gebhard, Ochshom, & Jones, 2012; Isner et al., 2011; Killion et al., 2012; NAEYC, 2009; Spokane Public Schools, 2010; Walpole et al., 2010; Whitebook & Bellm, 2014). Some policy reports suggested that these learning communities focus on learning and practicing of mentoring skills (Whitebook & Bellm, 2014), and others recommended them so that coaches have opportunities to brainstorm and bounce ideas off of one another (Bacevich & Salinger, 2006). Gebhard et al., (2012) suggested that states establish networks of specialists that cross sectors to allow different types of TA providers to learn from one another. NAEYC (2009) suggested online resources for easy communication among TA professionals, and the Spokane Public Schools (2010) suggested opportunities to visit other classrooms and collaboration on lesson planning. Walpole et al. (2010) specifically found that coaches who had more collaboration with peers provided more effective services, suggesting that these communities were important not only to coaches, but also for the success of the entire coaching program.

The coach trainings and ongoing supports that were described or recommended in policy and practice reports included initial and/or ongoing trainings (Blazar & Kraft, 2015; Dickinson & Caswell, 2007; Early et al., 2017; Landry et al., 2009; 2011; Lonigan et al. 2011; Mattera et al., 2013; Neuman & Cunningham, 2009; Neuman & Wright, 2010; Piasta et al., 2017; Whalen, Horsley, Parkinson, & Pacchiano, 2016) followed by regular, ongoing (e.g., weekly) support/meetings with trainers, researchers, or supervising staff to discuss any issues (Early et al., 2017; McCollum et al., 2011; Neuman & Cunningham, 2009; Neuman & Wright, 2010; Pianta et al., 2008; Piasta et al., 2017). In some cases, coaches were observed/visited by the researcher, trainer, or other supervising staff (Blazar & Kraft, 2015; Domitrovich et al., 2007; Landry et al. 2011; Lonigan et al. 2011; Mattera et al., 2013; Neuman & Cunningham, 2009; Neuman & Wright, 2010; Ota & Austin, 2013) to provide feedback and/or ensure implementation fidelity.

Beyond initial training, reports also recommended that coaches be able to access materials and resources as needed. Among the suggested resources were research on new coaching strategies and techniques (Spokane Public Schools, 2010; Byington & Tannock, 2011), a coaching manual that provides descriptions of roles and responsibilities and real-life examples (Isner et al., 2011), a toolkit to support the coaching process (Mattera et al., 2013), and a bank of effective prompts to facilitate teacher reflection (Pianta, DeCoster, et al., 2014).

Coach Caseloads

Although no studies varied the coaching caseload to explore whether having to support more teachers adversely affected impacts, Blazar and Kraft (2015) increased the coaching caseload in their study of their second cohort to accommodate the scale-up of the intervention. Despite finding significant impacts of their coaching intervention on the first cohort of teachers, there were no significant impacts of coaching on teacher practices in the second year of implementation when coach caseload increased from about

10 teachers per coach to about 16. They hypothesized that the increase in coach caseload may have been part of the reason why there were no impacts in the second year of implementation.

On Systemic Components Needed to Support Coaching

Like features of coaches themselves, systemic features to support coaching have not been isolated and tested in the literature. As such, this section draws from recommendations about best practices for coaching provided in policy and practice documents, rather than from an evidence base.

System-wide Goals

Several policy and practice reports emphasized the importance of clearly defined goals for coaching and the communication of goals to all stakeholders. As many policy reports noted, identifying goals, action plans, targets, outcomes, and scope, as well as the general purpose of the coaching, must be one of the first steps in developing a coaching model (Isner et al., 2011; Killion et al., 2012; McGroder et al., 2014). Communicating this vision is described as one of the keys to successful coaching (Hanover Research, 2015).

The Lastinger Center for Learning, Learning Forward, and Public Impact recently produced a joint report (Pemberton et al., 2016) that specified that the vision and commitment to the coaching plan need to be system wide in order to encourage buy-in and prevent confusion. Similarly, NAEYC's report stated that definitions and requirements of coaches must cut across sectors for complete integration of the coaching initiative (Young, 2012). Indeed, the many disparate definitions of coaching, mentoring, and consulting can leave staff confused about what roles they are expected to play. Therefore, for coaches to perform their duties effectively, the program must clearly state coaches' roles and responsibilities (McGroder et al., 2014; Killion et al., 2012; Young, 2012). Coaches themselves have to understand what they are tasked with so that they can deliver coaching that is consistent and competent (Isner et al., 2011).

Fidelity to the intervention can be accurately measured only if coaches understand what their responsibilities are and there are defined outcomes to evaluate (Isner et al., 2011). It is not surprising that studies found that coaches end up performing tasks beyond their job scope and say their roles are ambiguous and ill defined (Gallucci, Van Lare, Yoon, & Boatright, 2010; Heineke & Polnick, 2013). It may be important that activities to be performed by coaches, mentors, and supervisors be distinct from one another, with each staff member fulfilling a specific and different role (Whitebook, 2016).

Killion et al. (2012) pointed out that creating an "Is/Is Not" list for coaches can be helpful and help align everyone's expectations about what a coach does (or does not) do. Early Childhood Associates (2014) recommended the adoption of common definitions of TA provider types established by a national organization such as NAEYC to create cross-country standards. Other policy reports recommended system-wide cohesion in definitions to create a baseline of understanding for coaches, teachers, and leaders (Pemberton et al., 2016). Some reports emphasized the use of clear definitions and qualifications requirements from the beginning to benefit the coach hiring process specifically (McCarthy, Bickel, & Artz, 2010).

Coach Career Lattice

NAEYC's *Strategic Directions* report (Young, 2012) found that only around one-fifth of TA professionals who responded to an online national survey perceived having a clear career pathway. Even states that provided clear pathways did not incorporate all sectors or consistently differentiate between the

tiers of the career lattice enough to incentivize educators to advance through the tiers. The report suggested that a state system illustrate a range of occupational opportunities for coaches and ensure that pathways to qualifying for positions with higher levels of compensation be transparent, but also ensuring that these pathways support diversity in the workforce and equitable access to opportunities. Additionally, system-wide consistency can help ensure compensation parity for early childhood educators across sectors. A well thought out "career lattice" can create a coaching structure that provides high-quality technical assistance to programs and educators and also minimizes coach turnover or discontent about lack of recognition or progress in their careers.

Several policy reports explicitly suggested building a tiered career lattice with clear career pathways and avenues to credentialing and formal recognition, as well as compensation adequate to recruit and retain high-quality staff (Boller, Tarrant, & Schaack, 2014; NAEYC, 2009; NCCIC, 2006; Pemberton et al., 2016; Research Notes, 2016; Strategies for Children, 2010; Whitebook & Bellm, 2014). Career pathways and correspondingly adequate compensation levels allow professionals to increase their skills, become more effective in their coaching roles, and may reduce turnover. The Lastinger Center for Learning, Learning Forward, and Public Impact recommended implementing role pay increases that reward a coach's responsibility and effectiveness progress (Pemberton et al., 2016). Boller et al. (2014) suggested licensing and accreditation as an environmental-level intervention to increase professionalism and reduce turnover.

Use of Data

Another systemic feature of coaching that policy and practice reports recommended is building into coaching models the use of data (via coaching logs, feedback forms, etc.), as a way to effectively tailor teaching and coaching techniques, as well as enable methods of tracking progress of the coaching (Isner et al., 2011; NAEYC, 2009). This includes using data in all phases of implementation including planning, evaluation, quality assurance, accountability, and progress (NAEYC, 2016). These reports recommended that one of the goals of coaching be to help teachers use student data to focus their work on areas where students have the most need. As Killion et al. (2012) stated, one of the main roles of a coach can be that of a "data coach" who helps engage teachers in analyzing and using the myriad data available in order to strengthen instruction. Coaches themselves are encouraged to use the latest research to identify new techniques and strategies for coaching (Bacevich & Salinger, 2006; Becker, Bradshaw, Domitrovich, & Ialongo, 2013; Bean, Draper, Hall, Vandermolen, & Zigmond, 2010; Boller et al., 2014; Byington & Tannock, 2011; Killion et al., 2012; Pemberton et al., 2016; Spokane Public Schools, 2010).

Considerations

Particularly important for applying the reviewed literature to a statewide model is considering the implications of a coaching model's scale up. Several of the meta-analyses reviewed found that larger studies were associated with smaller results. Kraft et al. (2016) divided their sample into efficacy trials (<100 teachers) and effectiveness trials (>100 teachers) and found that effect sizes were approximately twice as large for the former as for the latter. Based on this finding, they suggested that scaling up coaching programs may face challenges that smaller scale demonstration models, delivered under best case scenario conditions to motivated, volunteer educators, do not face. Similarly, Markussen-Brown et al. (2017) found that studies with 50 or fewer participants resulted in significantly larger effects on structural quality outcome (i.e., improvements of classroom environment) than did larger studies. Fukkink and Lont's (2007) meta-analysis on early education PD (with and without coaching) found that programs

delivered at multiple sites and with a larger number of trainees were negatively associated with study outcomes. They suggested that this could indicate issues in the efficacy of large-scale training programs.

Finally, one of the most recent coaching studies reviewed – which included 535 pre-K educators participating in a large-scale, state-sponsored professional development program – found no significant impacts on teacher or student outcomes for any condition (Pianta et al., 2017). The authors speculated that there may have been issues with the content and implementation of the group professional development. Notably, coach logs revealed large variability in exposure to coaching, between 1 and 78 total hours, with a mean of 29 hours. As such, it is unclear whether the coaching was implemented as intended, and the findings may speak to the practical difficulties in maintaining high levels of fidelity of implementation as programs expand.

Conclusion

Though the body of emerging evidence supports the effectiveness of coaching for early educators, less is known about the best practices for delivery, coach characteristics, and development of a coaching system. The limited research that does exist can inform the delivery of coaching models, and a review of policy and practice informs best practices for coaches and the coaching system. Evidence related to scaling up provides additional guidance – and cautions – about expanding coaching models to the state level. Taken together with the review of best practices in other states, this evidence can help inform the development of a statewide coaching system in Massachusetts.

Attachment: Annotated Bibliography

Assel, M. A., Landry, S. H., Swank, P. R., & Gunnewig, S. (2007). An evaluation of curriculum, setting, and mentoring on the performance of children enrolled in pre-kindergarten. *Reading and Writing, 20,* 463–494.

This study assessed the impacts of two language and literacy curricula (*Let's Begin with the Letter People* and *Doors to Discovery*) and mentoring on children's language and literacy outcomes. Three sites participated in the study: a Head Start center, a Title 1 public school district, and a universal pre-K public school district. Schools within the three participating sites were randomly assigned (1) to use *Let's Begin with the Letter People*, (2) to use the *Doors to Discovery*, or (3) to a control condition. Schools in the two treatment groups were then randomly assigned either to receive mentoring or to receive no mentoring. Prior to the start of the school year, treatment teachers participated in a four-day training. Three mentors were available to provide support to teachers in the treatment groups with mentoring for 1.5 hours two times per month. The mentors assisted teachers with lesson plans, modeled curriculum, conducted side-by-side coaching, and provided feedback.

Children in treatment classrooms receiving one of the two curricula generally demonstrated stronger gains in language and literacy outcomes than did students in the control group. In addition, the results indicated that program site was a key moderator of effects, such that students in Head Start classrooms demonstrated larger gains regardless of the curriculum used or whether mentoring was available. The addition of mentoring in certain treatment conditions yielded mixed results: children in mentoring conditions showed greater gains only in Title 1 and universal pre-K classrooms, but not in Head Start sites.

The authors speculated that these uneven effects may have been due to not having enough mentoring sessions, that Head Start teachers may have benefitted foremost from a well-specified curriculum (which the public school teachers already had), that Title 1 and universal pre-K teachers were more responsive to mentoring, and/or that mentoring effects may have been attenuated because all treatment teachers received some degree of feedback.

Blazar, D., & Kraft, M. A. (2015). Exploring mechanisms of effective teacher coaching: A tale of two cohorts from a randomized experiment. *Educational Evaluation and Policy Analysis*, *37*(4), 542–566. doi: 10.3102/0162373715579487

This blocked randomized trial analyzed the impact of the *MATCH Teacher Coaching* (MTC) program on improving teacher practices common across grades and subjects, including behavior management, instructional delivery, and student engagement. Coaches worked with teachers in charter schools across the Recovery School District in New Orleans, a statewide program in Louisiana formed in 2003 to transform underperforming schools. Two cohorts of coaches, five in total, worked with participating teachers during a four-day training workshop over the summer. Teachers then participated in either three or four individual coaching sessions, weeklong observations, and feedback cycles throughout the school year. During each cycle, the coaches observed teachers' instruction and then provided feedback about what they observed. The coaches worked with the teachers to set expectations for growth and then evaluated progress through assessments using a classroom observation rubric developed by the coaching program. Between sessions, teachers communicated with coaches via email or phone about their progress every one to two weeks.

Three sources of data were used to analyze the effects of MTC on teachers' practices: a classroom observation protocol that aligned with the PD, a principal evaluation, and the TRIPOD student survey, which was used to obtain students' opinions about their teacher's instructional practices. All coaches observed classroom instruction and then scored their findings using the MATCH rubric. The program director shadowed the coaches throughout the school year and provided direct feedback on how they interacted with teachers and how coaches implemented any feedback. Conversations with the program director indicated that training was more formalized in Cohort 2 and that feedback cycles were more frequent.

No effect of coaching was observed on any of the outcome measures when the data was pooled across all teachers. The study did find that there was variability in the effectiveness of coaching between the two cohorts such that there were marginally significant or significant impacts of the treatment in Cohort 1 on two teaching practice measures: achievement of lesson aim and behavioral climate. There was also a significant impact of the treatment in Cohort 1 on the Challenge section of the TRIPOD survey, which focuses on the extent to which teachers promote perseverance and high-quality student work.

The authors speculated that the differences in results between Cohorts 1 and 2 were due to changes in the coaching model, including teacher-coach ratios, coaching dosage, coach turnover, and changes in the coaching focus.

Carlisle, J., & Berebitsky, D. (2011). Literacy coaching as a component of professional development. *Reading and Writing, 24,* 773–800.

This study compared the satisfaction with professional development, instruction, and student outcomes of first grade teachers in PD programs with and without a literacy coach. Teachers in both conditions participated in seminars throughout the school year (27 hours total) taught by reading experts drawing from the Moats *Language Essentials for Teachers of Reading and Spelling* (LETRS®) curriculum. The seminars focused on improving reading and reading instruction knowledge and assessing student progress to monitor the effectiveness of their instruction. The study used a quasi-experimental design wherein comparison groups were formed non-randomly; all teachers receiving literacy coaching were in Reading First schools that included this support school wide. Comparison teachers taught in schools that were eligible for Reading First funding, but did not participate in the program and did not have a literacy coach. The literacy coach was responsible for meeting weekly with teachers to assist them in delivering content and supporting their understanding of effective practices. The coaches also assisted in classrooms.

There were no significant differences between the two groups' perceptions of the PD, school climate, or school support. There were, however, significant differences between the two groups in the time devoted to phonics throughout the school year, such that teachers with a coach devoted a consistent amount of time to this, whereas teachers in the no-coach condition decreased their time on this topic dramatically. Further, teachers with a coach spent significantly more time using small group instruction than did teachers without a coach. For students designated as at risk, having a teacher in the coaching condition significantly decreased their chances of being deemed at risk at the end of the school year. Among all students, those with teachers in the coaching condition performed significantly better on the word decoding outcome than did students of teachers with no coaching.

Diamond, K. E., & Powell, D. R. (2011). An iterative approach to the development of a professional development intervention for Head Start teachers. *Journal of Early Intervention, 33*(1), 75–93. doi: 10.1177/1053815111400416

The authors of this study took an iterative approach to revising and then implementing a PD intervention for Head Start teachers. Starting with the *Classroom Links to Early Literacy* (CLEL) coaching-based intervention as a base, the authors developed and refined a version of the PD that focused on sound and word instruction. To do so, four studies were conducted to provide the authors with information about the presentation of the content, the utility of the PD, and its implementation. The final study included in the paper examined outcomes of the refined version of the PD intervention and is the focus of this summary.

Based on results of their implementation studies, the authors offered teachers 12 coaching contacts (submitting videos and receiving feedback) during one semester: the first six (four of which were videotaped) focused on vocabulary instruction, and the last six focused on phonological awareness. On average, there were 8.6 days between coaching contacts (with considerable variability – 3 to 28 days). The same skill or concept was focused on for several concurrent visits, and checklists of key instructional strategies were developed. Teachers were also provided with supplemental materials for skills that were hard to teach.

Teachers in the intervention condition provided more vocabulary instruction and there were more child/teacher utterances and teacher questions during large group sessions, compared with controls. These differences were not assessed for statistically significant differences.

Dickinson, D. K., & Caswell, L. (2007). Building support for language and early literacy in preschool classrooms through in-service professional development: Effects of the Literacy Environment Enrichment Program (LEEP). *Early Childhood Research Quarterly*, *22*(2), 243–260.

This study examined whether an in-service intervention called the *Literacy Environment Enrichment Program* (LEEP) could improve the quality of Head Start centers in New England. LEEP was designed by teachers and researchers to increase teacher knowledge about literacy development, affect classroom practices, and learn classroom strategies. Additionally, supervisors[11] from each Head Start center were required to attend the professional development so they could serve as on-site support for the implementation of the intervention. These supervisors also completed a one-credit practicum about supervision and received on-site support throughout the intervention from the PD instructors. Seventy teachers were recruited for either the treatment or control condition (not randomly assigned). Those in the intervention group attended two 3-day LEEP course sessions in the fall and winter and received four credits from a university in their state for participating.

Teachers who participated in the intervention had significantly higher scores on literacy and language outcome measures. These impacts were all moderate to large effects, except for writing. As such, the authors concluded that teachers who participated in LEEP made changes to their behaviors that can benefit children's language and literacy development.

[11] Although mentoring provided by supervisors does not fit with this report's definition of coaching, this article was screened in because the supervisors played a strong mentoring role in the intervention, beyond that of just teacher evaluation.

Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67–91. doi:10.1007/s10935-007-0081-0

> The study evaluated the effectiveness of a preschool version of the *Promoting Alternative Thinking Strategies* (PATHS) curriculum on socio-emotional outcomes of young children. Twenty classrooms in two Head Start programs located in Pennsylvania were randomly assigned in equal numbers to the intervention or control group. Teachers in the intervention group participated in a two-day training during the summer, followed by a one-day booster training session in January. Teachers in the intervention condition implemented weekly lessons and extension activities throughout one school year. Additionally, one to two Head Start supervisors served as PATHS Coordinators[12] on site, acting to ensure fidelity of implementation, meeting one-on-one and in groups with teachers to support teachers, and providing technical support during monthly classroom visits.
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> There were significant impacts on children's emotional knowledge, self-regulation, social interaction level, and social skills. These improvements were observed across different reporters, including direct child assessments, teachers, and parents.

Downer, J. T., Pianta, R. C., Fan, X., Hamre, B. K., Mashburn, A., & Justice, L. (2011). Effects of web-mediated teacher professional development on the language and literacy skills of children enrolled in prekindergarten programs. *NHSA Dialog: Research-to-Practice Journal for the Early Childhood Field, 14*(4), 189–212.

> This article examined the impact of a web-based PD approach called *MyTeachingPartner*™ (MTP) on the language and literacy skills of at-risk, pre-kindergarten children in state-funded programs. The MTP approach has three components designed to improve teacher/child interactions and promote learning: (1) observation and analysis of videos that demonstrate high-quality instruction/interaction; (2) skills training to develop responses to children's cues that can contribute to student language and literacy; and (3) ongoing individual feedback and support. Drawing on literature about high-priority skill targets to foster preschool literacy and language instruction, the MTP approach links dimensions of teacher-child interactions to phonological awareness, alphabet knowledge, print awareness, vocabulary/linguistic concepts, narrative, and social communication/pragmatics.
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> To test the impact of MTP, the study authors randomly assigned teachers to participate in one of three conditions for two consecutive school years: (1) low support condition, which provided access to MTP activities and video; (2) high support condition, which provided the same resources as the low support condition with the addition of individual web-based consultation (requiring that teachers videotape their instruction for 30 minutes every other week and then receive targeted feedback); and (3) a control condition, which gave access to MTP activities only. Four students within each participating teacher's classroom were randomly selected to participate in the study in each school year.

[12] Although mentoring provided by supervisors does not fit with this report's definition of coaching, this article was screened in because the supervisors played a strong mentoring role in the intervention, beyond that of just teacher evaluation.

There were moderate, significant impacts of receiving high support on the early language and literacy of children where English was spoken in class, compared with the control group. There were no significant impacts of participation in the low support group or for children in classrooms where non-English languages were spoken in class.

Early, D. M., Maxwell, K. L., Ponder, B. B., & Pan, Y. (2017). Improving teacher-child interactions: A randomized control trial of Making the Most of Classroom Interactions and My Teaching Partner professional development models. *Early Childhood Research Quarterly, 38,* 57–70. doi:10.1016/j.ecresq.2016.08.005

This study assessed the feasibility and effectiveness of two professional development models used in Georgia's state-funded universal pre-K program. *Making the Most of Classroom Interactions* (MMCI) involved regular meetings with a group of teachers and trained instructors to identify and analyze effective classroom interactions and discuss ways to increase children's learning. Between the in-person meetings, teachers were asked to watch videos and practice interactions in the classroom. The teachers also had access to video clips demonstrating best practices in teacher/child interaction. In the study, teachers participating in this model met over five, full-day sessions (one per month over five months). *MyTeachingPartner* (MTP), provided teachers with one-on-one remote coaching in a cycle format. Teachers made videos of themselves interacting with children in the classroom, and the videos were sent and reviewed by coaches who then provided feedback. Teachers reviewed the feedback and then participated in a call to discuss their practice, which was followed by a written summary with next steps from the coach. Teachers also had access to video clips demonstrating best practices. Teachers in the study who participated in MTP were expected to complete a coaching cycle every two weeks over eight months.

Teachers were randomly selected and then randomly assigned to participate in the MMCI, MTP, or a control group (which received "business as usual" mandatory PD). The study examined the impact of MMCI and MTP on (1) CLASS scores, (2) knowledge of effective teacher/child interactions, (3) perceived value of the intervention, and (4) the relationship between the coach and teacher. The CLASS score was divided into three domains: Emotional Support, Classroom Organization, and Instructional Support – domains hypothesized to be precursors of changes to child/instructor interactions.

MMCI teachers had significantly higher scores on all three CLASS domains (marginally significant for Classroom Organization), whereas MTP teachers had significantly higher scores on the Emotional Support domain only, compared with the control group. There were no significant differences between the MMCI and MTP teachers on the CLASS domains. The authors also found that MMCI teachers' knowledge of effective teacher/child interactions was significantly higher than MTP or control teachers' knowledge. Both groups of treatment teachers valued the PD significantly more than the control group. MTP teachers had more positive view of coaches than did MMCI teachers. Further, MMCI teachers whose coaches had more experience as Georgia pre-K consultants had slightly higher Classroom Organization scores.

Kretlow, A. G., Cooke, N. L., & Wood, C. L. (2012). Using in-service and coaching to increase teachers' accurate use of research-based strategies. *Remedial and Special Education, 33*(6), 348–361.

This study examined the effects of an in-service and coaching program focused on first grade teachers' delivery of three research-based strategies related to math instruction. Three teachers at a

suburban North Carolina elementary school participated in the study. The group in-service occurred in one teacher's classroom, whereas individual pre-conferences, coaching, and feedback sessions occurred in each teacher's own classroom. The training involved using a combination of whole-class instruction strategies, such as *model-lead-test* for introducing new concepts and correcting errors; choral responding; and response cards. Data on the delivery of the strategies were collected as audio recordings of each teacher's math lessons at baseline, after the in-service, and after receipt of coaching. No student data were collected.

All three teachers improved their delivery of the strategies after attending the in-service program. However, no statistical analyses were conducted on the data. In addition, the teachers reported high levels of satisfaction with the training model. Teachers also noted that by using the strategies, students were able to apply more of what they learned during group instruction to their individual work, and that the strategies motivated students who enjoyed the interactive math lessons.

Landry, S. H., Anthony, J. L., Swank, P. R., & Monseque-Bailey, P. (2009). Effectiveness of comprehensive professional development for teachers of at-risk preschoolers. *Journal of Educational Psychology, 101*(2), 448–465.

This article studied the effects of different forms of professional development on teacher effectiveness and student outcomes for classrooms of at-risk preschoolers. Teachers from 158 schools were randomly assigned to either a control group or one of four treatment groups. One treatment group received both in-classroom mentoring and detailed feedback, another group received mentoring but only limited feedback, another group received no mentoring but detailed feedback, and the fourth group received no mentoring and limited feedback. All groups partook of the same small-group online course focusing on language and literary instruction. All teachers administered the same curriculum-based measures (CBMs) to their students. Mentors were responsible for about 30 teachers, which included providing one-on-one mentoring and facilitating the online group training. Mentors received support from the project manager in the form of weekly conference calls and group conference calls across sites. Training for mentors was a four-day session at the beginning of the school year, which covered items such as effective mentoring strategies, how to administer the CBMs, and how to use the results of the CBMs to guide instruction.

There were positive effects on almost every outcome assessed for the treatment groups. Teachers in all treatment groups had significantly more positive overall teaching behaviors and higher teaching quality, made gains in phonological awareness instruction, writing instruction, print and letter knowledge instruction, play and learning center scores, and number of lesson plans. Treatment groups that included mentoring specifically demonstrated significantly positive gains in the quality of phonological awareness instruction, writing instruction, and the number of written lesson plans compared with those non-mentored treatment groups. Positive effects on child outcomes included increases in letter knowledge and print awareness and composite language abilities. Further, children of teachers who received mentoring demonstrated higher print awareness scores than those whose teachers didn't receive mentoring. Generally, teachers who received both mentoring and detailed feedback had the largest gains in teaching behavior and their students' school readiness.

Additionally, the authors noted that having a teacher in a treatment group was more predictive of student outcomes than was the child's initial letter knowledge ability. This implied that these types of

professional development could eliminate children's prior knowledge and education as a factor in their future success.

Landry, S. H., Swank, P. R., Anthony, J. L., & Assel, M. A. (2011). An experimental study evaluating professional development activities within a state funded pre-kindergarten program. *Reading and Writing: An Interdisciplinary Journal, 24*, 971–1010.

This study examined the impacts of a scaled-up comprehensive early childhood PD model on teacher instructional practices and behavior and on children's language and literacy outcomes. The PD was based on an evidence-based theoretical framework of four components: (1) an online professional development program (*eCIRCLE*) that covers a range of topics and current, research-based instructional practices; (2) in-classroom teacher mentoring with the aim of supporting teachers around planning, effective instruction, and the use of data to guide instruction (twice per month, two-hour sessions); (3) student progress monitoring by teachers, which provides immediate feedback about individual students' growth; and (4) the use of state-approved language and literacy curricula and classroom materials. To test the impact of this PD model, the authors randomly assigned classrooms in three early childhood programs targeting low-income children (e.g., Head Start) to either receive the PD or serve as a control classroom in Year 1. Teachers who participated in the project in Year 1 were invited to return for a second year.

Teachers who participated in the PD had significantly more change in their instructional practices than did control teachers, particularly in the areas of responsive teaching techniques, organizing the classroom, and school readiness emergent literature instructional activities. Although no differences were found in instructional practices by the amount of time teachers participated in the program, the length of time the teachers spent in the program had positive, significant effects on children's literacy and early language skills for the subgroups who may need the intervention the most. For example, there were significant impacts of the time in PD on vocabulary skills for younger children, those with lower vocabulary at pretest, and English language learners. Likewise, the authors found significant impacts of the time spent in the program on improving complex language for English language learners. Finally, teachers who were in control classrooms in Year 1 but then received the intervention in Year 2 demonstrated gains in almost all areas of teaching. They showed differences in children's language and emergent literacy gains across the school year between students taught in Year 1 and those taught in Year 2.

Lonigan, C. J., Farver, J. M., Phillips, B. M., & Clancy-Menchetti, J. (2011). Promoting the development of preschool children's emergent literacy skills: A randomized evaluation of a literacy-focused curriculum and two professional development models. *Reading and Writing, 24*(3), 305–337.

This study evaluated the impacts of the *Literacy Express Preschool Curriculum* (LEPC) and two types of LEPC-derived professional development on the emergent literacy skills of at-risk preschool children. Forty-eight preschools serving ethnically diverse students were randomly assigned to three different study groups: (1) a business-as-usual control group; (2) a literacy-focused curriculum with workshop-only PD group; or (3) a literacy-focused curriculum with workshop plus in-class mentoring PD group. Control classrooms continued to use their existing curriculum (High/Scope or Creative Curriculum) and did not receive any coaching from the study team. Teachers and assistants in the treatment classrooms attended a two-day PD workshop before the start of the school year and then participated in four additional half-day PD workshops that were evenly spaced throughout the school

year. Classrooms assigned to receive mentoring were visited once per week during the school year; mentors observed and gave feedback to teachers and assistants, as well as modeled activities and assisted with any challenges encountered with implementation. The study team provided all curriculum materials and training for the LEPC classroom teachers. Most teachers and aides in these classrooms began implementing the curriculum at the beginning of the school year, and all classrooms implemented their assigned curriculum within the first month of the school year.

Children completed a series of assessments, both in the fall and spring, to measure their general cognitive ability, oral language, print knowledge, and phonological processing skills. Classroom observations were conducted, lasting about three hours, using two tools to assess the impact of the intervention on classroom materials, activities, and teaching behaviors: The Early Language and Literacy Classroom Observation Toolkit (ELLCO) and the Early Childhood Classroom Observation Measure (ECCOM).

The LEPC curriculum had a positive effect on children's oral language, phonological awareness, and print knowledge skills. Further, students in classrooms that received mentoring scored significantly higher on the print knowledge test than did students in classrooms where only workshops were offered. Results also suggested impacts of the curriculum on teachers and classrooms, such that classrooms in the treatment conditions had significantly higher literacy activity scores and constructivist instruction measures.

Generally, the authors attributed the significant impacts to the curriculum, rather than to the additional PD, based on a comparison of effect sizes.

Mattera, S. K., Lloyd, C. M., Fishman, M., & Bangser, M. (2013). *A first look at the Head Start CARES demonstration: Large-scale implementation of programs to improve children's social-emotional competence.* OPRE Report 2013-47. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

This study examined outcomes of the Head Start CARES (Classroom-based Approaches and Resources for Emotion and Social Skill Promotion) demonstration, which provided 17 Head Start grantees with three interventions aimed at giving teachers resources for child social-emotional competence. Participating grantees were randomly assigned to one of the three interventions or a control group and represented diversity in geography, organizational setting, and size similar to Head Start grantees overall. One of the interventions, *The Incredible Years*, assisted teachers with improving classroom management to create an organized climate for children. The *Preschool PATHS* (Promoting Alternative Thinking Strategies) intervention worked to increase instruction on social-emotional problem-solving skills. The *Tools of the Mind* intervention aimed to use peer interaction and play to help children regulate their behavior, emotions, and thoughts. The implementation of these three interventions included weekly 30-minute required meetings and 60 minutes of required observation.

The authors explored the extent to which strategies in the interventions and coaching sessions were implemented, as well as the degree to which targeted practices changed in comparison with the control group. The authors reported that attendance at trainings and frequency, duration, and quality of coaching sessions were all high. Teachers reported understanding the interventions and being able to implement them easily, particularly *The Incredible Years* and *Preschool PATHS*. Fidelity of

implementation of the interventions was rated on a scale of 5, and all interventions received at least the targeted rating of 3, with further improvement over time.

In comparison with the control group, intervention group teachers showed improvement in the practices identified for each intervention: classroom management, social-emotional instruction, and scaffolding of peer interactions and play, respectively. Specifically, compared with the control group, there were significant positive impacts of *The Incredible Years* on classroom management; *The Incredible Years* and *Preschool PATHS* on social-emotional instruction; and *Tools of the Mind* on teacher scaffolding.

McCollum, J. A., Hemmeter, M. L., & Hsieh, W. (2011). Coaching teachers for emergent literacy instruction using performance-based feedback. *Topics in Early Childhood Special Education, 33,* 28–37. doi: 10.1177/0271121411431003

Continuing the work of a previous study (Hsieh, Hemmeter, McCollum, & Ostrosky, 2009), this study examined whether coaching for teachers in three specific cluster areas for pre-kindergarten practices affected teachers' use of the targeted literacy or changed literacy teaching environments. Cluster A supports language and comprehension, Cluster B promotes rhyme and beginning sounds awareness, and Cluster C supports print concepts and written language. Seven teachers received coaching, and five teachers in the control group received none. All were female, certified teachers from a state-funded pre-kindergarten classroom in a public school who taught in classrooms that served children with disabilities and children from low-income families who were considered at risk for later academic difficulties. Coaches who supported the intervention either had doctorates in early childhood special education (N=3) or were doctoral students (N=1). The professional development included two consecutive days of orientation before the start of the school year, three brief group meetings throughout the year to share experiences, and biweekly coaching sessions for observations and individual feedback. The authors analyzed findings from teacher observation checklists that the coaches filled out and pre- and post-Early Language and Literacy Classroom Observation (ELLCO) observations.

The treatment group demonstrated significantly higher results in Cluster B and Cluster C measures, as well as higher ELLCO scores in all three of the sections most directly related to language and literacy. Six of the seven intervention teachers achieved the targeted 80 percent demonstrated effects in Cluster A, five of the seven achieved the 80 percent target in Cluster C, and all achieved the target in Cluster B. None of the five control group teachers achieved the target in Clusters B or C, and only one did in Cluster A.

Neuman, S. B., & Cunningham, L. (2009). The impact of professional development and coaching on early language and literacy instructional practices. *American Educational Research Journal, 46*(2), 532–566.

This study used data from the Project Great Start Professional Development Initiative to determine whether there were any impacts of PD on teacher knowledge or improvements in practices in early language and literacy for both center-based and home-based providers. The study randomly assigned participants from the Detroit, Flint, Grand Rapids, and Lansing (Michigan) areas to a control group, a group that received professional development only in the form of a community college course, or a group that attended the community college course and received continuing coaching. The community college language and literacy course was developed with partners at local community colleges and included lectures and hands-on activities. The coaching was intended to help participants apply the

strategies from the college course in practice and included weekly one-on-one in-person meetings for the entire academic year. The first 15 weeks of the coaching occurred concurrently with the PD course. Weekly debriefings between coaches and instructional coordinator supervisors at the local community colleges ensured that coaching activities aligned with course topics. Coaches also attended a two-day workshop prior to the intervention for orientation and training. Assessments included pre- and post-tests of teacher knowledge on early language and literacy, as well as observations of the quality of early language and literacy practices implemented, using similar tools for center-based providers and home-based providers.

There were no significant changes in teacher knowledge for either treatment group or the control group. However, teachers who received coaching demonstrated significant gains in the quality of their teaching practice. Home-base providers, who tended to serve lower-income children, demonstrated larger gains. By the study's end, after coursework and coaching, the practice of home-based providers was similar to that of the center-based providers.

Neuman, S. B., & Wright, T. S. (2010). Promoting language and literacy development for early childhood educators: A mixed-methods study of coursework and coaching. *The Elementary School Journal*, *111*(1), 63–86.

This study explored the impact of different types of language and literacy PD for early childhood educators from community centers and public schools serving low-income children. Participating teachers were randomly assigned to a (1) coursework-only condition, (2) coaching-only condition, or (3) control condition. The coursework condition consisted of a three-credit, 20-hour course on early language and literacy offered by the local community college. Those in the coaching condition received on-site, individualized coaching focused on helping teachers apply research-based language and literacy strategies. The coaching was designed to follow best practices, including ongoing assistance, reflection, co-teaching through modeling and demonstration, development of rapport between teacher and coach, and assistance with planning. Coaching was provided weekly over 10 weeks for about three hours per session.

There were no significant impacts of participation in either treatment group on teacher knowledge of early language and literacy. There were, however, significant differences on structural characteristics of the environment, including the overall literacy environment. Teachers in the coaching condition scored significantly higher than either the coursework or the control group. Further, these results were maintained five months after the post-test.

To better understand why coaching affected structural environments but not the process characteristics linked to early literacy development, the researchers examined coach logs and found that fewer sessions were devoted to teaching strategies, and that this may have necessitated more time working with coaches. Feedback from teachers in the coaching condition indicated that they were satisfied with the PD, particularly with how practical it was – being on-site, context specific, and providing informal accountability.

Onchwari, G. & Keengwe, J. (2010). Teacher mentoring and early literacy learning: A case study of a mentor-coach initiative. *Early Childhood Education Journal*, *37*(4), 311–317.

This study explored the impact of a Head Start mentor-coach initiative on teacher literacy practices and children's literacy outcomes. Using a quasi-experimental design, half of classrooms in the sample

received coaching support, whereas the other half served as a control group. Teachers who received coaching were visited for four hours twice per month. To deliver supports to teachers, coaches were trained in the *Strategic Teacher Education Program* (STEP) model, which aims to train educators in research-based literacy practices.

Participating in the mentor-coach initiative had significant impacts on teacher and student outcomes. Those teachers provided significantly better classroom literacy activities, but there were no significant differences between treatment and control groups on literacy environment practices or activities. Children of teachers in the mentor-coach initiative scored significantly higher on listening, speaking, reading, and writing assessments compared with the control group.

Ota, C. L., & Austin, A. M. B. (2013). Training and mentoring: Family child care providers' use of linguistic inputs in conversations with children. *Early Childhood Research Quarterly, 28*(4), 972–983.

This study compared the effects of participation in two PD models aimed at increasing providers' linguistic inputs with children in family child care settings. Researchers randomly assigned 48 participating programs to (1) the control condition, (2) receipt of 10 hours of in-service training, or (3) receipt of 10 hours of in-service training plus on-site mentoring. The in-service training, spread out over six weeks in four 150-minute sessions, focused on language development and was based on the curriculum *First Steps: Supporting Early Language Development.* Those in the mentoring group participated in these trainings and also received six on-site mentoring visits every other week for 12 weeks, along with weekly phone calls from the mentor to follow up on the previous week's visit. Mentors in the study (N=4) had previous experience mentoring and in child care, and the majority had four-year degrees in an early childhood field. Mentor visits, which lasted 75 minutes on average, included modeling, discussion of issues and goals, and feedback. To monitor implementation, two mentoring visits were randomly selected and assessed for fidelity.

For both treatment groups, there was significantly more information talk, questions, expressive utterances, and teaching utterances. Providers in the mentoring condition significantly increased their use of information talk and teaching utterances compared with the training-only condition. There was a slight decrease in some linguistic inputs in the six weeks following the training, suggesting that retaining the benefits of training could be an ongoing issue.

The authors noted that their study cannot disentangle the effects of mentoring alone from the effects of mentoring plus training.

Pianta, R. C., Mashburn, A. J., Downer, J. T., Hamre, B. K., & Justice, L. (2008). Effects of web-mediated professional development resources on teacher-child interactions in pre-kindergarten classrooms. *Early Childhood Research Quarterly, 23*(4), 431–451.

This study examined effects of the *MyTeachingPartner* program to see whether individualized consultation to teachers resulted in gains in teacher/child interactions above and beyond offering them non-individualized professional development. Preschool teachers were recruited and randomized at the district level either into a PD group with web resources only or into a group with web resources plus consultation. The resources-only group had access to video examples and other materials, whereas the consultation group received regular feedback from consultants on their classroom practices in addition to the web materials. Teachers in the consultation group recorded an average of 14 videos throughout the course of the academic year, with each video lasting an average of 24

minutes. Teachers submitted videos to their consultant biweekly and received feedback on their implementation of the specific instructional activity in the video.

Teachers in the consultation group had larger gains in teacher/child interaction outcomes than did teachers in the web-only group. Specifically, the gains were significant for the Teacher Sensitivity, Instructional Learning Formats, and Language Modeling metrics. However, teachers in the web-only group who accessed the available web exemplars more frequently had more growth than those in the web-only group who had less exposure to the examples. Furthermore, there were larger increases for teachers who received consultation and were from classrooms that had higher levels of child poverty, whereas teachers of classrooms with lower levels of poverty had smaller gains.

Piasta, S. B., Justice, L. M., O'Connell, A. A., Mauck, S. A., Weber-Mayrer, M., Schachter, R. E., … Spear, C. F. (2017). Effectiveness of large-scale, state-sponsored language and literacy professional development on early childhood educator outcomes. *Journal of Research on Educational Effectiveness, 10*(2), 354–378.

This study assessed the impact of a large, state-sponsored PD effort aimed at improving early educators' knowledge, beliefs, and practice. Teachers were randomly assigned to a (1) 30-hour workshop, (2) workshop plus coaching, or (3) control group. Teachers in the coaching condition received a minimum of four to six hours of coaching per month throughout the academic year, designed to help them incorporate the content of the workshop into their classroom practice. The coaching was implemented in cycles of goal setting, planning, observation, feedback, and reflection. The researchers noted that unlike studies created and monitored closely by researchers, the PD studied was provided by contractors of the state's department of education and thus could serve as a "real-world" test.

There were no significant impacts of participation in PD on teacher knowledge outcomes or on self-efficacy and language and literacy beliefs. There were no significant impacts on the practice outcomes (quality of literacy environment and quality of classroom instruction). There were also no significant differences detected between the workshop only versus workshop plus coaching groups.

The authors hypothesized that the lack of significant results could be due to a misalignment of measures to the intended content of the PD, ineffective PD, and/or issues with fidelity of implementation of the PD.

Ruble, L. A., McGrew, J. H., Toland, M. D., Dalrymple, N. J., & Jung, L. A. (2013). A randomized controlled trial of COMPASS web-based and face-to-face teacher coaching in autism. *Journal of Consulting and Clinical Psychology, 81,* 566–572.

This study assessed the impacts of research-based PD on the outcomes of autistic children. Participating teachers were randomly assigned to one of three conditions: (1) control group, (2) receipt of the *Collaborative Model for Promoting Competence and Success for Students with Autism Spectrum Disorders* (COMPASS) with face-to-face coaching, or (3) receipt of COMPASS plus web-based coaching. The COMPASS model focuses on improving autistic children's social skills, communication, and independence. Coaching was provided four times over the school year (every five weeks) and was designed to help teachers implement teaching plans. Each coaching session, whether in person or web based, followed the same protocol of observing the teacher's video

capturing instruction of targeted objectives, obtaining teacher feedback on the observation, scoring children's progress, discussing teaching plans, and making adjustments.

Children in treatment groups had significantly higher scores on their individualized learning goals (focused on communication, social skills, and independence). There were no significant differences between the face-to-face and web-based conditions.

Rudd, L. C., Lambert, M. C., Satterwhite, M., & Smith, C. H. (2009). Professional development + coaching = enhanced teaching: Increasing usage of math mediated language in preschool classrooms. *Early Childhood Education Journal, 37*, 63–69.

This study explored the extent to which side-by-side coaching was associated with improvements in the usage of math-mediated language for 12 educators in an early childhood center setting. Participating teachers attended an initial two-hour training session on using math-mediated language in early childhood settings. Coaching was implemented using a staggered rollout – four educators were randomly selected to receive coaching one week after the training, followed one week later by an additional four educators receiving coaching, and so forth for the remaining educators. In total, each teacher received four, in-class coaching sessions.

There were increases in the use of math-mediated language immediately after both the training and the side-by-side coaching, with the largest improvements occurring during the coaching portion of the intervention.

Sailors, M., & Price, L. (2015). Support for the Improvement of Practices through Intensive Coaching (SIPIC): A model of coaching for improving reading instruction and reading achievement. *Teaching and Teacher Education, 45*, 115–127.

This study assessed the efficacy of the *Support for the Improvement of Practices through Intensive Coaching* (SIPIC) model on elementary and middle school teachers' instruction in reading practice and their students' reading achievement. The SIPIC model was designed to give teachers the opportunity to learn and implement promising practices into existing practices by interacting with qualified coaches who helped them understand the theory, model the practices, and discuss them. Schools participating in the study were randomly assigned to a treatment group that received a two-day summer workshop plus the SIPIC model or one that received the workshop only (control group). Teachers in the coaching condition received visits at least twice a month that consisted of preconference, guided observations and demonstration, co-teaching, post-conference discussion, planning, and guided reflection and conversations.

Teachers who received coaching provided students with more opportunities to engage in cognitive reading instruction and gave better explanations of these reading strategies than did teachers in the control group. Students of treatment group teachers made larger gains on standardized reading outcomes than students with control teachers, with the largest gains observed among students who were labeled as below grade level. Finally, the researchers found a significant relationship between the time teachers spent with coaches and their instructional practices.

Son, S. C., Kwon, K., Jeon, H., & Hong, S. (2013). Head Start classrooms and children's school readiness benefit from teachers' qualifications and ongoing training. *Child & Youth Care Forum, 42(*6), 525–553.

This study explored the relationships between teacher characteristics (e.g., education level, degree, teaching certificate, teaching experiences), professional development, and various environmental and child outcomes. Specifically, the study used a multi-level path analysis to examine the connections between teacher background, in-service training and coaching, and preschoolers' school readiness as mediated by classroom environments. The study relied on data from 2,159 children in 310 classrooms in Head Start programs participating in the 2003 Head Start Family and Child Experiences Survey (FACES). The survey is a part of Head Start's Performance Measures Initiative to examine the effects of Head Start programs on children's outcomes and families' well-being. Classroom environmental quality was measured using a combination of the Early Childhood Environment Rating Scale-Revised (ECERS-R) and teacher reports on their instructional practices. Students' school readiness was measured using early reading, early mathematics, and receptive vocabulary tests (i.e., pre-academic skills), along with measures of social-emotional skills including social skills, learning behaviors, and approaches to learning.

A significant positive link existed between teachers with an early childhood education major and the *provision of learning* measure (e.g., encouraging conversations, teaching literacy skills) and social-emotional practices (e.g., warm, supportive behaviors). Further, teachers who indicated receiving coaching supports also had higher *provision of learning* measures, along with more parent involvement. These measures of the classroom environment, in turn, were associated with higher children's math skills, social skills, and learning behaviors.

Wasik, B. A., Bond, M. A., & Hindman, A. (2006). The effects of a language and literacy intervention on Head Start children and teachers. *Journal of Educational Psychology, 98*(1), 63–74.

This study assessed the impact of a language and literacy intervention designed to teach strategies for book reading and oral language. Two Head Start centers with 16 classrooms were randomly assigned to the treatment or control group. Two hundred seven children, mostly African-American (91 percent) participated in the study. Over the course of nine months, treatment teachers received two-hour group trainings monthly, followed by modeling of the strategy in their classrooms by the researchers. Techers had two weeks to practice the strategy in their classrooms, then were observed using the strategy and given feedback on their implementation. This coaching component of the intervention averaged about four hours per month per teacher.

Children in intervention classrooms had significantly higher levels of expressive and receptive language than did children in control classrooms. Teachers in the intervention condition demonstrated significantly more talking during book reading and asking of open-ended questions.

The authors discussed the implications of these findings for Head Start generally, noting that this intervention was more intensive and sustained than in-service trainings that occur once with no follow-up.

Whalen, S., Horsley, H., Parkinson, K., & Pacchiano, D. (2016). A development evaluation study of a professional development initiative to strengthen organizational conditions in early education settings. *Journal of Applied Research on Children: Informing Policy for Children at Risk, 7*(2), Article 9.

This study reported the results of a three-year evaluation of the Early Childhood Education Professional Development Initiative (ECE PDI), funded through i3 and aligned to Illinois Early Learning Standards, to determine fidelity of implementation and impacts on adult learning, classroom

practice, and student learning outcomes. The intervention targeted stakeholder groups of childhood center leaders, direct supervisors, teachers, and coaches. It used three strategies: learning labs to build knowledge, on-site coaching sessions to help transfer the knowledge into practice, and reflective practice groups to create a clear culture and consolidate learning. The study involved five Head Start sites and 40 matched comparison centers. It focused on six main outcomes: how well training for coaches was delivered, the hours and percentage of professional development sequences delivered, and attendance and engagement for each stakeholder type (coaches, teachers, supervisors, and leaders).

The authors reported few significant results for children, potentially because of small sample sizes. They did find that children in intervention centers had a significantly faster mean growth rate in social and emotional development than those in comparison centers.

Appendix B. A Scan of Statewide Early Educator Coaching Systems

Summary of Findings

Statewide Structures

Of the 14 states reviewed (AL, AZ, CO, GA, FL, KY, LA, MN, NY, OR, RI, VT, WA, WV):

- All have at least two of the five structures of a statewide coaching and technical assistance system analyzed for this study: (1) systems for identifying coach characteristics, (2) an established career pathway for coaches, (3) initial training and ongoing supports for coaches, (4) advisory bodies, and (5) data systems specific to coaches.
- Four states have comprehensive statewide coaching models that include all of the five statewide structures analyzed for this study (AZ, CO, MN, WA).
- All have some systems that identify coach characteristics, including career pathways. Of the 14 states, 11 have established coach competencies, but these are notably different from Massachusetts's competencies for TA providers.
- Nine states provide initial training for coaches and/or common ongoing supports for coaches.
- Ten states have state systems structures that support coaches: 10 have a statewide advisory group that oversees coaches, and 5 have data systems that capture coach-specific data.

	Systems for Identifying Coach Characteristics	Standardized Coach Training, Other Supports	State Systems Structures
Number of States with Each Element	14	9	11

Coaching Features

Of the 14 states reviewed:

- Nearly every state connects its coaching system to its QRIS.
- Most states define the features of their coaching cycle; most include *needs assessment, planning, observation, feedback,* and *reflection.*
- Most use a tiered coaching approach to provide different levels of coaching to programs based on coaches' content expertise, areas of educators' needs, or both.
- Few set guidelines or requirements for coaching dosage (duration and frequency) or coach caseload.
- Most require coaches to collect and use data to inform their coaching and as a way to monitor their progress.

Goals of the State Scan

As a growing body of evidence makes clear the vital role that high-quality early educators play in improving educational outcomes for the youngest children, more states have begun to develop models and initiatives designed to build the capacity and sustain the quality of their early education workforce. Some, such as Massachusetts, are in the midst of developing integrated early educator workforce development systems.

Massachusetts is committed to including teacher coaching as part of its early educator support system, because like those in many other states, state leaders believe the evidence shows that coaching is a wise investment. This is despite coaching being a resource-intensive activity: it is typically delivered one-on-one or tailored to the needs of a small group, and coaches tend to have high levels of education and training. Coaching is included in a comprehensive educator support system because of its potential to improve the skills and knowledge of the early education workforce and, ultimately, outcomes for children.

Abt conducted a scan of coaching initiatives in other states to identify promising practices and approaches to inform the development of Massachusetts's system of coaching and TA.[13] This report provides key findings and examples from that scan to inform Massachusetts's efforts to

- align statewide systems of coaching;
- ensure the quality of early educator coaches;
- provide ongoing training and support for coaches to continuously improve their work, and
- establish data systems to track the dosage and delivery of coaching.

The review was conducted in three steps. First, Abt conducted a 50-state scan of coaching and technical assistance initiatives in early education and out-of-school time, based on documents accessible on the web. The scan allowed us to identify features of states' approaches to the delivery of coaching, as well as the structures that states use to support and monitor coaching.

Second, 14 states were chosen for more in-depth investigation, based on the results of our national scan and nominations from EEC and partners Drs. Robert Pianta and Bridget Hamre, from the Center for Advanced Study of Teaching and Learning (CASTL) at the University of Virginia. These states were selected to provide examples of three topics of particular importance to Massachusetts:

- A comprehensive technical assistance and coaching system, or several elements of such a system.
- Support for educators and early education and care providers in multiple settings across a mixed delivery system.
- Integration of different statewide coaching initiatives into one statewide system (e.g., QRIS, mental health, inclusion coaching).

[13] Abt also conducted a search for research studies of statewide coaching models or coaching models being implemented at scale, but found only a few relevant publications.

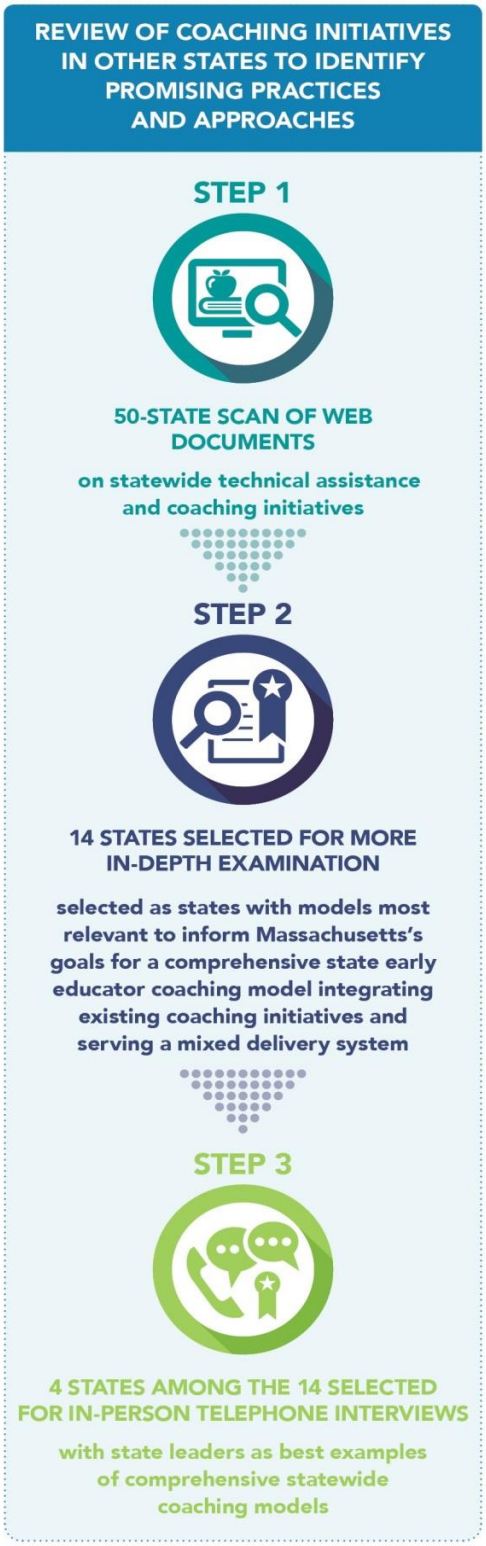
These issues were prioritized because any statewide model that is established in Massachusetts will need to integrate several initiatives already in place or under development. These include Massachusetts's revised QRIS and a new Educator career lattice being developed by EEC, the existing EEC Educator and Provider Support grants,[14] and the Early Childhood Mental Health grants.[15] Coaching is also a key component of federally funded Preschool Expansion Grants (PEG) and Head Start programs. Though these coaching models share some features, there currently is relatively little alignment across the programs.

The 14 states selected for more in-depth review are: Alabama, Arizona, Colorado, Georgia, Florida, Kentucky, Louisiana, Minnesota, New York, Oregon, Rhode Island, Vermont, Washington, and West Virginia. Through web searches and document review, Abt gathered more detailed information regarding implementation, funding amounts and sources, challenges addressed, and lessons learned for each.

Third, Abt selected 4 states from among the 14 that had some elements of statewide coaching models for early educators funded by state agencies. For these states, Abt conducted telephone conversations with state leaders. These states are Arizona, Colorado, Minnesota, and Washington.

Abt framed its scan of states' coaching models around four **research questions**:

1. What types of statewide early educator coaching structures are in place, and what components do these systems include?
2. What are the characteristics of the coaches in the statewide coaching system?
3. What supports are provided for the coaches in the statewide coaching system?
4. What are the features of coaching as it is delivered within these comprehensive systems?



[14] These grants provide professional development opportunities and technical assistance to early education and out-of-school-time providers and educators across the state through five regional grantees.

[15] These grants support positive relationships and healthy social and emotional development of all children through six regional grantees.

The next section of this appendix focuses on questions 1-3. The following section focuses on question 4.

Elements and Structures of Statewide Coaching Systems

We compared the characteristics of the statewide coaching systems in the 14 focal states against a small set of key elements of well-designed integrated statewide TA and coaching systems, drawing those elements from recommendations in several national policy organizations (Child Trends, NAEYC, OPRE). These elements were

1. professional standards, competencies, and role definitions for coaches;
2. a career pathway and system for credentialing coaches;
3. a system of ongoing training support for coaches;
4. state advisory body that provided oversight for coaching initiatives; and
5. state data system for tracking and monitoring coaching.

As described in step 3 above and shown in Exhibit B-1, four states (AZ, CO, MN, WA) have models in place or in development that encompass all five key elements. Three other states (GA, OR, VT) have four of the five elements in their models. Systems of coach competencies (#1) and coach pathways (#2) are the elements most frequently in place across the states. Coaching supports (#3) and state systems structures (#4, #5) are in place in most, but not all, of the states.

Exhibit B-1. Statewide Coaching Models: 14 Reviewed States and Massachusetts, by Number of Elements Included

State	Systems for Coach Characteristics		Standardized Coach Training/Other Supports	State Systems Structures		# of Elements in State Model
	Coach Competencies	Coach Credential Process, Career Pathways		Coaching Advisory Body	Data Systems for Coaching	
CO	X	X	X	X	X	5
MN	X	X	X	X	X	5
WA	X	X	X	X	X	5
AZ	X	In development	X	X	X	4+
GA	X	X	X	X		4
OR		X	X	X	X	4
VT	X	X	X	X		4
AL	X	X	X	X		3
KY	X	X	X			3
NY	X	X		X		3
WV		X	X	X		3
FL	X	X				2

LA		X		X		2
RI	X	X				2
MA	X					1
Total (excluding MA)	**11**	**14**	**10**	**11**	**5**	

Characteristics of Coaches: Ensuring Quality Coaches

Several states have made efforts to define, improve, and measure the quality of their coaches. Typically, these states have started by developing a set of competencies for coaches, to make clear what a coach should know and be able to do to improve early educator quality. Next, some states have established career lattices to formalize these competencies and define the pathways available for advancement as coaches improve their skills. Finally, states have developed approval or credentialing systems to verify and monitor the qualifications and competencies of their coaches. In many states, each of these components is captured in a state TA or coaching registry system (National Registry Alliance, 2013b).

In most of the states reviewed, the systems of coaching competencies and credentials recognize the need for levels of coaching skills and training for coaching across the mixed delivery system.

Coach Competencies

A key step in ensuring the quality of coaches is to define and describe the knowledge, skills, and dispositions that effective coaches possess. Every state has its own unique set of coach competencies, but there are common themes. Exhibit B-2 compares categories of competencies from the 11 states that include competencies in their models. We included Massachusetts in this table to the extent possible; however, the set of competencies that Massachusetts has developed is quite different from the other states'. It goes deeper in some areas, which results in many more categories; thus, it can't be easily mapped to other states (see table footnote). One result of this review might be that Massachusetts brings its competencies into better alignment with the rest of the field.

Of the 11 states (excluding MA) that include competencies in their coaching systems, 10 states include relationship-based practice, and more than half include competencies related to professionalism (9 states), assessment (8), adult learning principles (8), and content knowledge (7). Slightly less than half of the states have competencies related to effective communication (6), management and planning (6), and effective instruction (5).

Exhibit B-2. TA/Coach Competencies Included in State Coaching Systems

	Content Knowledge	Adult learning principles	Assessments	Professionalism	Relationship-based practice	Effective communication	Management and planning	Effective instruction
MA*	X		X	X	X	X	X	X
AL			X		X		X	
AZ	X	X	X	X	X			X
CO			X		X	X	X	
FL	X			X	X	X	X	X
GA	X	X	X	X	X		X	X
KY	X	X		X	X	X		
MN	X	X		X	X			
NY		X	X	X	X	X	X	
RI	X	X	X	X	X			X
VT	X	X	X	X	X	X	X	
WA		X	X	X		X		X

Notes: Of the 14 selected states, 3 states (LA, OR, WV) are not shown because they don't include coach competencies in their coaching models.[16]

Coach Credential/Approval System

Several states have taken an additional step to ensure the quality of their coaches, trainers, or other TA providers by developing credentialing or approval procedures. These credentials are designed to ensure competency and dictate the level and content on which individual providers can coach or conduct trainings.

As shown in Exhibit B-1 above, all of the 14 states have or are developing systems of coach pathways or credentials several common elements:

- Tiered levels of trainers/coaches – Several credentialing systems (CO, GA, KY, LA, MN, WA) include distinctions between levels of trainers from beginning to advanced.
- Training in design and delivery of content to adult learners.
- Renewal requirements – Several credentialing programs require TA providers to renew their credential/approval every two to three years.
- Some states partnered with accredited colleges and universities to develop credit-bearing courses in adult learning and education that result in a credential for coaches.

Below we describe coach credentialing systems in three states with well-established systems.

[16] Massachusetts competency categories not captured in this matrix are: The Role of Evaluation in the Technical Assistance Process; Resource and Referral; Collaborating Disciplines and Service Networks; Infant and Toddler Development; Infant and Toddler Development Screening and Assessment; Pre-K Development; Understand Child and Youth Development; Supporting Development through Family, School, and Community; Relationships as the Context for Development; Key Relationships for Infants and Toddlers; Policies That Support Relationship-Based Practice; Relationships with Educators and Caregivers; Other Key Relationships for Preschoolers; Strong Caring Relationships as the Context for Healthy Development; Intentional Relationship Building; Curriculum for Infants and Toddlers; Development and Implementation of Infant and Toddler Curriculum; Key Partners and Resources Supporting Infant and Toddler Curriculum; Key Elements of Learning Environment; Safe, Healthy, and Nurturing Environments; Curriculum for Preschool Settings; Development & Implementation of Preschool Curriculum; Key Resources Supporting Preschool Curriculum; Intentional Learning and Engagement; and Links to the School Day.

State Example: Colorado

In Colorado, a Coaching credential is offered by the Coaching Network, in collaboration with the Colorado Coaching Consortium.[17] To qualify for the credential, applicants must have completed Level III of the Early Childhood Professional credential, have three or more years of experience in early childhood education and at least 1,820 hours of direct work with children and/or families, and have completed a four-day relationship-based professional development training (RBPD) or equivalent. The Coaching credential is composed of three stackable levels based on experience and education. Level I is intended for applicants with no experience in direct coaching. Level II requires 300 hours of direct coaching experience. Level III requires 600 hours of direct coaching experience, a statement of coaching philosophy, a case study, and a bachelor's degree in early childhood education or related field.

Coaching credential holders must renew their certification every three years (for Level I) or five years (for Levels II and III). To receive certification renewal, coaches must demonstrate a certain amount of reflective supervision hours (25 to 40 hours, depending on level), have an updated professional development plan, and complete 45 hours or three credits of ongoing professional development in early childhood education or a coaching-related topic. Throughout their professional development, coaches can complete self-evaluations using a checklist developed by the Colorado Coaching Consortium. This checklist is aligned with the established core competencies; it also can serve as a reference point for coaches in developing their coaching professional development plan.

State Example: Georgia

In Georgia, the Department of Early Care and Learning established three levels of technical assistance providers – Candidate, Associate, and Specialist – determined by the applicant's level of education, experience, and training. All three designations require a bachelor's degree in early childhood education, child development, or a related field; three or more years' experience working in early childhood care and education (one year of which must be direct experience); and completion of a 50-hour Art of Technical Assistance course. In addition to these requirements, the Candidate designation requires the applicant to be currently providing technical assistance with support and supervision; the Associate level requires two or more years' experience providing technical assistance. The Specialist level requires two or more years' experience providing technical assistance and the successful completion of a technical assistance "portfolio," a performance-based assessment of competency intended to provide tangible evidence of competence and best practices. Designations awarded by Georgia Training Approval are valid for three years.

State Example: Minnesota

Minnesota's trainer approval process emphasizes content knowledge and training skills. Through Achieve (Minnesota Center for Professional Development), the state supports relationship-based professional development (coaching, mentoring), trainer approval, and course approval. The trainer approval system defines requirements for various types of trainers: Trainer I, Trainer II, and Master Trainer (each of which is mapped to specific steps in Minnesota's Career Lattice for Childhood Care and Education Practitioners), plus Content Experts, Guest/Visiting Trainers, and Higher Education Trainers. These levels

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[17] The Colorado Coaching Consortium includes representatives from various early childhood education coaching initiatives with a goals of understanding the scope and nature of early childhood coaching projects across Colorado and exploring a common set of principles or standards for coaching and more systematic professional development opportunities for coaches. See http://cocoaches.net/CoachingCredential.html.

correspond with the levels of courses trainers are permitted to provide – only Master Trainers and Content Experts are approved to conduct trainer-of-trainer events. Trainers are required to renew their approval every three years.

Coaching Certificates

Some states have worked with university partners to develop credit-bearing coaching certificates. The University of Colorado-Denver has developed a three-course, nine-credit Early Childhood Coaching Certificate that aligns with the Colorado Coaching Consortium's coaching competencies. The courses use research-based practices to teach coaching skills for early childhood educators, connecting awareness with application and deepening of practice, and attuning for personal and organizational change. Washington's coaching and credentialing system includes a Certificate in Early Childhood Coaching provided by the University of Washington through which participants can earn up to nine credits toward degree requirements.

Supports for Coaches

As shown in Exhibit B-1 above, about two-thirds (10 of 14) of the states are providing training for new coaches and ongoing support for established coaches.

New Coach Training

Several states require coaches to attend common training sessions before they are permitted to begin coaching. Examples from three states follow.

State Example: Alabama

In Alabama, the Office of School Readiness requires all First Class coaches to attend a two-day training to learn the Alabama Reflective Coaching (ARC) model and best practices for working with adults. Once trained, First Class coaches attend monthly webinars to discuss topics of relevance, share new coaching tools and resources, and share common issues.

State Example: Colorado

The Colorado Department of Education has established Early Childhood Regional Coaching Consultants, who provide relationship-based professional development trainings in communities across the state. The topics for RBPD training sessions include adult learning, coaching competencies, reflective practice, and coaching implementation tools. The Department requires all new coaches to attend a four-day training session on RBPD, provided at no cost.

State Example: Washington

In Washington, new coaches are required to attend two-day training sessions to learn about the state coaching model. Coaches must attend this Early Achievers (EA) Coach Framework training within six months of hire. The Framework, developed by the University of Washington's Childcare Quality and Early Learning Center (CQEL), includes training on shared goal setting, focused observation, and feedback and reflection; and it introduces coaches to the model's three guiding principles of resilience, cultural competence, and parallel process. Orientation webinars cover topics such as Washington's coaching standards, quality ratings, EA pathways, timeline, coach roles, and available resources, including the Web-based Early Learning System (WELS) and data entry requirements.

Ongoing Support for Coaches

Across the states, a variety of other types of support for coaches are being offered, including ongoing PD opportunities (in person and web based), opportunities for supervision from a master coach, and peer-to-peer coaching systems. Beyond initial training, some policy reports also recommended that coaches be able to access materials and resources as needed. Among the suggested resources were research on new coaching strategies and techniques (Spokane Public Schools, 2010; Byington & Tannock, 2011), a coaching manual that provides descriptions of roles and responsibilities and real-life examples (Isner et al., 2011), a toolkit to support the coaching process (Mattera et al., 2013), and a bank of effective prompts to facilitate teacher reflection (Pianta et al., 2014). Several states are providing these types of supports, some examples of which are described below.

State Example: Arizona

In Arizona, professional development is offered to the coaches and consultants providing services to early care and education programs enrolled in Quality First (Arizona's QRIS system) through the Quality First Academy (http://www.qualityfirstacademy.org/login?destination=home). Its participants are coaches and consultants from a range of different coaching initiatives, including Quality First coaches and coaching supervisors, assessors, and assessor supervisors, as well as other consultants and their supervisors providing services to providers in the Quality First system, such as mental health consultants, child care health consultants, inclusion coaches, and Arizona Department of Education mentors. The Academy offers all Quality First technical assistance providers (TAPs), including coaches and consultants, access to a 14-hour onboarding track that introduces the Quality First system; a training for TAP supervisors on how to supervise for quality, provide support and mentorship, support informal and formal data use, engage in goal setting for quality improvement, and conduct engaging conversations for quality change; and a training for both TAPs and TAP supervisors on creating a community of learners.

For 2017, the TAP supervisors will attend an eight-hour Supervising for Quality training, held prior to five-hour Community of Learners sessions attended by all Quality First TAPs. After the sessions are completed, TAP supervisors will participate in a one-hour discussion to brainstorm ways to support and mentor their staff while incorporating new skills learned during the session. The Community of Learners sessions are held at multiple locations across the state five times a year. They focus on trauma-informed care, inclusion, and language and literacy.[18]

In addition to the training, the Quality First Academy offers an annual symposium training that focuses on statewide networking, collaboration, and professional development in field-related topics for TAPs and TAP supervisors. All Quality First coaches and consultants can attend the symposium. To prepare for the symposium, managers from the child health, inclusion, mental health, and assessment coaching and consultant teams meet monthly with Academy leadership to decide what content will be taught. Content is typically based on the needs identified by the field. The symposium's mixed-service model allows Quality First coaches to gain knowledge about other services and resources available and how to reach out to specialized coaches and consultants to help programs access specialized support, as needed.[19]

[18] Email from Leslie Totten, Quality First Director, May 30, 2017.

[19] Interview with Leslie Totten, Quality First Director, May 25, 2017.

State Example: Colorado

Colorado has five regional coaching consultants who provide ongoing support, supervision, and regionally based training to local coaches and support coaches as they advance toward earning their Coaching Credentials.

State Example: Minnesota

In Minnesota, two statewide professional learning communities (PLCs) for coaches meet monthly. The first PLC consists of about 50 Parent Aware Quality Coaches (QRIS coaches) who alternate between meeting in-person and meeting by videoconference. The second PLC consists of Pre-K CLASS coaches.

State Example: Washington

In Washington, the University of Washington's Childcare Quality and Early Learning Center hosts monthly webinars with topics ranging from resilience and cultural competence to using the Classroom Assessment Scoring System (CLASS) to inform goal setting. These webinars encourage dialogue among coaches, provide new information on specific topics, and introduce new tools or resources to enhance coaches' work. Early Achievers Institutes are large multi-day conferences hosted by CQEL and geared toward program directors, EA coaches, and classroom staff to provide support on the Early Achievers Standards.

Washington also has a system for peer-to-peer support among coaches. Pairs of coaches and consultants from a statewide Coach Support Team meet once a month to review the practice-based coaching foundations of goal setting, observation and feedback, and reflection. These individual consultations enable coaches to get customized support and guidance as they use the coach model with early educators. Coaches may also attend optional two-day internships focused on inclusive care and education for children with special needs and their families. The internships contain a variety of training strategies – lectures, focused observations, and facilitated discussions. Internships are small and clustered by regions so that coaches can build local communities of practice.

State Systems Structures

Many of the 14 states have established system-level supports, 11 in the form of advisory bodies and 5 by providing data systems for coaches.

Coaching Advisory Body

Several policy reports recommended establishing advisory boards or groups at the state level that focus on a systemic approach for cross-program consistency (NAEYC, 2016; Byington and Tannock, 2011; Killion et al., 2012; Hindman, Snell, Wasik, Lewis, Hammer, & Iannone-Campbell, 2015). Some reports included recommendations that state-level PD advisory structures provide opportunities for sharing information across agencies (e.g., public health, elementary and secondary education) to support system building and evaluate the effectiveness of the investments in professional development across sectors.

State Example: Vermont

In 2013, funded by a grant from the Child Development Division of the Vermont Agency of Human Services, Northern Light Career Development Center established the MATCH (mentoring, advising, teaching, coaching, consulting) committee with representation from Head Start, CDD, Children's Integrated Services, public schools and the VT Department of Education, Afterschool, Resource Development Specialists, and statewide sponsors: VT Association for the Education of Young Children

(VAEYC), VT Child Care Industry and Careers Council, and VT Birth to Three joined the committee. This committee has developed and action plan and worked to "unify and enhance the professional development system for early childhood and afterschool professionals" by establishing various supports for early educator coaches.

Data Systems for Tracking Costs and Supporting Coaching

A data system to support coaching is the least well developed element of the state coaching systems reviewed. Two of the states demonstrate how data systems can be used.

State Example: Arizona

In Arizona, First Things First has created its Data Center (http://datacenter.azftf.gov/) as a starting point for strategic discussions with early childhood stakeholders – including educators, service providers, community leaders, and families – on how to maximize the impact of resources on young children. The Data Center tracks dollars spent by region on professional development for early educators. The First Things First Extranet also is a data system, used for communication between coaches and programs (e.g., orientation information, announcements, etc.). It also holds profile information about each provider (e.g., data about the staff, site, etc.). Finally, the Extranet contains resources available to the providers and coaches to provide information about the various details of participation within Arizona's QRIS.

State Example: Washington

The Washington Department of Early Learning coaching toolkit website (https://del.wa.gov/ECEAP_Coaching_Toolkit) is a repository of webinars, handouts, forms, and useful links to resources hosted by partner organizations and other entities. Similarly, CQEL's coaching resources website (http://www.cqel.org/) contains easily accessible online resources and tools, such as handouts, forms, and an instructional support matrix; classroom areas brainstorming resources; and other resources.

Features of Statewide Coaching Models

In addition to analyzing the structures and systems that states have developed to support high-quality coaching of early educators, Abt analyzed the features of the statewide coaching models – that is, the ways in which coaching is being implemented in early childhood education programs and classrooms. Exhibit B-3 below summarizes key features and the states that are incorporating them.

Exhibit B-3. Features of Statewide Coaching Models

State / Model or System Name	Aligned to QRIS	Tiered Coaching	Coaching Cycle	Coaching Dosage	Coach Caseload	Standardized Content/Curricula	Data Collection and Use
AL Alabama First Class Coaching		X	X	Beginning Teacher – 1/month + video, phone, email Progressing Teacher – 1/month Refined Teacher – a few	1:15		X

				times/year			
AZ Quality First Coaches	X	X	X	1-2 Star Programs – 6-8 hrs/month 3-5 Star Programs – 4 hrs/month	1:9	X	X
CO Colorado Coaching Consortium	X	X	X	Not yet	Not yet	X	X
GA Bright from the Start	X		X				
KY PD Framework	X	X	X			X	X
LA Agenda for Children	X	X	X	Individualized		X	X
MN Parent Aware Quality Coaches	X	X	X	Varies	Caseload calculator	X	X
NY			X			X	
OR Spark/Early Learning	X	X		Varies			X
RI Exceed	X						
VT MATCH						X	X
WA Early Achievers Coaches	X	X	X		1:40		X
WV Early Childhood Training Connections and Resources						X	

Note: Web-based document review did not reveal enough information to fully complete the chart for FL, NY, RI, or WV.

Tiered Coaching

Tiered coaching means the level of coaching provided varies to match the level of program need. Some states are attempting to align coaching to programs' needs *and* readiness. Examples of each are described below.

State Example: Alabama

Alabama's Office of School Readiness developed the Alabama Reflective Coaching model (ARC) for use in supporting early childhood coaches and Alabama First Class Pre-K (universal prekindergarten initiative) directors and teachers. ARC identifies three levels of teachers: Beginning, Progressing, and Refined and provides each with a different level of coaching. For Beginning Teachers (new or not progressing) ARC coaches visit at least once a month and follow up by telephone, video conference, and

email. Progressing Teachers receive at least one visit a month from a coach. Refined Teachers communicate with coaches through phone calls and webinars.

State Example: Louisiana

The Louisiana Department of Education funded Agenda for Children to lead the Child Care Technical Assistance Program, which provides on-site coaching and TA to early education and care programs. The program is free for licensed centers and family child care providers. Initially providing TA and coaching to all 500 centers in its region, the Agenda for Children determined that some centers were more ready for coaching than others. In July 2015, in an attempt to use limited funds most effectively, the Agenda for Children launched a tiered TA model (http://www.agendaforchildren.org/tiered-ta.html), in which providers must demonstrate their "readiness" to receive coaching.

The Louisiana model defines three tiers: Tier 1 is "Commit," Tier 2 is "Prepare," and Tier 3 is "Achieve." Program leaders from Tier 1 programs can receive foundational trainings and basic coaching by phone and email; to be eligible for Tier 2 they must attend a Quality Improvement Orientation session, complete a Commitment to Participate in Technical Assistance form, provide their most current licensing review, and update their information in the state's referral database. Program leaders and educators in Tier 2 programs attend training sessions in Teaching Strategies (TS) GOLD and CLASS assessments. Tier 2 program leaders receive coaching sessions on TS GOLD implementation or CLASS scores; to move into Tier 3 they must attend four trainings focused on management and administration and complete a self-assessment, quality checklists for each classroom, and request an audit. Programs in Tier 3 participate in customized, intensive on-site coaching, targeted trainings, webinars, and professional learning communities. Coaches for Tier 3 programs work with program leaders and teachers to prioritize needs (using results from the classroom quality checklists and administrator self-assessments), determine goals, and create an action plan. The coach works intensively with the program and gathers evidence of improvement submitted by program leads.

Coaching Cycle

Planning and Goal Setting

Consistent with policy report that recommend clear coaching goals and roles and responsibilities (Hanover Research, 2015), some states require their coaches to engage in initial planning and goal setting before beginning their work. Some states have based their model on Head Start's Practice-Based Coaching model (OR) and other relationship-based professional development training (AL, AZ, CO, MN, WA), which begin with a planning process. The PBC model provides guidance related to planning and goal setting that recommends that coaches administer a needs assessment, collaboratively set goals for coaching, jointly develop an action plan to guide the coaching process, and review and update goals and plans throughout the length of the coaching partnership.[20]

Observation

As with planning and goal setting, several states have adopted practice-based and relationship-based coaching models that include a feature related to conducting observations (AL, AZ, CO, MN, OR, WA). Head Start's PBC guidance recommends that coaches engage in focused observations during regular classroom activities. The focus of these in-person or video observations is guided by the needs assessment

[20] See https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/docs/pbc-handout.pdf.

and action plan. Coaches record information about the observation, gather more information, and then provide targeted support to improve teaching practices.

Reflective Feedback

Coaches use reflective feedback as a means to help educators examine their practice and continuously identify areas for improvement. Some of the states (AL, AZ, CO, MN, OR, WA) that have adopted practice-based and relationship-based models require coaches to use particular strategies for providing reflective feedback. The PBC model provides guidance for providing reflective feedback that recommends that it be provided during a debriefing "meeting," a scheduled time for coach and teacher to communicate about progress and challenges, and make plans for future meetings and observations.

Guidelines for Coaching Dosage

Coaching dosage (or "intensity") refers to the duration of time spent coaching combined with the frequency of coaching sessions over time (how often, how many). Some states have established guidelines for coaching dosage. Alabama's ARC model uses a tiered approach that ranges from a few times a year to once a month with follow-up by email or phone. Arizona's model ranges from four to eight hours each month, depending on the QRIS level of the program. Louisiana's tiered TA model includes more coaching for programs with higher needs that have demonstrated readiness to effectively collaborate with a coach.

Guidelines on Coach Caseload

Some research (Blazar & Kraft, 2015) has indicated that the higher the educator-to-coach ratio, the less impact the coaching program will have on improving teacher practice. In response, some states (AL, AZ, MN) have guidelines in place to limit the number of educators that coaches are responsible for supporting. Alabama and Arizona have established ratios of 1:15 and 1:9 respectively. Minnesota has created a caseload calculator that attempts to incorporate some of the nuances of programs and educators, such as program quality rating level and educator experience level.

Data Systems to Track Delivery of Coaching

Some states have designed statewide data systems that allow for the capture and monitoring of data related to coaching.

State Example: Alabama

Alabama used its Preschool Development Grant to develop a software system that allows its First Class coaches and monitors to enter data about classroom quality. These data can include the results from assessments such as the Early Childhood Environment Rating Scale-Revised (ECERS-R), Classroom Assessment Scoring System (CLASS), TS GOLD, and Peabody Picture Vocabulary Test (PPVT). This database is used by the state to monitor its quality initiatives, including those related to coaching and monitoring.

State Example: Arizona

In Arizona, Quality First coaches complete coach activity logs after each coaching session that record the focus of the visit, notes from the visit, and progress made, entering this information into a statewide database. Other coaches and supervisors who visit that site are then able to efficiently review activity logs to see who was there when, what was discussed, and what issues or challenges arose, as well as to review assessment scores.

Conclusion

With limited research evidence supporting the features of effective coaching for early educators, and virtually no research on the features of an effective statewide system of coaching supports and delivery, this review of state models provides some field-based information about both. This information can provide ideas and considerations for the development of a statewide coaching system in Massachusetts.

Appendix C. Inventory of Massachusetts Early Educator Coaching

Summary of Findings

In the absence of a state coaching system for EEC-funded initiatives, there has been limited integration of initiatives. Our inventory of five state coaching-focused initiatives reveals that without a single set of guidelines for coaching, each initiative has developed its own practices. There are some features in common across initiatives, which reflect much of what the field recommends as best practices. At the same time, there is variation in coaching for different types of programs/educators and topics.

- **Coach training.** All of the coaching-focused initiatives provide or link coaches to training. However, there is no common orientation or initial training to provide coaches from all EEC-funded coaching initiatives with a core set of skills. There are few formal, EEC-funded, ongoing trainings designed for coaches and TA providers.
- **Community of practice.** Opportunities for grantees and coaches/consultants to interact with one another and share information and best practices within and across coaching initiatives are infrequent and generally not formalized.
- **Coach career lattice.** Most current Massachusetts initiatives that include coaching require coaches to have a bachelor's degree, teacher or director experience, PD experience, and knowledge of state standards and tools. However, there is currently no state-level approval process or articulated career progression for coaches. Current initiatives do not have specified requirements for coaches based on their skills/competencies or the population that is being coached.
- **Delivery model**. In practice, there are some common delivery-related elements across current initiatives – including needs assessments, observation, and the provision of feedback. But these reflect common understanding of best practices, rather than adherence to any specified guidelines.
- **Dosage.** Initiatives do not currently share common dosage thresholds for the duration and frequency of coaching sessions. Some grantees, however, have established their own tiered systems, where the amount of coaching depends on the topic coached and the needs of the educators or program. The decisions around the amount of coaching typically are not formalized.
- **Content/focus of coaching.** Currently, state grant initiatives fund general classroom support such as classroom management and subject matter support for literacy and math (EPS, Head Start PBC, PEG), as well as targeted support for mental health or social-emotional content (ECMH, Pyramid Model).
- **Use of data.** Some grantees have developed their own data collection practices and analysis capacity, but there is no statewide data system for coaches to use to collect and analyze data about the delivery/implementation and/or outcomes of coaching. Currently, some grantees (EPS, ECMH) are required to submit annual reports, but this information is not captured in a statewide database or accessible to other coaches or TA providers statewide.
- **Supports for coaches.** Some grantees regularly supervise and monitor coaches' impact, but for most, this is informal and infrequent. Currently, coaches have no access to coaching for themselves – either from peers or from some type of master coach.

Introduction and Overview of Inventory

The goals of this inventory of state coaching initiatives are to (1) systematically identify and document key aspects of the technical assistance and coaching currently being supported by EEC; and (2) describe other EEC initiatives that now connect to or could better connect to current coaching initiatives. This inventory first summarizes the methods Abt used to collect this information, next describes each initiative included in the inventory, and finally discusses common features and structures across initiatives.

EEC currently supports a variety of initiatives that include a coaching component, including

- Educator and Provider Support (EPS) grants;
- Early Childhood Mental Health Consultation (ECMH) grants;
- Head Start Practice-Based Coaching (PBC);
- Preschool Expansion Grant (PEG) coaching;
- Pyramid Model coaching; and
- additional EEC-funded initiatives that provide TA and guidance to providers, including EEC Quality Improvement Specialists, licensing staff, and Family Child Care Systems (FCCS).

EEC has also been developing some systematic elements to coaching across initiatives. For example:

- It recently funded a training session, *Coaching for Change*, that supported EPS coaches to understand and use the *Guiding Change* technical assistance provider competencies.
- It is in the process of developing a career lattice to define career pathways for the early education and out-of-school-time workforce; this lattice will also incorporate career pathways for coaches and TA providers.

Methodology

In May and June 2017, Abt interviewed 29 individuals to understand current state-supported early education program- and educator-focused coaching and TA grants and initiatives. Per EEC's recommendation, Abt interviewed stakeholders who oversee or engage in coaching as a part of their program model, including EPS grant, ECMH Consultation grant, Head Start, Family Child Care Systems, and Pyramid Model sites. In addition, the Abt team interviewed stakeholders involved in initiatives that will connect with and affect the development of a statewide coaching model, including the state leads for QRIS revisions, the Educator career lattice, licensing, and Family Child Care Systems. Finally, Abt interviewed those who provided the *Coaching for Change* training on Massachusetts's technical assistance competencies and who engaged with the Early EdU Alliance's Coaching Companion.

Interviews were conducted in three rounds to capture different levels of leadership and support. In the first round we included state leads from EEC, Department of Public Health (DPH), and Department of Elementary and Secondary Education (ESE); leads of early childhood programs; and leads of state initiatives. Next we interviewed grantees and coordinators recommended by the interviewees in round one. Finally, we interviewed coaches and consultants suggested by interviewees from round two. We created interview protocols by respondent type (stakeholder, early childhood program lead, state initiative lead, grantee, coach, and consultant); these protocols were informed by a review of documents provided to Abt by EEC and also from online documents found by the Abt team. We designed the protocols to

include questions to inform our understanding of the coaching and TA services currently provided in the state. The protocols also aligned with the rubrics used for two other components of the broader work plan; the literature review (Appendix A) and scan of state models (Appendix B).

Abt interviewed 31 respondents in Massachusetts: 14 state agency leaders, 9 grantees and coordinators, and 8 coaches and consultants. Exhibit C-1 below provides more detail about the numbers and types of respondents interviewed. An example of an interview protocol (for EPS grant coordinators) is attached to this appendix.

Exhibit C-1. Summary of MA Initiatives Inventory Interviews

Respondent Type	EPS	ECMH	Head Start PBC	Pyramid Model	Other Initiatives	Total
State Agency Lead	1	2	2	2	7	**14**
Grantee/Coordinator	3	4	1	0	1	**9**
Coach/Consultant	5	3	0	0	0	**8**
Total	**9**	**9**	**3**	**2**	**6**	**31**

*Other initiatives include QRIS, licensing, FCCS, career lattice, Early EdU, *Coaching for Change* training.

Abt's inventory of Massachusetts coaching initiatives was guided by five **research questions**.

1. What types of early educator coaching initiatives are currently supported by EEC?
2. What are the features and content of the coaching models being implemented in Massachusetts?
3. What are the characteristics of the coaches in current state-supported initiatives?
4. What supports are provided for coaches as part of current state initiatives?
5. What types of state-level tracking or monitoring is being conducted

Description of Current Initiatives

This section provides an overview of each coaching initiative.

Educator and Provider Support (EPS) Grants

The purpose of an EPS grant is to (1) support pathways that lead educators to degree attainment and increased competency through certificates and credentials; (2) support providers (programs) in attaining and maintaining accreditation and upward movement on the Massachusetts QRIS; and (3) foster a comprehensive professional development system that addresses leadership development and leaders in the field. The grant focuses on competency development through educator and provider pathways and coaching and mentoring.

EPS Grant Priorities[21]

[21] Information for the following sections was derived from Fiscal Year 2018 Educators and Provider Support Grant Request for Responses.

- Provide intentional professional development opportunities that enhance educator knowledge, skills, and abilities and that transform practice.
- Provide professional development opportunities and support services that meet the needs of adult learners and address the diversity of the Massachusetts early education and out-of-school-time workforce across EEC's mixed delivery system.
- Provide professional development opportunities that align with EEC's Core Competencies, QRIS, and early learning standards and guidelines.
- Support pathways that lead educators to increased competency through certificate, credential, and/or degree attainment.
- Support providers (programs) in attaining and maintaining national accreditation.
- Support providers (programs) in meeting licensing requirements, QRIS standards, and upward movement in QRIS.
- Support educators and providers to make informed and appropriate educational choices that advance professional growth and enhance program quality.

Grantees

EEC selects grantees from five regions across the state to receive grants that range between about $500,000 and $900,000 annually. EPS grantees oversee the day-to-day management of the grant and ensure grant requirements are met. Grantees develop and deliver professional development opportunities that meet the needs of the field and provide technical assistance related to professional development pathways, accreditation, and upward movement on QRIS. EPS grantees also provide support for QRIS Measurement Tools and Assessment to ensure locally that programs engaged in QRIS have access to and are being trained to use the measurement tools in their programs. EPS grantees

- provide direct services;
- develop and implement an effective governance structure;
- assess and respond to the changing professional development needs of their region;
- leverage professional development activities across public and private agencies in order to maximize resources (both fiscal and in-kind), prevent duplication of effort, and utilize individuals and institutions with the requisite skills;
- participate in EEC-sponsored meetings and professional development opportunities related to the implementation of a comprehensive statewide professional development system;
- respond to EEC inquiries and requests for information in a timely manner, including submitting required data reports and other reports as required by EEC;
- conduct an annual needs assessment to ensure services provided are meeting regional needs and provide needs assessment results to EEC;
- use data gathered from needs assessments, evaluations, and other reports to inform and enhance grant services; and

- provide opportunities for educators, providers, partnership members, and other stakeholders to evaluate grant services.

Coaches

EPS supports a lead coach, responsible for the oversight, management, and documentation of technical assistance and coaching services, overseeing EPS-funded coaches and their caseloads. The grantee contracts with coaches to support providers and educators across EEC's mixed delivery system in each region to achieve and/or maintain national accreditation and advance in the QRIS. EPS coaches provide professional development opportunities and supports to enhance competencies through certificate, credential, and/or degree attainment in early childhood education or a related field. EPS grants prioritize educators and providers serving high-needs children and participating in QRIS, in accordance with EEC policies.

Qualifications for EPS coaches include the following:

1. Hold a minimum of a bachelor's degree from an accredited institution of higher education in early childhood education or a related field; or hold a minimum of an associate's degree from an accredited institution of higher education in early childhood education or a related field; or hold a specialty degree outside the field of early childhood education that directly relates to the subject matter being addressed.
2. Have experience providing consultation, training, and/or mentoring.
3. Demonstrate ability to use developmentally appropriate practice and to implement adult learning strategies.
4. Demonstrate knowledge of curriculum development across all domains, including individualization to meet the needs of children with a wide range of needs and abilities.
5. Demonstrate knowledge of EEC initiatives such as QRIS, Core Competencies, curriculum guidelines, and early literacy.
6. Demonstrate ability to adapt strategies and resources to the client's learning style, culture, language, needs, and preferences.
7. Regularly assess training or mentor session outcomes, including the use of participant feedback.
8. Demonstrate ability to apply principles and techniques of objective program observation and assessment.

Early Childhood Mental Health (ECMH) Consultation Grants

ECMH grants provide consultation services to address and support the social-emotional development and behavioral health of children in early education and care and out-of-school-time settings. ECMH consultants also provide support and guidance to programs, educators, and families to address the developmental, emotional, and behavioral challenges of infants and young children to ensure healthy social-emotional development, reduce the suspension and expulsion rate in early education and care settings, and promote school success.

ECMH consultants work in partnerships with programs to[22]

- design and implement program policies, procedures, and practices that are responsive to the social-emotional and behavioral health needs of children;
- assess strengths within the early education and care environment supporting children's social and emotional development;
- strengthen educators' skills to identify children with or at risk for behavioral, developmental, or mental health difficulties;
- adapt curriculum and enhance behavior management skills that are responsive to children with a range of developmental, social, and emotional needs;
- implement positive behavior interventions and supports using evidence-based practices, such as the Center on the Social and Emotional Foundations for Early Learning (CSEFEL) model;
- build collaborative relationships with families to support children in the classroom and their homes;
- develop strategies for staff self-care; and
- successfully retain children in a program or family child care.

ECMH consultation services may include

- classroom observations and strategies for creating supportive learning environments;
- customized training and/or coaching for educators, such as identifying signs and symptoms of trauma in infants, toddlers, and young children;
- guidance for developing ongoing partnerships with families, using strength-based approaches;
- individual observation and assessments of children (with parental consent);
- guidance in the development and use of individualized behavior support plans for children, with input from parents and educators, to prevent and reduce concerning or challenging behaviors; and
- assistance with referrals to community-based services that meet the mental health, social welfare, and other basic needs of children (with parental consent) and families.

Grantees

EEC funds six grantee organizations, each at an average of $200,000 annually, to administer ECMH grants to strengthen programs in EEC's mixed delivery system, supporting the provision of high-quality, nurturing learning environments that are responsive to children with a range of developmental, social, and emotional needs. ECMH grants are intended to help programs prevent, identify, and reduce the impact of behavioral and emotional distress on young children through the use of on-site early childhood mental health consultation and mentoring.

Grantees also provide programs with training and coaching in order to strengthen educators' capacities to reflect, problem solve, and be effective in identifying risks and preventing or reducing social-emotional

[22] Information for the following sections was derived from Fiscal Year 2018 Early Childhood Mental Health Consultation Grant Request for Responses.

and behavioral concerns. Grantees provide interventions that address concerning or challenging behaviors through referrals and coordination with community-based services. Grantees are expected to support programs' abilities to successfully retain children who may have otherwise been suspended or expelled due to challenging behaviors, using strength-based approaches. They also strengthen the overall infrastructure and coordination of services on behalf of children, families, and programs to improve the integration of ECMH services with other systems of support.

Grantees are responsible for three main activities:

- **Identifying needs and meeting them**. Conducting outreach, referrals, and requests that are culturally and linguistically relevant to programs, families, and communities; and identifying the need for ECMH services among programs serving children and families with high needs, and implementing strategies to work efficiently and effectively to address unmet needs in the communities to be served.
- **Ensuring prioritized programs are served**. Managing and tracking program requests for early childhood mental health consultation services using a system to ensure that programs and family child care providers who meet the criteria as specified are prioritized for ECMH service; and have a method for evaluating how a program or provider meets the specified priority.
- **Efficiently serving as many programs as possible**. Providing ECMH services in a manner that is comprehensive and benefits the greatest number of programs possible that serve at-risk children, and children and families identified as "high needs," without duplication of services or supplanting of funds.

Consultants

ECMH grantees hire consultants who provide supports to programs, educators, and families within their region. Consultants' knowledge and qualifications must be aligned with Core Competencies in Massachusetts for mental health and early education and care professionals (i.e., mental health clinicians, behavioral specialists, or social workers). ECMH consultants provide services including enhancing program quality by working in partnership with programs, educators, families, and other community supports.

ECMH consultants must participate in professional development and technical assistance provided by EEC or other state partnering agencies. To qualify, an ECMH consultant must

1. be knowledgeable about EEC licensing regulations, early learning standards, Head Start Standards and IDEA requirements, and the resources and tools that EEC-funded programs use to promote healthy social and emotional development, inform curriculum and instruction, and measure children's developmental progress; and
2. must have clinical experiences with children younger than age 8.

Head Start Practice-Based Coaching (PBC)

Head Start has a long tradition of providing professional development to support teachers as they implement effective practices that lead to positive outcomes for children. The coaching model used by Head Start grantees and programs in Massachusetts is based on the coaching model of the National Center on Quality Teaching and Learning. Called Practice-Based Coaching, it is a cyclical model of coaching comprising three components: (1) shared goals and action planning, (2) focused observation, and (3) reflection and feedback (https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/docs/practice-based-coaching.pdf).

PBC occurs within the context of a collaborative partnership. This partnership formalizes the interactions between a coach and teacher, between a group facilitator and teachers, or among peers to provide a safe space for teachers to ask questions, discuss problems, get support, gather feedback, reflect on practice, and try new ideas. Each component in the PBC cycle is designed to inform the actions taken by a coach or educator during the subsequent component (or throughout the coaching process). The cyclical nature of PBC emphasizes that expectations and desired outcomes of coaching are regularly reviewed and updated.

The PBC model also supports a variety of coaching delivery formats. The coaches can be experts, peers, or the teachers themselves; and programs can deliver coaching on site or from a distance using technology, and in multiple formats. These formats can include videotaped activities and follow-up in-person discussions. PBC supports Teachers Learning & Collaborating (TLC), where coaching is delivered in collaboration with peers or other educators in one-on-one or group settings.

Preschool Expansion Grant (PEG) Coaching

In late 2014, the federal Preschool Development Grants Program awarded EEC a Preschool Expansion Grant (referred to as the Massachusetts PEG program) to expand high-quality early childhood education to 4-year-olds from low-income families.[23] The PEG model is defined by the provision of key elements perceived to be important drivers of quality as described below.

EEC is concentrating its PEG resources in five underserved high-need communities: Boston, Holyoke, Lawrence, Lowell, and Springfield. These communities provide full-day, full-year preschool for 4-year-olds through public-private partnerships between the local education agency (LEA) and local licensed early learning providers. In each community, the participating providers, including a Head Start agency and one or more community-based agencies, provide the services with support from the LEA.

Prominent in the PEG program is the provision of support for classroom teachers at levels that reflect a serious commitment to teacher professionalism and skill development. Coaching is one important means by which support is delivered to teachers to improve knowledge and practice. Although coaching was not required in year one, it was strongly encouraged and has been added as an expectation for all communities in the second year of implementation.

PEG communities were allowed to design their own coaching model in terms of content, dosage, and strategies. PEG coaches address a range of topics, including general content instruction, classroom organization, behavior management, use of curricula, general classroom environment, special education referrals, and supporting children's social-emotional development. The district-employed coaches meet with individual PEG teachers or teaching teams to offer instructional support and other classroom management support to improve instruction.

Coaches

All PEG coaches have expertise in early childhood education and development. They also report a variety of experience as coaches, ranging from none to more than 10 years. In three communities, PEG coaches were hired from an existing pool of district coaches or experienced district teachers.

[23] This information comes from the PEG Year 1 evaluation report, as well as Year 2 coach interviews and teacher surveys conducted by Abt Associates.

PEG coaches receive professional development related to coaching, instructional leadership, or teaching in prekindergarten classrooms. Coaches in three communities attend team meetings in which a supervisor provides professional development or other kinds of support directly related to their responsibilities. All coaches attend monthly meetings with district supervisors and monthly meetings with PEG leadership. PEG coaches stated that over the past year, they also received supervision where their work as a coach was directly observed by either a peer or a supervisor and they were provided direct feedback on their coaching activities.

PEG coaches reported using a variety of observation tools to track the progress of educators toward their goals and objectives. Some coaches used the CLASS observation tool to assess progress; others used observation forms that included educator or classroom goals. Several coaches videotaped their observations and then reviewed them with educators to provide feedback. When asked to rate the effectiveness of coaching in addressing specific needs of PEG teachers, coaches gave high ratings – either 4 or 5 out of a possible 5.

Pyramid Model Coaching

The Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children (http://challengingbehavior.fmhi.usf.edu/do/pyramid_model.htm) is a conceptual framework of evidence-based practices developed by two national, federally funded research and training centers: The Center on the Social and Emotional Foundations for Early Learning (CSEFEL; http://csefel.vanderbilt.edu/) and the Technical Assistance Center on Social Emotional Intervention (TACSEI; http://challengingbehavior.fmhi.usf.edu/). At its base, the Pyramid has systems and policies to train and support the early educator workforce in the use of evidence-based practices. Building on that base, the model next includes universal supports for all children's social and emotional health (relationships, environments); the next layer includes practices focused on prevention and remediation of social emotional problems (social skills). At the top of the Pyramid are intensive interventions.

In 2009, Massachusetts was selected by the CSEFEL to participate in professional development and training designed to build the skills of infant and early childhood educators in young children's (birth to age 5) social-emotional development.

Massachusetts established a CSEFEL Pyramid Model State Planning Team to "help develop, evaluate, and sustain a statewide, collaborative professional development infrastructure that utilizes CSEFEL's conceptual framework, joined with other related promotion, prevention, and intervention efforts."[24] Planning team members included representatives from the Massachusetts Departments of Early Education and Care, Elementary and Secondary Education, and Public Health; public school districts; Head Start; Catholic Charities; higher education institutions; and providers. As part of its efforts, the team has selected three demonstration sites in which it will work to build educators' capacity to adopt the Pyramid Model and increase the number of high-quality Pyramid Model trainers and coaches.

Family Child Care (FCC) Systems

FCCSs were created by EEC in the 1980s to give high-needs children the opportunity to attend FCC programs. Today, EEC provides direct subsidies to FCCSs and center-based providers in their network on a per child/per day basis. The FCCSs are required to provide a variety of services to families and children,

[24] Retrieved from CSEFEL web site. http://csefel.vanderbilt.edu/resources/states/ma_overview.doc.

such as family support services, referrals to community services, and substitute child care. The systems also support providers, offering eligibility and enrollment services, home visitor services, and TA. The required technical assistance is expected to address such areas as family conflict resolution and child behavior, and sessions occur on site at least once per month. There is evidence, however, that the FCCSs provide all required services with the exception of TA, which is undefined and left to their interpretation. Currently, no mechanism exists for FCCSs to report to EEC their provision of TA to family child care providers.

There is limited guidance in how systems should provide the required services, and there is wide variation in how systems are designed to meet these specifications. EEC can confirm, anecdotally and through its annual auditing, that FCCSs are performing all these services, at a basic level or higher, with the exception of technical assistance.

Common Structures and Features across State Grants and Initiatives with Coaching Components

This section describes Massachusetts's current grant programs and initiatives, using as a guide the elements of statewide coaching systems that Abt identified in our literature review and scan of coaching models in other states. Exhibit C-2 below shows those already in place, as well as the areas where gaps exist.

Exhibit C-2. Comparison of Massachusetts's Current Coaching Initiatives

	Coaching Supports		Systems Supports		Coaching Model Features			Total Features
Initiative	Coach Training	Coaching Advisory Body	Designed to Support QRIS	Data Collection and Use	Data Systems for Coaching	Coaching Cycle	Coach Caseload	
Educator and Provider Support (EPS) Grants	X (some regions)		X	X		X	6-8 at one time; 15-20 on average throughout the year	**7**
Early Childhood Mental Health (ECMH) Consultation Grants	X			X		X	2-3 at one time; 20 on average throughout the year	**7**
Head Start Practice-Based Coaching (PBC)	X			X	X	X	5-6 at one time; 16 in one year	**6**
Preschool Expansion Grant (PEG) Coaching	X			X		X	Varies; monthly to a few times/year	**7**
Pyramid Model Coaching	X			X		X		**5**
Total Initiatives	**5**	**0**	**1**	**5**	**1**	**5**	**4**	

Hiring Coaches and Consultants

For most current coaching initiatives in the state, there is grant- or initiative-specific guidance about the qualifications and experiences that coach applicants must have to be hired. For example, EPS coaches must have at least a bachelor's degree (many were reported to have a master's degree; many are current or former directors of child care centers). Head Start provides guidance about coaching credentials, which include a requirement for a bachelor's in early childhood education or related field. One Head Start grantee interviewed by Abt for this project developed its own job descriptions for the positions of Coach and Peer Mentor, requiring at minimum a bachelor's degree and experience working in the early childhood field. In the four PEG communities, coaches were hired by the school district. With one exception, PEG coaches are former early childhood teachers.

Staffing and Caseloads

It is common across grant initiatives for coaches to serve in part-time roles. For example, EPS lead coaches are full-time in some regions, though some spend a small amount of their work time coaching educators and programs directly, as well. EPS coaches are mainly part-time employees. Likewise, ECMH consultants are often part-time. Across PEG communities, coaches had other responsibilities in addition to coaching. For example, coaches in two communities were responsible for developing curriculum for the PEG and district preschool classrooms.

A coach's caseload can include assignments in more than one region. On average, a full-time coach has 15 to 20 cases per year, and a part-time coach has 5 to 7. Typically coaches manage three cases at a time, but that can vary depending on whether they are full- or part-time.

ECMH grantees interviewed for this project vary in the number of consultants they have and the balance of full-time and part-time consultant staff. Two grantee sites have programs on waiting lists; another site has adequate staffing and is able to respond to every referral immediately. A consultant's total caseload varies throughout the year, averaging 15 to 20 cases annually, with some consultants managing as many as 3 cases at a time.

One Head Start program using Practice-Based Coaching has a coach for 2.5 hours per week who serves 29 classrooms across 11 centers. In addition to the coach, in school year 2015-16, the program also provided training for eight staff to attend the PBC training and became peer mentors. The program also provided staff time for peer mentors to meet regularly. These mentors were reported to be a key component of the program's PBC model, but due to staffing shortages in 2016-17, they had to devote all of their time to teaching. As a result, peer mentoring is no longer occurring. The Head Start coaching caseload varies slightly, but a coach usually has a caseload of 5 to 6 classrooms at any time and usually continues with these classrooms over the course of a year. In a year, a PBC coach might handle approximately 16 cases.

Coaching Activities and Delivery

EPS coaches across the five regions serve both individual educators and groups of educators within programs. Coaching services across the five regions were reported to primarily focus on licensing and QRIS-related topics, with some regions also focusing on social/behavioral issues, health and safety, and program administration. Some coaches also provide support for the Massachusetts Infant Toddler and/or Preschool Guidelines. Educator Core Competencies were reported to be incorporated in coaching less

frequently, and Massachusetts Curriculum Frameworks were infrequently mentioned in relation to the coaching content provided.

EPS coaches provide feedback to educators and programs through email, observations, and reports on observations, in-person feedback, phone calls, and occasionally through video or live online meetings.

According to one EPS coach, "Coaches conduct initial meetings with programs or educators and may conduct a needs assessment or an initial intake, set up an MOU, and/or develop a coaching plan between the coach and the programs or educators with measureable goals on a set timeline." One coach described her process as the following:

> *My first visit, … I think of the plan: what is their main goal and what are the steps to that goal. Sometimes they have more than one goal, and then I try to home in on what is the priority. I use guided questions to find out really what they would like to work on. We agree together what each of us is going to do before the next coaching visit.*

ECMH grantees described various service delivery plans used by the consultants at their sites. The consultant model usually focuses on capacity building for the program or educator and begins with the signing of a MOU, service plan, or partnership agreement. EEC is developing templates for these documents, but they are not yet standardized across the regions. One respondent noted:

> *For us, we created a model that outlines exactly what happens from the time we get the referral to the time we close the case. We have an outline of what happens in each of these referrals and whether it is an individual or a classroom referral.*

After the initial referral, conducting assessments of the child and program may take up to a month, with the consultant usually developing a written report of the assessment findings and meeting in person with the program director and/or educator to discuss the findings and make recommendations.

The Head Start PBC model comprises a cyclical process for supporting teachers' use of effective teaching practices: (1) planning goals and action steps, (2) engaging in focused observation, and (3) reflecting on and sharing feedback about teaching practice. One Head Start program Abt interviewed uses SMART goals (*Specific, Measurable, Achievable, Relevant, Time bound*) to help educators set goals for what they will achieve through coaching that are realistic and measureable.

PEG coaches reported using some common strategies across the five regions. All coaches reported using a sequence of "observe, reflect, and discuss" with teachers. Lead teachers reported that the PEG coaching addressed a range of topics. The most common topic of coaching was content instruction generally. Some coaching focused on how to use specific curricula, the general classroom environment, and supporting children's social-emotional development. PEG coaches typically observed teachers in their classrooms and then met with them to discuss the observation. Teachers in two PEG communities completed a formal needs assessment at the beginning of the school year for coaches to review. In another community, the PEG coaches set a loose structure for the 2015-16 coaching sessions – a list of topics that all coaches were to cover with teachers over the course of the year.

In some regions, Family Child Care Systems staff members conduct home visits and monitor programs; connect providers to services aligned with child care resource and referral agency, EPS, and ECMH services; and communicate with providers. FCCS staff members also provide Child Development Associate support groups for programs.

Training and Supervision

Current coaching initiatives vary in the amount, frequency, and type of training and supervision provided for coaches. For EPS grantees, supervision of coaches is mainly informal, with many regions reporting casual conversations, phone calls, and emails. In general, very few opportunities for organized or formal feedback were reported. However, one region requires coaches to attend meetings with the grant coordinator in person every six weeks.

One lead coach reported*:*

> *I had wanted to do more formalized supervision, but I see [coaches] and talk to them very often. They are contracted, and we are sorting out if they should do [supervision] during contracted hours.*

For ECMH, feedback for consultants on their work comes from several sources. One site uses annual consultant performance evaluations that request feedback from programs receiving consultant services; another site uses parent and teacher satisfaction surveys to help inform and improve consultant services. ECMH consultants are encouraged to participate in a variety of trainings, some are required by EEC, such as first aid training. Several sites provide trauma training for all staff, along with regular updates for this training. Other trainings provided to consultants include Teaching Pyramid Observation Tool (TPOT)[25] trainings, Touchpoints training, technical assistance training, Pyramid Model training, and education advocacy. One site provides tuition reimbursement to consultants for attending trainings.

In the first year of implementing the Head Start PBC model, coaching was available to programs and educators for a nine-month period. Coaches are supervised every month at a meeting where the supervisor reviews caseloads. Discussion on caseloads and coaching availability includes reviewing potential new clients and program priorities and how to manage the coaching caseload in such a way to include time for new higher priority programs. The system also uses a coaching agreement signed by the coach, educator, and supervisor. At the end of each year, recipients of coaching provide feedback on the coaches and vice versa.

One Head Start interviewee reported incorporating some slight changes to the PBC model, developing a "triad model" as a way to include better communication among the supervisor, educator, and coach:

> *Once a month the three of them meet together and decide on goals. It's worked out really well. The supervisor is there … and supports goals and there's a lot of time directly related to performance. It makes things easier when they understand up front that they're all going to work together as a team, rather than pitting the coach against the supervisor and the teacher is left in the middle.*

PEG coaches received professional development related to coaching, instructional leadership, or teaching in prekindergarten classrooms during year one of the program. Coaches in three communities attended team meetings in which a supervisor provided professional development or other kinds of support directly related to the responsibilities of coaches. In two communities, coaches were provided with mentorship

[25] This workshop prepares participants to use the TPOT to gather information on preschool teacher implementation of the Pyramid Model practices.

opportunities in which the mentor observed the coach in action and debriefed with the coach about his/her work with the teacher.

FCCS staff receive some training and professional development, such as Individualized Professional Development Plan (IPDP) and Continuous Quality Improvement Plan (CQIP) training, and participated in Home Visitor Coaching cohorts and group coaching opportunities in their local community on topics related to QRIS. FCCSs also work collaboratively with EPS grantees to plan and execute QRIS professional development for affiliated educators once a year. Family child care TA is highly variable between systems, without much overlap. FCCSs may be aware of coaches and how to access them, through EEC, but unless there is a specific reason or challenge, systems do not typically access coaching for their educators.

Coaching Dosage

Across current coaching initiatives and across grantees within initiatives, the duration and frequency of coaching varies. For EPS grantees, the dosage of coaching across regions is individualized; coaches in each region adjust the coaching provided based on the topic of focus and the needs of the coaching recipients. Two regions begin their coaching with a formal application for coaching services that is web based and available on their organizational websites – this application highlights needs of the program and provides information coaches can use to determine how much and how often coaching is provided. According to one EPS coach,

> *I'm a big communicator, so I check in via email and phone calls to see how things are going. And then we'll continue with coaching visits. Rarely do I meet more than once a month. I've learned that if I go every two weeks, the person might feel like their hand is being held more, but their progress isn't really more. Once a month works for me, and their progress is good – but at least once a month, never less. We go along and check off their goals. Sometimes we take a left turn to something that wasn't originally a goal, but emerges as something they want to do or a concern or it was hidden and I didn't see it at first. When they meet the goal, then we're done. It usually is within a fiscal year that all of this happens.*

ECMH grantees also provide a range of individualized consultations to their programs, educators, and families. ECMH grantees have some form of an MOU, partnership agreement, and/or service delivery plan with programs, in order to better engage all involved and allow for the identification of individualized supports and goals. One ECMH grantee asked its consultants to submit a monthly consultation log, which includes the start and closeout dates of services, to get a better idea of the dosage of time and the services they provide. It is not a formal process but helps them get more in line with EEC practices.

The Head Start coach meets monthly with the educator and conducts coaching observations every other month. However, providing coaching services for two or three years is reported to be the most effective over time, according to the PBC reports.

In two of the four PEG communities where coaching was provided during year one, most lead teachers reported being observed and meeting with their coach monthly. In the other two communities, lead teachers reported being observed and meeting with their coach a few times per year. Typically, coaches

met with teachers one-on-one, but 23 percent of teachers reported that they sometimes met with the coach in a group.

Support for Coaching

Improved support for coaches was commonly suggested across coaching initiatives. For EPS coaches, support for coaches varies across the regions. Over the past year, regions provided their coaches with the opportunity to attend the *Coaching for Change* training on the *Guiding Change* competencies. In general, regions encouraged coaches to attend trainings, but often did not provide any funding for coach training. Coaches reported attending trainings on their own, such as trainings on licensing, CLASS, or QRIS.

EPS grantees required all coaches to take the *Coaching for Change* training. Coaches were provided regional trainings on various topics and encouraged to take webinars, particularly related to QRIS. One EPS grantee tracks the trainings that its coaches attend and requires coaches to update their training documentation every four months. The same region also conducts peer learning community meetings, where coaches meet as a group and discuss a topic of interest. These meetings are an opportunity to share best practices and lessons learned and to help problem solve individual coaching challenges.

All PEG coaches reported monthly meetings with district supervisors and monthly meetings with PEG leadership. Coaches differed in their reports of the relative amount of time spent in meetings, but stated that there was at least one meeting per week. These meetings included those with district supervisors and district curriculum and instruction teams. Importantly, in three communities, coaches met with other PEG or district coaches; these coaches reported during Abt's interviews that the meetings provided valuable support and content.

Assessment of Effects of Coaching

The effectiveness of coaching is assessed in a variety of ways across initiatives. Most initiatives monitor QRIS ratings and CLASS scores as ways to assess the impact of coaching. For ECMH grants, coaches also monitor the numbers of suspensions and expulsions in programs.

Depending on the EPS region, grant coordinators, lead coaches, and coaches review a program's goals, and most frequently use changes in QRIS scores or changes in CLASS observations to assess the effectiveness of the coaching. Some grantees use a program's successful accreditation as an indicator of coach effectiveness. One EPS grantee sends an annual survey to recipients of its coaching services to elicit feedback and then shares the survey findings with the coaches. Coaches refer to the coaching plan developed with the program or educator to monitor coaching progress, and check off and date when each goal in the program plan is accomplished. In other regions, coaches fill out a site visit form or coaching log after each coaching visit, which is reviewed by the lead coach at the regional level.

ECMH consultants use a variety of tools to assess pre- and post-consulting progress and the effectiveness of their consulting. These tools include the Parents and Pediatricians Optimizing Development (PPOD), Teaching Pyramid Observation Tool (TPOT), the Devereux Early Childhood Assessment (DECA), Contextual Probes of Articulation Competence (CPAC) form, and an assessment checklist, which often includes an in-depth interview with program educators. Consultants conduct initial assessments with a program director or educator and then conduct multiple follow-up assessments using these tools, reviewing assessment scores to determine progress over time.

One Head Start interviewee determines the effectiveness of the coaching by focusing on classroom improvements. This interviewee also includes annual in-depth peer feedback as part of the coach's performance evaluation and PBC evaluation. Annually, each educator also provides feedback on working with the coach, and the coach provides feedback on working with each educator.

PEG teacher progress resulting from coaching was formally tracked in one of the four communities that provided coaching during year one of the program. In this community, coaches kept logs that helped them identify what to follow up on in subsequent sessions and also allowed them to note any growth/progress they observed. An observation tool was used in one coaching session that focused specifically on how teachers were implementing the curriculum. Information gathered during this session was used to create action plans for individual teachers. In the other three communities, tracking was less systematic. Coaches followed up with teachers informally, but did not record whether progress was made on any goals or areas of improvement that were identified in previous coaching sessions.

As part of the PEG evaluation, PEG teachers were invited in focus groups to provide their perceptions of the utility of coaching. Teachers in one community reported that the coaching was highly beneficial. Teachers in two other communities reported that the coaching was useful, but not well aligned with what was happening in the classroom; these teachers wanted coaches to provide more actionable feedback targeted to specific teacher practices or child learning outcomes.

Challenges to Implementing Coaching

Interviewees across coaching programs cited various challenges to implementing coaching well. The most frequently mentioned challenges included the interrelated issues of limitations in time, funding, and staffing that mean coaches are not able to spend as much time coaching or provide as many follow-up visits as might be needed. Other common challenges included a lack of buy-in from program leadership, misperceptions about the role of coaching and coaches, and a lack of coherent support for coaches.

EPS grantees, coordinators, and coaches discussed a number of challenges and barriers to implementing coaching. Some noted that program directors and educators can resist participating in coaching services, particularly when they are required to participate in coaching due to licensing or performance issues. One coach reported:

> *How do I combat that [lack of motivation]? Just by trying to motivate them and remind them why they got into this field. That's a hard one. They are usually pretty receptive to moral support and to encouragement and to praise and appreciation. Just to say here's someone who cares about me and is going to come in and help to do this.*

For EPS coaches who cover multiple regions or extensive territory within a region, distance can be a challenge. EPS coaches mentioned time spent traveling as taking away from what limited time overall they have to provide coaching services. Coaches mentioned that some programs are experiencing severe staffing shortages, which makes it difficult for them to find the time to devote to coaching. Staffing issues were particularly referenced as a problem for family child care providers.

Though the EPS grantees from all regions come together quarterly to discuss the coaching services, each region has a different way of providing coaching services, which can make the coaching process more complicated for coaches who cross regions with their coaching. One coach reported:

> *[Regions] pay different rates, in some cases. Their forms are all really different. Each region offers trainings. … What no one realized is that the majority of coaches cross lines and coach in more than one region. So now we are all going to repetitive trainings. I would love for the professional development for coaches to be more individualized, because some of us are new and some are in a different place in our careers.*

ECMH grantees mentioned a diverse set of challenges. Some referenced the limited number of consultants and a lack of sufficient time to address the needs of the programs and educators. One respondent noted:

> *There are not enough hours in the programs to do what we need to do, that is the issue. Also we hear from programs when there is nobody here to answer the phone – and that is because we are out in the field.*

In addition, though programs are familiar with the term *coach,* many do not really understand what is meant by the term *consultant* as it is used in ECMH grants. One ECMH grantee reported that this lack of understanding can lead to teachers being less receptive of consultant services. Grantees and consultants also described making outreach and education efforts to centers and family child care sites to increase understanding there of the importance of social and emotional behaviors and learning. However, there continues to be a lack of referrals for these issues. ECMH consultants also described tension that can occur between families and educators, with each wanting to put responsibility on the other for children's behavioral issues, making working to change the behavior of each challenging for consultants.

Head Start providers reported as main challenges the lack of time to serve all coaching requests and limited funding to provide additional peer mentors and more coaching hours. In addition, one Head Start program noted that programs often initially viewed coaching in a negative way – as a penalty for or indicator of low performance. One Head Start program that used videotaping as a tool to provide and then discuss classroom observations also mentioned finding most educators reluctant to be videotaped.

PEG coaches reported several barriers to the delivery of coaching. Coaches and teachers in two communities had difficulty finding sufficient staff classroom coverage for necessary coaching activities and communications. Coaches and teachers reported that this barrier arose due to incomplete or shifting staffing in PEG classrooms. In addition, in two communities, some teachers' classrooms were geographically isolated, with individual classrooms scattered across a range of early childhood education settings. This barrier increased travel time for the coaches and prevented teachers from forming relationships with one another that could reinforce the support they were receiving from the coaches. In one community, there was not enough space available in the center for private follow-up meetings between the coach and teachers. In some cases, coaches had to wait one to two days after observations to have this type of meeting. Finally, coaches, teachers, and leadership in two communities reported that coaches were sometimes unfamiliar with regulations and context. That unfamiliarity decreased the utility of the strategies and support the coach was able to provide.

Recommendations from Coaches and Grantees

Coaches from various initiatives provided suggestions for improving current supports for coaching in Massachusetts.

- **Opportunities for support:** Coaches in all grant programs reported they would like to meet more with other coaches within their grant initiative – as well as with coaches from other grant initiatives – to share best practices and learn more about how they organize their work.
- **Clarity of roles**: Some coaches reported interest in outlining and clarifying the responsibilities of coaches and educators.
- **Data tools:** Some coaches mentioned the value of having access to a data system in which they could enter information regarding the programs and educators receiving coaching. This would allow coaches to share information across EPS, Head Start, ECMH, PEG, and FCCSs to learn who has visited which programs how frequently and with what impact.

Other Initiatives Related to Coaching

There are initiatives that are currently overseen and funded by EEC that it might consider when developing a new statewide model of coaching for early educators. Below we describe two of these current initiatives, licensing and QRIS:

Licensing

EEC is responsible for the licensing of early care and education programs, which include requirements for provider PD and licensor visits that could be leveraged when developing the new statewide coaching model.

Professional Development

PD requirements differ by type of program and include requirements for onboarding providers, as well as ongoing requirements. For individuals applying to be family child care providers, within one year before applying for licensing, they must attend a five-hour, in-person orientation delivered by an EEC-approved trainer and an online training, along with additional online trainings specific to their role or child care center size. Educators in small- and large-group and school-age child care programs must complete two online trainings within 60 days of hire, along with additional online training specific to their roles.

Once licensed, educators are required to maintain documentation of completion of PD activities and record them in the EEC Professional Qualifications Registry. EEC supports state-wide PD through its EPS grantees, and it accepts an array of PD activities that satisfy the number of PD hours required by EEC regulations. In particular,

- Family child care providers working more than 25 hours per year and less than 10 hours per week must complete 5 hours of PD activities per year.
- Family child care providers working more than 10 hours per week and educators in small-group and school-age child care must complete at least 10 hours of PD activities per year.
- Educators in large-group and school-age child care program who work less than 10 hours per week must complete at least 5 hours of PD activities per year; those working at least 10 but less than 20 hours must complete 12 hours; and those working 20 or more hours per week must complete at least 20 hours.

Across all program types, at least one-third of the PD must address diverse learners. Further, all PD activities are required to relate to EEC's eight Core Competencies, which span from "Understanding the Growth and Development of Children and Youth" and "Guiding and Interacting with Children and

Youth" to "Health, Safety, and Nutrition" and "Professionalism and Leadership." These Core Competencies align with indicators in the EEC's QRIS, as discussed in the following section.

ECE providers are also eligible to apply for the state's ECE Scholarship Program. The program was designed to give ECE providers access to higher education and support for attaining a degree, ultimately to increase the quality of ECE providers. Those awarded the scholarship receive funding for an associate's, bachelor's, or master's degree program in an ECE or related field and can take up to three courses per semester during the fall, spring, and summer. Recipients are expected to continue working as an ECE educator or provider in Massachusetts for six months for each semester of the scholarship (up to a two-year maximum for an associate's degree, and a four-year maximum for a bachelor's).

Licensor Visits

In 2016, EEC implemented a cloud-based licensing database called the Licensing Education Analytic Database (LEAD) to store data and facilitate mobile and more detailed recording of licensor visits. After submitting an application for licensing, providers are assigned a licensor tasked with visiting the home or program to ensure compliance with EEC regulations. As part of the new LEAD system, providers will also receive annual unannounced visits and other monitoring visits based on the providers' history of compliance. Highly compliant providers would receive fewer, more targeted visits in the future, allowing licensors more time to focus on improving non-compliant programs. Additional goals of these visits include more time for technical assistance and the documentation of health, safety, and quality best practices.

Quality Rating and Improvement System (QRIS)

In 2011, EEC launched the voluntary QRIS tool to assess, improve, and communicate quality levels of early care programs. In January 2016, EEC and Board of Early Education and Care (BEEC) reviewed a QRIS validation study conducted by the Wellesley Centers for Women and the UMass Donahue Institute, and BEEC established a QRIS Ad Hoc Committee to oversee and guide revisions to the QRIS. Researchers reviewed the validation study findings and developed recommendations for standards revisions. In January 2017, BEEC directed QRIS Program Quality Unit staff to begin revisions work. Through the first six months of 2017, EEC worked with stakeholders to develop recommendations for revisions to the standards that included condensing five quality standards into four: (1) Curriculum, Assessment, and Developmentally Appropriate Practice; (2) Learning Environment and Interactions; (3) Family and Community Engagement; and (4) Professional Culture, Professional Development, and Reflective Practice. In June 2017, BEEC voted to send the draft standards out for public comment for a period of 100 days. Programs are rated on a four-point scale, with 4 reflecting the highest quality level.

Programs at Levels 3 and 4 of the QRIS are assessed by Program Quality Specialists who are trained to promote a standardized rating system with high inter-rater reliability and consistent ratings. In addition to visiting programs to assess quality levels, Program Quality Specialists might work directly with providers to plan and implement positive instructional strategies and classroom practices and provide individualized technical assistance.

Conclusion

There are several coaching initiatives currently providing needed supports for early educators in Massachusetts. However, though multiple efforts focus on providing effective coaching, the current system in Massachusetts also faces some challenges:

- Gaps and redundancies between and among coaching initiatives.
- Diverse professional development and coaching needs of multiple stakeholders across the mixed delivery system.
- Disconnected or nascent structures that support and integrate the initiatives within the current system.

Taken together with the literature review and the scan of other state models, this inventory of Massachusetts grants and initiatives reveals some gaps in the current statewide structures to support a coherent coaching system and consistent guidance/expectations about the desired features of a coaching model.

Attachment: Inventory of Current TA, Mentoring, and Coaching Models in Massachusetts EPS Grant Coordinator Interview Protocol

COACHING/TA SERVICES

1. Who are the primary recipients of your coaching?

- *Center-based*
- *Family child care*
- *Public preschool*
- *Private preschool*
- *Out-of-school time/after school*

2. Do you have an overarching framework or coaching model that guides either the content or the delivery approach? If yes, how would you describe your model?

3. What content areas do your coaches cover?

- *Licensing regulations*
- *Program administration*
- *Social/behavioral*
- *Language/Literacy*
- *Math*
- *Mental health*
- *Health and safety*
- *Licensing mitigation issues*
- *QRIS specific (clarify what support they offer)*
- *Supporting English learners*
- *Supporting students with special needs*
- *Other – administrative/business support*

4. To what extent is your coaching/TA intentionally aligned with?

- *Guiding Change guidelines?*
- *Educator Core Competencies?*
- *QRIS standards?*
- *Massachusetts Infant-Toddler and/or Preschool Learning Guidelines?*
- *Massachusetts Curriculum Frameworks?*
- *Licensing Requirements?*

5. What is the process by which you determine a plan for coaching/TA for an individual program or staff?

6. On what schedule do EPS coaches provide/offer services to a program or to educators? Are there individualized plans for each program being served?

7. Do you prioritize the coaching provided to which programs across the mixed delivery system? If so, how? Do you know what proportion of each type of program you serve in your region?

8. How do coaches provide feedback to those they coach? How often do they provide feedback?

COACHES

9. Who are your coaches? How many do you have on staff and how many are part-time or full-time? Across all of your coaches, what is your coaching capacity in terms of total FTEs?

10. Do you have eligibility requirements for your coaches? What types of competencies and experiences do you look for when hiring coaches?

11. What is a typical coach's caseload over a year? At any given time?

12. As part of your grant, is training provided to coaches? If so, what form does the training take and when is it delivered? How much training is delivered to coaches per year?

13. As part of your grant, is ongoing support provided to coaches?

14. As part of your grant, do you incorporate the use of an observational and/or standardized measures of coaches to assess their skills/progress? If so, which one and how?

IMPACTS/SUCCESSES

15. How do you assess the intended results of your coaching for program quality/educator competence?

16. Do you use any standardized tools to measure results or changes as a result of coaching?

ALIGNMENT WITH STATEWIDE POLICIES AND INITIATIVES

17. Can you help us understand the extent to which your coaching and technical assistance is aligned/integrated with or is similar to coaching and TA from licensing or QRIS?

18. In what ways do you combine your EPS funding with other funding and/or initiatives to coordinate services?

19. How much of a challenge has it been to coordinate with other initiatives either through funding or programmatically?

FUNDING QUESTIONS

20. How do you prioritize your services when there are more programs (or educators) wanting support than you can serve?

21. What is the size/magnitude of the gap between the amount of coaching you have funding to provide and the need/ request for coaching from programs (or educators)?

CHALLENGES/PERCEPTION OF GAPS

22. What are key barriers or factors that challenge your EPS-funded coaching/TA from being implemented as it was intended? These include barriers on the grant side and barriers on the educator/program side?

23. Have you developed strategies for addressing any of these barriers?

WRAP-UP QUESTIONS

24. Before we get off the phone, is there anything else you'd like to share that we haven't talked about?

Would you be willing to share some documents with us? For example, forms you use (a) for coaches to track their activities with providers/educators (e.g., coaching logs), (b) to obtain participant feedback, (c) customized job descriptions for coaches?

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