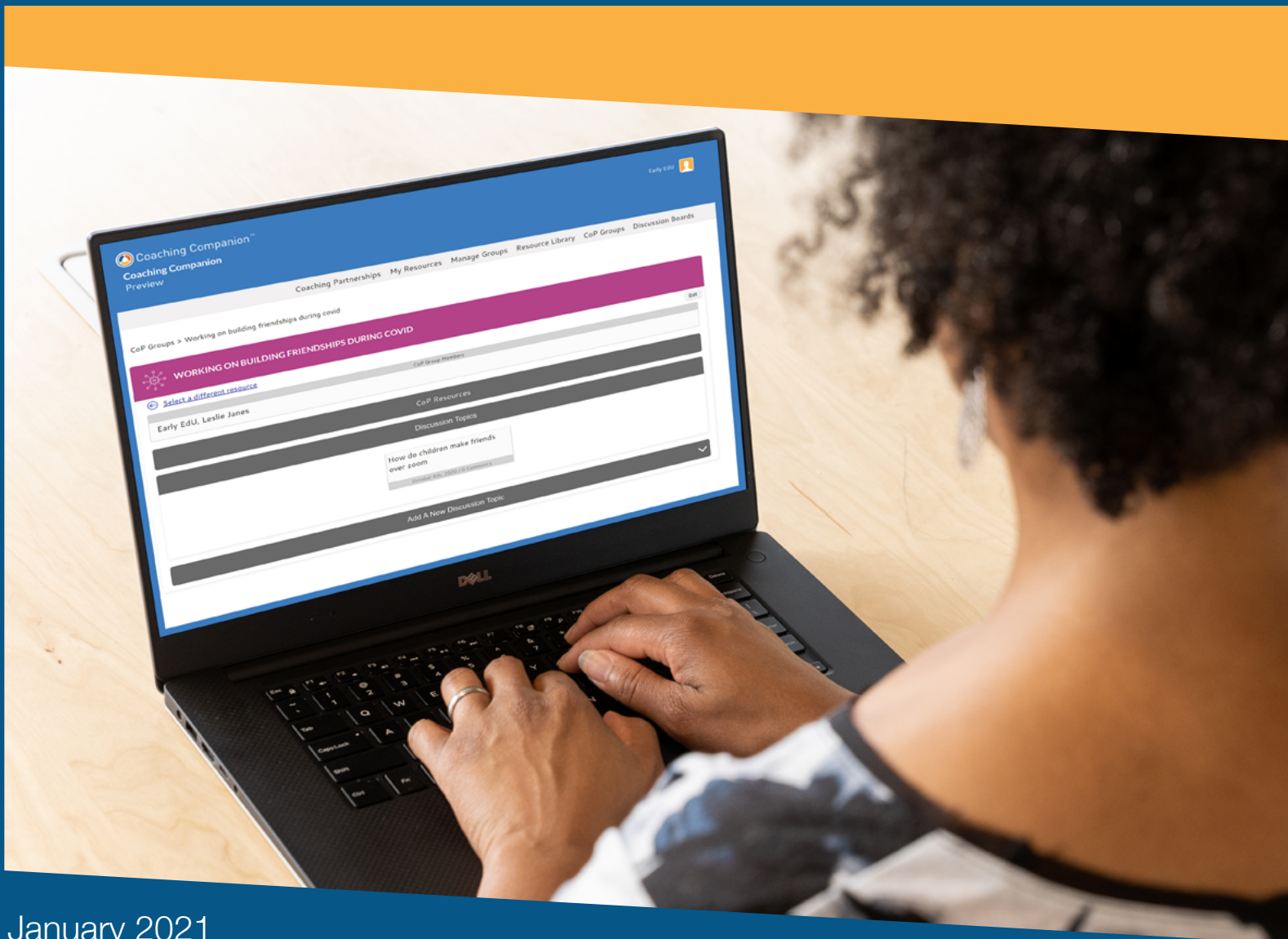


The EarlyEdU Alliance®

Equity-Driven Early Childhood
Teacher Preparation

Coaching Companion™:

The Promise of Video-Based Coaching in Transforming
the Early Childhood Workforce: A Multiple Case Study



January 2021



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Table of Contents

4	Introduction
4	Professional Development in Early Care and Education
6	Coaching in Early Care and Education
9	Use of Video in Professional Development and Coaching
13	The Coaching Companion
18	Exploring Coaching Companion's Use in the Field
24	Lessons Learned
28	Implications for Practice
29	References
32	Appendix

Introduction

High-quality early care and education (ECE) is a continuing national priority. High-quality ECE requires a knowledgeable and skilled workforce. Transforming the Workforce (Institute of Medicine & National Research Council), recommended that all professional development for the early childhood workforce explicitly link knowledge and practice, emphasizing the “importance of the work environment in supporting quality professional practice” (p. 346). Early childhood leaders, researchers, and policymakers have been looking for innovative professional development approaches that lead to mastery and use of effective teaching practices. Coaching has emerged as a promising approach, and video based coaching holds particular promise. The Coaching Companion™, a web-based video sharing and feedback platform, brings meaningful and accessible coaching to fruition. The platform includes several standard features to support coaching and professional development, and it can be customized to meet the needs of states or other entities.

To establish the context for the use of the Coaching Companion, we first provide information about professional development in ECE and describe what we know about coaching. Next, we explore what we know about the use of video and online tools to support coaching. These are followed by a report of a multiple case study and lessons learned from that study.

Professional Development in Early Care and Education

Professional development has experienced both accelerated expansion and increasing scrutiny as public programs for young children have increased in recent years. Professional development is defined as facilitated teaching and learning experiences designed to enhance practitioners’ knowledge, skills, and dispositions as well as their capacity to provide high-quality early learning experiences for young children (National Professional Development Center on Inclusion, 2008). Professional development takes many forms, including courses, workshops, written materials, podcasts and videos, and technical assistance such as mentoring, consultation, and coaching.

Several literature reviews and empirical studies have begun to identify the essential features of professional development associated with teacher behavior change and improved child outcomes. Sheridan and colleagues (2009) referred to these features as the active ingredients of professional development. Understanding how, with whom, and under what conditions these active

ingredients are implemented in order to make good decisions when selecting or designing professional development experiences is critical.

Efforts in professional development draw heavily from adult learning theory (e.g., Knowles, 1980, 1990; Bransford et al., 2000), and models of staff development for educators (e.g., Joyce & Showers, 2002). Foundational principles shared across adult learning theories capture adult learners' characteristics and the features to be infused in professional development. Emerson-Hoss and Packard (2020) highlight these seven features: acknowledge and build on prior learning, incorporate culturally responsive teaching, make teaching relevant, respect the need for self-directed learning, provide opportunities for reflection, give strengths-based feedback first, and the social context matters.

Showers et al. (1987) conducted a review of the staff development (K-12) literature and identified key components of effective approaches. This influential review is often the starting point for more recent examinations of the research literature. Joyce and Showers (2002) built on their review and developed a model that showed the accumulating effects of the key components of professional development. The model addressed the well-known finding that workshop-style professional development (presentation of theory and content) is often ineffective for changing or improving teacher practice. Instead, the presentation of theory and content needs to occur in tandem with other professional development activities such as demonstrating and modeling the practices. The addition of coaching and practice opportunities with feedback maximizes the likelihood of teachers using the practices within the classroom.

Despite these findings and model-building, much professional development continues to rely on conference attendance and workshops, including one-shot workshops. However, there has been an uptick in researchers developing and studying more systematic approaches that incorporate coaching and performance feedback and examine their effects on teacher behavior and student achievement.

Garet et al. (2001) studied the impact of various professional development strategies on k-12 math and science teachers' teaching behaviors (self-reported changes in knowledge and skill). They identified several features essential to impact: focus on content knowledge, opportunities for active learning, aim for coherence with other learning activities, provision of sustained and intensive support, and allow for collective participation. Yoon et al. (2007) reviewed the evidence on how teacher professional development affects student achievement, not just changes in teaching practice. Focusing on K-12 teachers, they found over 1,300 studies, but only nine met the rigorous What Works Clearinghouse standards. The studies offered high quality professional

development-intensive, sustained, content-focused, coherent, well-defined, and strongly implemented. High-quality professional development produced moderate and significant effects on student achievement.

A number of recent reviews have examined the empirical literature in early care and education to better understand the important features or components of professional development in the ECE context. For example, in a review commissioned for the US Department of Education on effective professional development in early childhood, Zaslow et al. (2010) identified features associated with stronger evidence of effectiveness. Snyder et al. (2011) took stock of the existing research literature on professional development in early intervention and early childhood special education. These reviews and others (e.g., Schlacter, 2015) provide consensus on the features associated with effective professional development efforts for the ECE workforce:

- Focus on practice(s) with clearly articulated objectives
- Opportunities to observe, experience, and receive feedback on the practice(s)
- Sufficient intensity and duration
- Ongoing support and feedback in the work setting
- Collaboration and interaction
- Consideration of organizational context including linkages with school's goals and curriculum

There is increasing momentum toward conducting experimental studies with sufficient description of the methods which enable us to unpack the effectiveness of the key features and the mechanisms by which changes in teacher and child outcomes are accomplished.

Coaching in Early Care and Education

Coaching has emerged as a promising professional development practice. It includes many of the key features or active ingredients identified in empirical studies and literature reviews. Coaching is active, job-embedded, and can provide the ongoing and individualized support needed for meaningful change. Further, implementation science (Fixsen et al., 2010) emphasizes the importance of ongoing or follow-up support and relationships among professional development approaches. Coaching is considered an implementation driver, and it is needed to achieve change in teachers' practices and improved child development and learning.

Coaching maximizes job-embedded learning. Definitions vary and range from a focus on instruction (e.g., Knight, 2007) to a focus on the coach-coachee relationship (e.g., Chu, 2014; Rush & Shelden, 2020). A frequently used definition of coaching in ECE comes from the National Association for the Education of Young Children (NAEYC) and the National Association of Child Care Resource and Referral Agency (NACCRRA) (2011): “a relationship-based process led by an expert with specialized early learning and adult learning knowledge and skills, who often serves in a different professional role than the recipient(s). Coaching is designed to build capacity for specific professional dispositions, skills, and behaviors and is focused on goal-setting and achievement for the individual or group” (p. 11).

Isner et al. (2011) conducted a review of 44 studies of coaching in early childhood programs. They found that most studies reported improvements in desired quality (often measured by the Classroom Assessment Scoring System® [CLASS®]), providing some evidence of positive effects from coaching. The review suggested that some features of coaching were more important than others, but the studies did not provide enough detail or variation to identify the specific features.

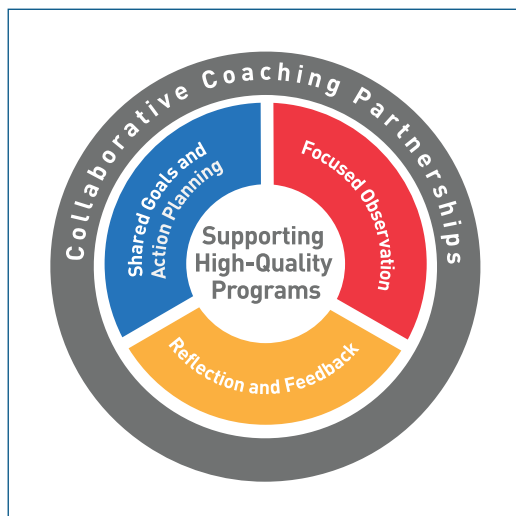
Aikens and Akers (2011) conducted an extensive review of the research literature on coaching as a professional development tool in ECE. They identified studies that reported on the links between coaching and outcomes. A variety of outcomes were reported and were generally positive. Outcomes included improvements in classroom instruction, curriculum implementation, teacher-child interactions, and classroom environmental indicators. The reviewers noted the emergence of several key features—providers (coachees) are highly engaged, feel respected, and understand and agree with coaching goals, and they have adequate practice and planning opportunities.

Snyder et al. (2012) conducted a systematic review of professional development literature in ECE. They identified and reviewed 256 empirical studies. They further examined a subset of 159 studies that included systematic follow-up. Heartened by the fact that the majority of studies of professional development reported some follow-up, they also reported variability in how carefully follow-up was described. The most common form of follow-up was coaching with performance feedback.

Artman-Meeker et al. (2015) noted consensus on five effective coaching strategies: a focus on partnerships (or collaboration), goal setting and action planning, action in the work setting (e.g., modeling, demonstration), observation, and reflection and feedback. Their literature review included 49 empirical studies of coaching in ECE. The authors were encouraged by the number of studies that met their fairly rigorous inclusion criteria. Over half of the studies included at least four of the five effective coaching strategies.

Practice-Based Coaching

Practice-Based Coaching (PBC) was developed for the early childhood context and is a prominent model in ECE. PBC is a cyclical approach for supporting effective teaching practices that lead to positive outcomes for children. PBC occurs within the context of a collaborative partnership between the coach and coachee. The coaching cycle involves planning goals and action steps, engaging in focused observation, and reflecting on and sharing feedback about teaching practices (NCQTL, n.d.). Note that the PBC approach incorporates effective coaching features that have emerged from the research literature in adult learning and coaching as a meaningful strategy in professional development.



The PBC cycle begins with a process of identifying and planning goals and action steps. Initial goal setting may involve teacher observation, needs assessment, and use of programmatic assessment results such as the CLASS (Pianta, La Paro et al., 2008), Early Childhood Environmental Rating Scale-3® (Harms et al., 2014), or Teaching Pyramid Observation Tool (TPOT) (Hemmeter, Fox & Snyder, 2014). Ongoing goal setting is based on focused observations, feedback, and reflection. Goals are individualized, observable and measurable, and accompanied by an action plan or roadmap.

Focused observation is guided by the goal and action plan. The coach observes and gathers information about the coachee's use of the targeted teaching practice(s) (i.e., the goal). Observations may be done live and in-person or video recorded. Following the observation, the coach and coachee individually reflect on the coachee's implementation. They meet (in-person or virtually) to discuss the observation. The coach provides feedback on the coachee's performance, and together they make plans for next steps. The coach and coachee reflect on what worked and also consider barriers to the use of the teaching practice. The coaching cycle continues with additional practice, observation, and feedback. When goals are achieved, new goals are written, and the cycle continues.

Research has demonstrated the effectiveness of the PBC approach on use of teaching practices in the social-emotional domain, positive behavior support, early literacy, and embedded instruction (see Snyder et al., 2015). Findings to date show that the PBC approach is associated with increased use of effective teaching practices by teachers and improved child outcomes. Variation on

delivery of coaching has also been studied—in-person, remote, web-mediated, individual and small group. A focus of these studies has been the effectiveness of PBC on coachees' implementation of effective teaching practices with fidelity.

Use of Video in Professional Development and Coaching

For many years, professional development providers and coaches have used video in various ways to help teachers improve their teaching practice. Video captures the richness and complexity of teaching and provides an authentic record that can be viewed repeatedly. The use of video can enhance professional development, and coaching in particular, by fostering observation skills, supporting self-reflection and analysis, and enhancing opportunities for feedback from experienced providers and coaches. Teacher engagement in their own professional growth may be optimized through opportunities to see teaching as it happens. Motivation may also be enhanced through collaboration with peers in communities of practice or video clubs.

There are various sources of video. Professional development providers or coaches may construct their own or locate video examples of targeted teaching practice(s). More often, in coaching, teachers video record their own teaching, or a peer or coach records the video. These video recordings provide opportunities for self-reflection and analysis, as well as focused performance feedback from the coach. In recent years, there has been an increased description of and research on the potential benefits of video analysis and feedback in teacher preparation and ongoing professional development.

Traditionally, the use of video was time-consuming and burdensome. Cameras were expensive, sometimes bulky, and had to be shared. Large cameras and videographers were distractions in the classroom. Video had to be delivered to the coach—in person or via the mail. Video editing tools were complicated or unavailable, and it could be challenging to organize and keep track of video clips and records of the feedback given.

As video technology has become more affordable and easier to use, its application in professional development and coaching has increased. Mobile devices (smartphones and tablets) are ubiquitous. Video sharing is part of everyday life. Video editing, annotation and feedback tools, and sharing and storage capabilities are increasingly available. Such tools enable individuals to

upload a video clip of themselves performing a teaching task. Then the video can be viewed by themselves, their coach, or peers. Viewers can comment (i.e., annotate) usually by text but potentially by audio or drawing directly on the video. The annotated video can be shared back-and-forth between teacher and coach, each providing feedback based on their observations.

Research on Use of Video

In the past decade, a number of systematic reviews of the use of video in professional development have appeared in the literature. Major and Watson (2018), in their scoping review of the use of video in professional development for teachers, found that published studies have increased dramatically and that video is effective when used as part of professional development for teachers. Gaudin and Chalias (2015) conducted a literature review of pre-service and in-service use of video viewing. They found that video viewing and analysis have been studied in diverse teacher development settings and contexts. Like others, their review found positive outcomes but lack of clarity around the specifics of teacher viewing and analyzing video. This lack of clarity makes it difficult to know the precise factors that can make use of video effective and enable practitioners to replicate and scale up the effective use of video viewing and analysis.

In their literature review, Baecher et al. (2018) sought to identify the specific facilitation structures and approaches used to support video analysis. They categorized the ways by which professional development providers or coaches can guide teachers' analysis of their teaching practice. The categories they elucidated are discourse analysis, group discussion, observation rubric, one-on-one reflective conversations, structured viewing guides, online video annotation, and reflective writing. The use of video improves teachers' ability to evaluate and make changes in their teaching (Tripp & Rich, 2012). With repeated opportunities and guidance, teachers also develop the ability to identify and distinguish examples of the targeted teaching practice(s) from non-examples and extraneous classroom events. Video analysis is emerging as a promising practice for engaging teachers in learning about and improving their teaching practice.

Performance Feedback

A complementary line of research in professional development and coaching focuses on performance feedback. Performance feedback is "the use of observation-based data to provide non evaluative information to teachers to increase their awareness of their teaching practice, reinforce desired teacher behaviors, and correct undesired behaviors" (Sweigart et al., 2016, p. 422). Performance feedback is an evidence-based intervention for improving

teachers' practice (Fallon et al., 2015). Traditionally, observations are done in-person. The professional development provider or coach observes in the classroom and then provides feedback shortly thereafter, usually in a face-to-face debriefing session. Observations can now easily be done via video. To be meaningful, the use of video requires that the teacher and coach specify the focus of the observation. An important component of any video based system is reflection and feedback. Teachers and their coaches engage in the debriefing session to analyze and reflect on what is seen and can be learned from the videos (Nagro et al., 2017). The coach provides performance feedback on the use of the targeted teaching practice(s).

Combining Video and Performance Feedback

Video-based coaching, combined with reflection, analysis, and performance feedback, shows great promise and it also increases options for distance coaching. Powell et al. (2010) studied the effects of intensive individualized coaching on early childhood teachers' use of early literacy practices. One group received in-person coaching. The other group received video-based coaching by which educators video recorded themselves teaching, then sent the video to their coach, who provided extensive feedback linked to their video observations. Coaching also included access to video exemplars. Results showed improved use of teaching practices and no differential effects between groups, leading the researchers to identify the use of video as a promising practice.

Pianta and colleagues have developed and studied a web-based system of professional development called My Teaching Partner. In their studies, teachers provide more frequent video examples of their teaching to their coaches, and coaches offer web-mediated consultation and feedback as well as access to additional video examples of the targeted teaching practices. Findings from several studies examining the use of video in conjunction with performance feedback as a professional development tool demonstrate positive changes in teachers' interactions with children (Pianta, Mashburn, et al., 2008).

Joseph and Brennan (2013) describe the use of video combined with communities of practice for pre-service ECE students. Students learned effective teacher child interaction practices, video-recorded their own interactions, selected prime examples, and shared them with their instructor and their community of practice (COP). They received performance feedback from both their instructor (i.e., coach) and their small peer group. The authors reported that students improved their use of targeted teaching practices and their ability to give effective feedback and judged the activity as positive.

More recently, McLeod et al. (2019) examined the effects of video and email feedback on teachers' use of effective teaching practices. Pre-service

teachers submitted videos of themselves teaching to their coaches. Coaches viewed the video and provided detailed performance feedback by email. The PBC approach was used. The authors reported positive effects of the video combined with email feedback.

These examples demonstrate that coaching that incorporates video-recorded observations with performance feedback can result in changes in teacher behavior and improved use of effective teaching practices. These studies also provided participants with access to coaching supports, including video exemplars of the targeted teaching practices. Specifically, the coaching approaches were systematic and involved planning, identifying goals and actions, observation, opportunities to practice, and helpful feedback and support.

Research on PBC and other coaching approaches and specific coaching features, such as the use of video for focused observations and performance feedback, informs the design and application of coaching within ECE programs. In the meantime, Head Start, states, cities, and regions are implementing coaching within comprehensive professional development and quality improvement systems.

Video Annotation and Feedback Tools

With the increased use of video-based coaching, administrators and coaches will be looking for tools that support the effective and efficient use of video. Video sharing is now widely available through various tools and platforms such as YouTube and Vimeo, and services and systems such as Google Drive and Dropbox. These tools present some challenges for teacher professional development through coaching. The most obvious challenge is privacy. Another set of challenges has to do with the usefulness of features of particular value for coaching and their specific relevance to early care and education. Video sharing and annotation and feedback tools offer numerous benefits, including portability, support for more in-depth video analysis, collaboration across defined groups of users, opportunities for users to view their progress, and options for distance or remote coaching (Joseph & Gasamis, 2018). Increasingly, tools and platforms have become commercially available.

The Coaching Companion

The Coaching Companion is a video sharing and coaching feedback web-based application. Developed at the College of Education, University of Washington, the secure platform allows for individualized and collaborative coaching to improve coaching and teaching practices, and in turn, child outcomes. Coaching Companion users film themselves interacting with children and then upload their videos to the Coaching Companion platform where they and their coach view the videos, reflect on the teaching practice(s), provide feedback, and share their comments and annotations. Peers can also participate by way of a COP.

The Coaching Companion is aligned with the PBC framework, which promotes a collaborative partnership as a condition for meaningful coaching. Shared goals and action plans related to specific teaching practices are established, followed by focused observations (live or via video). Feedback can be time stamped to the video. The Coaching Companion organizes and stores information to enhance accountability. Use of the Coaching Companion supports coaches and teachers in moving through the PBC framework's coaching cycle. The Coaching Companion allows access to a media library and digital resources, including additional video examples, interviews with experts, training modules, webinars, web series, links to websites, handouts, and tip sheets. The Coaching Companion provides the ability to link professional development tools, such as training modules and exemplar videos, to live practice, allowing coachees to plan for practice improvement before recording their video. In addition, the Coaching Companion can be customized to meet state system or organization professional development needs. Customizations can support alignment across an extensive coaching system, align to early learning guidelines or other professional standards, promote efficiencies and consistency among coaches, and incorporate required coaching documentation across the coaching cycle. The Coaching Companion complies with the Family Educational Rights and Privacy Act (FERPA); user organizations are responsible for other privacy requirements.

Coaches and coachees may also use the Coaching Companion to document competencies from an established list used by the coaching project or system. Coaches can determine levels of completion and systems can capture which competencies have been completed and those that are still in progress. A COP feature is built into the Coaching Companion. The COP feature allows groups of users, outside of individual coaching relationships, to interact and support community building and professional learning outside of demonstration of mastery of individual practices. COP enables groups of coachees to view one another's videos, lesson plans, or practice documentation, and practice giving feedback. Participants hone their observational skills and learn to give feedback on observable practices. In their study with pre-service students, Joseph and Brennan (2013) demonstrated the positive effects of this feature.

The Coaching Companion also includes video annotation and feedback tools designed to support coaching. The tools do not do the coaching; coaches do. Commenting on videos and time stamping the comments prompts coaches to identify the moments when practices are successful and missed opportunities. It allows for discussion between the coach and coachee with direct evidence to support the discussion. Video annotation through time-stamped comments also enables the coachees to observe their behaviors and practices and reflect on their strengths and challenges. Seeing oneself in-the-moment offers insight and opportunity for reflection. Coaches can support coachees to notice, describe, and then analyze. This reflective practice enables them to see successes and opportunities. The ability to make comments and discuss practice in real-time with a video completes the virtual coaching cycle with effectiveness equal to or higher than in-person coaching. Video annotation, a robust resource library of exemplars and training tools, and COPs create a comprehensive remote or hybrid professional development system built around coaching and job-embedded professional development. See Table 1 for a list of the basic Coaching Companion features.

Table 1: Custom Coaching Companion Basic Site Features

Features of Coaching Companion	Details
Login and General Site Overview	<ul style="list-style-type: none"> • Remote login for a single sign-on using the state system login and password • Create homepage links to provide easy access to other sites in your state or network • Able to create user profile fields that allow systems to report and pull data based on various profile information • Custom site can request a unique name for their site and add logos and color schemes • Platform and its functionality automatically scales to the device being used to access its content (e.g., content becomes touch screen enabled, shrinks pages to the size of the device for optimal viewing and functionality, allows for easy uploads from mobile devices [smartphones or tablets])
Coaching Relationships and Partnerships	<ul style="list-style-type: none"> • Allow for flexible partnerships: self-coaching through ample exemplars, resources, and video reflection; one-to-one coach:coachee relationship; and group coaching • Observer role is included to support supervision and consultation • The creator can easily edit partnerships • Creator can easily edit partnerships

Features of Coaching Companion	Details
Goal	<ul style="list-style-type: none"> • Goals can be initiated by either coach or coachee • Embedded drop-down menus of Goals and Action Plan steps support documentation of the coaching cycle • Goals can be created in any format or cadence a coach and coachee specify
Action Plan Steps	<ul style="list-style-type: none"> • Access to existing action plan templates • Action Plan steps can be: <ul style="list-style-type: none"> ◦ Built out one at a time or as a list ◦ Reorganized easily ◦ Designed to follow a format and cadence agreed to by the coach and coachee ◦ Created to include resources from the state, system, or Cultivate Learning media library • Resources, such as PDFs, photographs, videos, Word documents, Excel spreadsheets, and PowerPoint presentations, can be attached to each Action Plan step • Resources uploaded to My Resources can be linked to Action Plan steps • External websites can be linked to and embedded into Action Plan Steps • Video tagging (commenting feature) allows a user to comment on their observations or reflections directly within the video • Each comment is time-stamped and records the identity of the individual making a comment • Videos can be tagged as many times as a user require • Comments can be replied to, and replies are archived in a manner that visibly illustrates the entire conversation trail
Focused Observation	<ul style="list-style-type: none"> • Focused observations allow for the coach or coachee to specifically explain and document the focus of the observation • Focused observations can be dated and titled

Features of Coaching Companion	Details
Reflection and Feedback	<ul style="list-style-type: none"> • Observation notes can be listed as comments or as video tags • Video tagging (commenting feature) allows a user to comment on their observations or reflections directly within the video • Comments are time-stamped and the identity of the individual making a comment is recorded • Videos can be tagged as many times as a user deems necessary • Comments can be replied to, and replies are archived in a manner that visibly illustrates the entire conversation trail
Goal Completion and Reporting	<ul style="list-style-type: none"> • Goals can be completed and summarized • Action Plan Steps can be completed and summarized • Completed Goals and Action Plan steps are visibly marked in the system • Completed Goals and Action Plan steps are dated • Digest View feature describes a summary of each coaching cycle, including start and completion dates for all Goal and Action Plan steps, associated documentation (action plan resources and Focused Observations), and comments
Resources and Support Materials	<ul style="list-style-type: none"> • Easy upload to a user's personal library of resources (e.g., videos, pictures, PDFs, Word docs, PowerPoint presentations) • Easily organize and sort uploaded resources by assigning a tag that streamlines subsequent access to each resource • Shared Assets Page allows items to be easily viewed or accessed by others in a user's group outside of a coaching partnership or COP

Features of Coaching Companion	Details
Community of Practice and Discussion Groups	<ul style="list-style-type: none"> • Community of practice enable clusters of users to share resources and engage in discussions outside of a coaching cycle • Participants can upload resources and comment on discussion topics and resources • An external link can be used as a media item allowing for video or PDF uploads • Individual comments can be assigned to each uploaded resource in a COP Discussion Topic • Resources can be linked from My Resources to COPs • Discussion boards can be accessible to all users or allow for limited access depending on site role
Privacy	<ul style="list-style-type: none"> • Coaching Companion is Family Educational Rights and Privacy Act (FERPA) compliant

Design and Customization

Throughout the development process, the Coaching Companion designers listened to key stakeholders and users. After an initial set of ideas was conceptualized, a design charrette was held. Charette participants included program leaders, researchers, coaches, and teachers (Penuel & Gallagher, 2017). The prototype was developed, user feedback obtained, revisions made, and the tool was launched (Weidler-Lewis & Fullerton, 2015). Feedback was actively collected in the pilot phase, which guided subsequent design revisions and the inclusion of additional features. During this early phase, Head Start was our primary audience. As states and other organizations requested the tool, a custom version was designed that allowed for additional accountability features and greater customization to meet each state's unique coaching framework.

The Coaching Companion family of web applications runs on our in-house, nested component-based web application framework, which we use to create the Coaching Companion content management systems. The framework uses subsets of specific functionality, referred to as components, that can be arranged in hierarchical structures, referred to as recipes. Components can be quickly created to allow for an endless variety of media types, annotation types, and site content. Recipes provide site functionality as they describe the potentiality of what a user can do and see, and provide for the agility and customizability of the Coaching Companion.

The Coaching Companion has been used in several state and municipal systems. While the Coaching Companion is aligned with the PBC framework, the content of coaching is not limited to any particular curricular domain, and it may be used to coach on leadership practices as well as teaching practices.

Exploring Coaching Companion's Use in the Field

We investigated the tool's implementation, systematically exploring how it is used, factors associated with successful use and what factors interfere with successful use, and the nature of any customization strategies needed. Three questions guided our work:

- How is the Coaching Companion used in states and municipalities?
- What factors are associated with or interfere with successful use?
- What customization strategies are needed?

See Appendix for a description of the study methods.

Our review of seven entities that used the Coaching Companion for approximately one year included four state systems, one service region within a large state, one large city, and one research study involving two universities. We used archival records, including meeting notes and work orders, interviews (individual and focus groups), and surveys to develop a case study for each site or entity. This gave us a comprehensive snapshot of how each entity was using the Coaching Companion. We then analyzed the case studies to identify potential themes or variables that seemed to influence the successful implementation of the tool and factors that interfered with successful implementation. Finally, we identified the customization features used by each entity.

Coaching Companion Case Studies

Site 1

Site 1 is a region within a large state's Quality Rating and Improvement System (QRIS). The regional hub coordinates training and technical assistance for childcare and early learning systems within that region, including cities, towns, and more remote areas. Site 1's coaching program is the original pilot site for the Custom Coaching Companion. Site 1 had an established training and technical assistance system and experienced coaches who used a cyclical approach to coaching. They had experience with another web-based coaching platform. When that contract ended, they approached Coaching Companion

developers. They required a platform that was flexible, customizable, and cost-effective. Site 1's lead coach and program leader actively participated in creating customizations and assisted in training their coaches to use the Coaching Companion. In the second year of use, Site 1 expanded its coaching program by nearly doubling the number of coaches and local programs. Site 1 has a number of professional development supports for coaches, including extensive trainings, monthly meetings, and on-call availability for troubleshooting. The lead coach uses the Coaching Companion and provides supports to other coaches. She created pre-built coaching cycle resources to provide information, for all coaches, about using the Coaching Companion and its features.

Site 1 coaches repeatedly noted that having a lead coach as a support person was essential to their comfort and success in using the Custom Coaching Companion. In addition, holding group meetings with a support network of coaches allowed for the sharing of resources and problem-solving tips.

In the current year, to increase the number of coaching cycles completed by coaches, the site began offering monetary incentives of \$75 per coaching cycle for completion of goals (up to 10 goals). To access this incentive, a completed goal entailed the creation of the goal and the coach/coachee engaging in a minimum of five action plan steps, with the final step being skill demonstration through video. Coaches report that incentives increased the engagement of coachees in coaching cycles.

Many coaches expressed initial hesitation in using Coaching Companion, particularly as related to their comfort using technology and videos. Lead coaches proved instrumental in easing this hesitation. One coach stated, "I am shocked at how seamless and easy it has been and just became a part of coaching."

During a group interview with coaches from a large region, the time-saving benefits of using Coaching Companion were highlighted, as were increased "thoughtfulness" of their responses and quality coaching interactions. A second-year user of Coaching Companion reflected, "I can't hide behind my coaching anymore. The parallel process and reflection is [sic] much more present. I am much more intentional about what I say. The learning curve was huge and embracing it has made me a better coach because I am being thoughtful about what I have said. I get to have the time to reflect and be accurate and intentional about how I respond. I am using Spanish, as well, so it gives me the space to pause and be accurate."

Site 2

Site 2 is a statewide site and is the largest of the Coaching Companion sites in terms of the number of users. Launched in 2015 with the original version of the Coaching Companion, the tool was rebuilt and all data migrated over to a new customized platform in January 2019. Site 2 uses the Coaching Companion as part of the state's QRIS with its primary use as part of training tools and resources, including coaching supports related to improvement in quality indicators as measured by the Early Childhood Environment Rating Scale and the Infant Toddler Environment Rating Scale®. The Coaching Companion is available to all individuals who are a part of the state's registry system. Site 2 has also used the Coaching Companion in two projects to improve caregivers' use of science, technology, engineering, art, and math (STEAM) practices, and positive behavior support practices. Extensive training webinars, resources, and supports have been developed to support the use of the Coaching Companion. Conferences are held regularly at locations around the state and include sessions related to coaching and the Coaching Companion. The state also offers a coaching certificate based on the PBC framework. Supports for coaching are shared by different agencies across the state system.

Program administrators reported that the uses of Coaching Companion differ greatly throughout the state. It has been challenging to make use of all of the tools provided and they suggest that this may be related to inconsistent messaging across programs. In the current year, discussions have begun with the state's lead agency to support "re-energizing" use of the platform and aim for consistency across the state. Pilot programs and studies were paused due to the COVID-19 pandemic. However, conversations have continued.

Site 3

Site 3 is a geographically small state that uses the Coaching Companion as part of its QRIS. Site 3 requires 18 hours of annual professional development for early childhood educators. One option for these teachers is to engage in professional development workshops that include a short-term coaching component. The PBC framework is built into the professional development system and coaching is used to follow in-person professional development activities with competency-based, job-embedded assignments.

After participating in a professional development workshop, participants work with their instructor to set goals and video record their practice. During small group coaching sessions, the coaches and teachers work through the PBC cycle. Site 3 had piloted a few different coaching platforms and encountered challenges in locating a system that supported the diversity of education, access, and comfort with technology within the workforce. Initially, very few

videos were uploaded, which resulted in stopping the coaching process and limiting feedback opportunities. One program administrator explained, “We really believe in our coaching program and want it to be successful. We don’t want a struggle with technology to turn people off from the benefits. It relies on participants watching videos of their actual practice to receive strengths-based feedback. How could we provide a platform for participants to log in and share their videos easily?” This sentiment was the driving force in the adoption of the customized version of Coaching Companion. Webinars provided training to instructors and coaches during which teachers and other professional development participants were guided through the platform in person at the conclusion of the professional development workshops. Links were created to professional development sign-ups to minimize access challenges with email addresses. Incentives of \$25 were provided to teachers who uploaded videos for use within the professional development system. With the program interruptions caused by the COVID-19 pandemic, Site 3 has continued to use the customized Coaching Companion as a resource library with associated webinars and lectures to continue to engage early childhood professionals in expanding their knowledge and skills while unable to be present in the classroom.

Site 4

Two universities are collaborating to implement a study of the feasibility of virtual practice-based group coaching for Head Start teachers. Group meetings occur every three weeks, with a total of eight group meetings that focus on coaching around social skills in the classroom. In between these group meetings, coaches and teachers (coachees) have individual meetings. The Coaching Companion was selected as the platform for coaches and teachers to create individual and group goals, upload and share video, engage in the PBC cycle, and document progress.

Although training occurred, teachers experienced challenges in uploading videos and accessing resources embedded in links within comments. Coaches provided support and technical assistance on the use of the technology and the teaching practice.

Coaches use the platform as a central location for all progress monitoring and resources. They are then able to provide specific, time-stamped feedback to teachers embedded within their uploaded videos. The videos and feedback are then used during coaching debrief sessions. One coach noted that, “this resulted in very effective teacher reflection and continued action planning.” Keeping all documentation in a central location has simplified progress tracking and assisted in the accountability of participants accessing resources.

Site 5

Site 5 is a mid-size state that was offered access to a customized version of the Coaching Companion through their participation in a pre-K quality improvement project and tested the Coaching Companion's capacity and feasibility with several early learning initiatives in the 2019-2020 program year. One project focused on improving instruction. Participants attended a four-day institute followed by a year-long monthly COP to support teachers' capacity building as leaders in their program. The Coaching Companion was used to disseminate and generate discussion prior to the institute, collect feedback on homework assignments during the institute, and to engage in job-embedded learning activities throughout this program year. The Coaching Companion was also built into a study planned by university researchers to examine how specialists can better work with family childcare providers. In addition, Site 5 included the Coaching Companion as part of a leadership training program for early childhood program leaders. Three cohorts participated, learned about the Coaching Companion, and were trained in how the tool could be used to provide meaningful professional development and coaching for their teachers and other caregivers.

Prior to the introduction of the Coaching Companion, this site did not have a robust coaching system to support their numerous offerings related to professional development for their early learning workforce. There were examples of coaching excellence in some areas of the state but no statewide approach or message. Program administrators identified this issue as a limitation and reported that using the Coaching Companion while building a coaching system was a challenge to utilizing the tool's features.

Site 6

Site 6 is a mid-size state that was offered access to a customized version of the Coaching Companion through their participation in the same pre-K quality improvement project as Site 5. Site 6 launched an early childhood coaching pilot project in four counties across the state during the 2019-2020 school year. Coaches were hired to support the pre-K teachers in these counties. Simultaneously, COP groups of principals were established as part of the Pre-K improvement project. The goal of the COPs was to build connections and collaboration between administrators within the districts and share information with these administrators about the curriculum's use in the early childhood programs and to enhance curriculum implementation.

In addition, a city within this state asked to use the Coaching Companion with their Head Start and Early Head Start coaches. Their immediate purpose in using the Coaching Companion was to help identify the level of intensity of

coaching needed for new coaches and then support the coaching process. Expert coaches used the CLASS to determine the level of intensity. Individual coaching and supports for teachers varied from one time per week, twice per month, monthly, or even a six-week intensive program.

Program leaders in Site 6 identified a need for a platform to house professional development resources, disseminate resources, and initiate efficient coaching partnerships and group collaborations. Their version of the Coaching Companion was built to meet these needs.

Coaching Companion developers provided extensive training sessions with coaches as well as tip sheets for coaches and administrators. One program administrator commented that the Coaching Companion is a "...platform to set up collaboration opportunities for me [sic] and my coaches and for the coaches to set up collaboration with their teachers." Another program administrator speculated that coaching is related to reduced turnover of teachers. One of the challenges identified by coaches and administrators is access to and comfort with technology. This issue has been a barrier to merely providing coaching using Coaching Companion and a factor in teacher buy-in. Coaches mentioned, however, that once teachers were using Coaching Companion, there were benefits to simply commenting on observation videos, as well as the ability to share resources from the resource library. While coaches have not found that Coaching Companion has saved them time, they report value in having a central location for their communications, coaching interactions, and resources with their teachers.

Site 7

Site 7 is a large city that requested the use of the Coaching Companion to support their coaches working with family caregivers. In previous years, the local university was providing coaches and coaching to center-based teachers. When this arrangement ended, a pilot program began with the family childcare network and education specialists were hired as coaches. A customized Coaching Companion was developed that included a specific goal to increase the use of positive behavior support practices.

This site has struggled with implementing Coaching Companion. Program administrators and providers commented that the greatest challenges were getting buy-in from providers and supporting them in using the technology. Most providers had not used technology of this kind consistently and needed significant training to get "up to speed" with using the tool. Coaches found that "success was really based in the relationship that the coach had with the coachee." Most have had brief exchanges but have not yet achieved the ability to consistently connect with family childcare providers in coaching interactions.

Lessons Learned

Our first question was to better understand how the Coaching Companion was used in the field, across sites that differed in size, location, and organization. The Coaching Companion was identified as a tool that had the potential to support the coach and coachee activities, including use of video-based coaching and various documentation efforts. In some sites, the Coaching Companion was viewed as part of the overall professional development system. Several sites used the COP function, and examples of COPs were formed with coaches, teachers, and school principals/program administrators. The resource library was used as a key resource feature by several sites. As the pandemic put a pause on some coaching activities when programs were closed and all in-person coaching efforts were halted beginning in March 2020, sites made greater use of the resource library and added their own videos to those available from the Coaching Companion's media library to support the work they were engaging in with providers.

Next, we analyzed the cases to identify the factors associated with the successful use of the tool. Our analysis also identified factors that interfered or served as barriers to successful use. We identified four major themes associated with the implementation of the Coaching Companion.

1. A coaching system or framework is needed first.

The Coaching Companion can support use of this established system. The Coaching Companion is intended to help organize coaching systems and support the workforce in demonstrating effective practices. Sites that had a clear and established approach to coaching were able to take advantage of the Coaching Companion to enhance the work that the coaches were engaged in with providers across settings and geography.

2. Use of the Coaching Companion needs a “champion” who advocates for continued use of the tool.

Sites differed in how they were organized and who led the coaching effort. We found that sites that had individuals familiar with the Coaching Companion, knew how to use it, and were committed to its integration into their system were better positioned to implement the use of the tool. When an advocate was viewed as distant from the day-to-day coaching activity their support was less significant. When messages about the use of the Coaching Companion were inconsistent, momentum toward implementation was difficult to accomplish.

3. Use of the Coaching Companion requires practical supports.

These supports include time and opportunity to practice, and access and

familiarity with the technology, and stable access to the internet. Despite our daily use of technology, tools such as the Coaching Companion are not always an easy or comfortable fit for the early childhood workforce. Sites varied in how they made the Coaching Companion available and how much and what kinds of practice were offered. Finally, as a web-based tool, access to a stable and robust internet was required but not always available in some locations.

4. Uptake and continued use of the Coaching Companion require incentives to fully establish and promote efficiencies.

Sites varied in their use of incentives and the timing of those incentives. It is likely that the success of incentives is influenced by the context. In some sites where teachers and coachees had minimal resources, tablets were provided. In other sites, to increase the frequency of use of the Coaching Companion, monetary incentives or professional development credit were used to reinforce video uploads and completion of coaching cycles.

Our third question was to better understand the types of customization features and strategies that entities wanted or needed in order to use the Coaching Companion. The most common features that sites requested were around customizing notifications to match the site's needs, tracking or documentation, especially around the completion of coaching cycles, linking to resources with particular attention to linking external resources to a coachee's action plan or a community of practice, and drop-down menus for efficiency. See Table 2 for a list of custom features that have been requested and are in progress.

Table 2: Custom Coaching Companion New Site Features and Functions (as of May 2020)

Features of Coaching Companion	Details
Login and Site Membership	<ul style="list-style-type: none"> • Turn on and off notifications based on individual preferences • Add and link user groups at one time with the option of assigning specific hierarchical site roles • Administrator can create groups without being connected to them
Partnership	<ul style="list-style-type: none"> • Partnerships can be named, sorted, and archived.
Goal	<ul style="list-style-type: none"> • Prepopulated coaching cycles allow for an administrator to build out coaching cycles that all coaches can access and customize.

Features of Coaching Companion	Details
Action Plan Steps	<ul style="list-style-type: none"> • Play-by-Play (tagging and commenting feature) allows a user to create multiple tags and organize them by assigning specific names and colors to each. • Video can be paused as frequently as a user requires to make a comment, and the Play-by-Play feature allows comments to be labeled with pre-set practices or tags while still time stamping and labeling the commenter.
Reflection and Feedback	<ul style="list-style-type: none"> • Play-by-Play (tagging and commenting feature) allows a user to create multiple tags and organize them by assigning specific names and colors to each. • Video can be paused as frequently as a user requires to make a comment, and the Play-by-Play feature allows comments to be labeled with pre-set practices or tags while still time stamping and labeling the commenter. • Video Tracker chronicles individual viewers of a video, their pause points, whether they viewed the entire video, and if they returned to view it again.
Goal Completion and Reporting	<ul style="list-style-type: none"> • Goals and action plan steps can be completed, documented, and summarized in the coaching cycle. • Completed steps and goals indicate that a coachee has finished an action and is ready to move on to new step or goal. • Users (primarily coaches) can complete goals at varying levels. • Analytics reports chronicle users' access of specific Coaching Companion component sites and tools. • Program Reporting function generates reports that display selected standards areas and completion status of user activity.
Resources and Support Materials	<ul style="list-style-type: none"> • Training Modules can be embedded into the Coaching Companion. • Modules may include several activities (lecture, responding to exemplars, demonstration of practice).

Features of Coaching Companion	Details
Community of Practice and Discussion Groups	<ul style="list-style-type: none"> Community of Practice groups that include restricted resource sections.
Additional Features	<ul style="list-style-type: none"> Use video submission to certify skills on identified content and activities of the training to ensure fidelity of the content. Allows for configuration of site text in different languages. Tag-it function allows classes of users to review and tag video based on a standard set of practices and expectations and align their tags with a master set of tags for the video.

Discussion

The Coaching Companion is a web-based platform with a number of features such as embedded guidance through the PBC cycle; capacity for uploading, sharing, and providing feedback on video and other documentation; individualized resource libraries; creation of communities of practice; and various means for tracking progress, managing records, and reporting. The tool has gone through several design changes over the years based on user feedback and as a function of technology advances.

Research has established the importance of professional development to support the early care and education workforce. Effective professional development is focused, coherent, well-defined, appropriately intensive and sustained, and job-embedded. Coaching has emerged as an effective method for providing job-embedded, ongoing support that leads to change in adult behavior, leading to improved child outcomes. A key element of successful coaching is the provision of timely and useful feedback. Video enhances coaching by helping to focus on the goal, provide opportunities to reflect and analyze teaching, and to give and receive feedback that connects to actual practice. The Coaching Companion supports all of these components of effective coaching, plus it includes methods for organizing and managing coaching activities.

During the COVID-19 pandemic, we were able to continue data collection and use the opportunity to reflect on lessons learned by sites in their early stages of using the Coaching Companion. Further, we gained additional insights as we observed sites and programs as they used the Coaching Companion when programs were closed and as they planned for re-opening. We were repeatedly reminded that the tool does not do the coaching; it is intended to support coaching. Thus, a basic requirement is to have a coaching system or framework in place. We learned about the importance of a credible champion or advocate able to keep the Coaching Companion front and

center and help users problem-solve. We learned that the practical aspects of using a new innovation cannot be ignored. That means that when planning to use the Coaching Companion, concerns related to time, practice, and access to a device and the internet must be addressed. Finally, we all differ in our interest in or attraction to innovations. Consider incentives, whether they be financial, recognition, or social support, to encourage meaningful implementation of a tool such as the Coaching Companion.

We will apply these findings and lessons learned to future iterations of the Coaching Companion. We can leverage these findings to expand both the number of users and the contexts in which the tool is used. Further, the findings provide valuable guidance for the development of training materials and ongoing user supports.

Implications for Practice

Sites interested in the Coaching Companion should evaluate their readiness or preparation for using the tool. Our case study illustrated that sites with effective adoption of the Coaching Companion had coaching systems outlined prior to beginning use or had Coaching Companion and video coaching built into the foundation of the coaching system. In addition, clarity of purpose for use can support sites being prepared to use a tool such as the Coaching Companion. Particularly, is there a problem that a tool like Coaching Companion can help solve?

In building or examining their infrastructure, sites need to appreciate the value of having clear expectations and a champion to support the use of the Coaching Companion. This could be one or more individuals but requires strong knowledge of the coaching system and the processes of coaching within that system, and extensive experience with the Coaching Companion to act as frontline technical support for the team of coaches. This support of a champion gives strategies that ease the learning curve for coaches and offers guidance from someone familiar with the platform and the local coaching system. Finally, while the lessons learned from these case studies are important, extended periods of implementation will provide crucial information on the platform's impact on coaching systems and the path to refining the Coaching Companion.

References

- Aikens, N., & Akers, L. (2011, July 7). [Background review of existing literature on coaching](#) [Policy paper]. Mathematica Policy Research.
- Artman-Meeker, K., Fetting, A., Barton, E. E., Penney, A., & Zeng, S. (2015). [Applying an evidence-based framework to the early childhood coaching literature](#). *Topics in Early Childhood Special Education*, 35(3), 183-196.
- Baecher, L., Kung, S. C., Ward, S. L., & Kern, K. (2018). [Facilitating video analysis for teacher development: A systematic review of the research](#). *Journal of Technology and Teacher Education*, 26(2), 185-216.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). [How people learn](#) (Vol. 11). National Academy Press.
- Chu, M. (2013). [Developing mentoring and coaching relationships in early care and education: A reflective approach](#). Pearson Education.
- Collins, L. W., Cook, S. C., Sweigart, C. A., & Evanovich, L. L. (2018). [Using performance feedback to increase special education teachers' use of effective practices](#). *TEACHING Exceptional Children*, 51(2), 125-133.
- Emerson-Hoss, K. & Packard, M. (2020). *Facilitating competency-based educator development model* [Unpublished manuscript]. University of Washington.
- Fallon, L. M., Collier-Meek, M. A., Maggin, D. M., Sanetti, L. M., & Johnson, A. H. (2015). [Is performance feedback for educators an evidence-based practice? A systematic review and evaluation based on single-case research](#). *Exceptional Children*, 81(2), 227-246.
- Fixsen, D. L., Blase, K. A., Duda, M., Naoom, S. F., & Van Dyke, M. (2010). Sustainability of evidence-based programs in education. *Journal of Evidence-Based Practices for Schools*, 11(1), 30-46.
- Fox, L., Hemmeter, M. L., & Snyder, P. S. (2014). [Teaching pyramid observation tool for preschool classrooms \(TPOT\)](#). Paul H. Brookes Publishing.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). [What makes professional development effective? Results from a national sample of teachers](#). *American Educational Research Journal*, 38(4), 915-945.
- Gaudin, C., & Chaliès, S. (2015). [Video viewing in teacher education and professional development: A literature review](#). *Educational Research Review*, 16, 41-67.
- Harms, T., Clifford, R. M., & Cryer, D. (2014). *Early childhood environment rating scale (ECERS-3)* (3rd ed.). Teachers College Press.
- Hemmeter, M.L., Snyder, P. & Fox, L. (2018). [Using the Teaching Pyramid Observation Tool \(TPOT\) to support implementation of social-emotional teaching practices](#). *School Mental Health* 10, 202-213.
- Institute of Medicine, & National Research Council. (2015). [Transforming the workforce for children birth through age 8: A unifying foundation](#). The National Academies Press.
- Isner, T., Tout, K., Zaslow, M., Soli, M., Quinn, K., Rothenberg, L., & Burkhauser, M. (2011, February). [Coaching in early care and education programs and quality rating and improvement systems \(ORIS\): Identifying promising features](#). *Child Trends*.
- Joseph, G.E. & Gasamis, C.T. (2018). *Windows and mirrors: Video annotation tools to support performance feedback in ECE preparation programs* [Unpublished manuscript]. University of Washington.
- Joseph, G. E., & Brennan, C. (2013). [Framing quality: Annotated video-based portfolios of classroom practice by pre-service teachers](#). *Early Childhood Education Journal*, 41(6), 423-430.
- Joyce, B., and Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Association for Supervision and Curriculum Development.
- Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Corwin Press.

- Knowles, M. S. (1980). *The modern practice of adult education: From andragogy to pedagogy*. Cambridge Adult Education.
- Knowles, M.S. (1990). *The Adult Learner: A Neglected Species* (4th ed.). Gulf Publishing.
- Major, L. & Watson, S. (2018). [Using video to support in-service teacher professional development: the state of the field, limitations and possibilities](#). *Technology, Pedagogy and Education*, 27(1), 49-68.
- McLeod, R. H., Kim, S., & Resua, K. A. (2019). [The effects of coaching with video and email feedback on preservice teachers' use of recommended practices](#). *Topics in Early Childhood Special Education*, 38(4), 192-203.
- Nagro, S. A., DeBettencourt, L. U., Rosenberg, M. S., Carran, D. T., & Weiss, M. P. (2017). [The effects of guided video analysis on teacher candidates' reflective ability and instructional skills](#). *Teacher Education and Special Education*, 40(1), 7-25.
- National Association for the Education of Young Children & National Association of Child Care Resource & Referral Agencies. (2011). [Early childhood education professional development: Training and technical assistance glossary](#).
- National Professional Development Center on Inclusion. (2008). [What do we mean by professional development in the early childhood field?](#) The University of North Carolina, FPG Child Development Institute.
- Penuel, W. R., Gallagher, D. J. (2017). [Creating research-practice partnerships in education](#). Harvard Education Press.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System: Manual K-3*. Paul H Brookes Publishing.
- 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.
- Powell, D. R., Diamond, K. E., Burchinal, M. R., & Koehler, M. J. (2010). [Effects of an early literacy professional development intervention on Head Start teachers and children](#). *Journal of Educational Psychology*, 102(2), 299.
- Rush, D. D. & Shelden, M. L. (2020). *The early childhood coaching handbook* (2nd ed.). Paul H. Brookes Publishing.
- Schachter, R.E. (2015). An analytic study of the professional development research in early childhood education. *Early Education and Development*, 26(8), 1057-1085.
- Sheridan, S. M., Edwards, C. P., Marvin, C. A., & Knoche, L. L. (2009). [Professional development in early childhood programs: Process issues and research needs](#). *Early Education and Development*, 20(3), 377-401.
- Showers, B., Joyce, B., & Bennett, B. (1987). [Synthesis of research on staff development: A framework for future study and a state-of-the-art analysis](#). *Educational Leadership*, 45(3), 77-87.
- Snyder, P. A., Hemmeter, M. L., & Fox, L. (2015). [Supporting implementation of evidence-based practices through practice-based coaching](#). *Topics in Early Childhood Special*, 35(3), 133-143.
- Snyder, P., Hemmeter, M. L., & McLaughlin, T. (2011). Professional development in early childhood intervention: Emerging issues and promising approaches. In Groark, C. (Series Ed.) & Kaczmarek, L.A. (Vol. Ed.), *Early childhood intervention: Shaping the future for children with special needs and their families: Vol. 3. Emerging trends in research and practice* (pp. 169-204). Praeger.
- Snyder, P., Hemmeter, M. L., Meeker, K. A., Kinder, K., Pasia, C., & McLaughlin, T. (2012). [Characterizing key features of the early childhood professional development literature](#). *Infants & Young Children*, 25(3), 188-212.

- Sweigart, C. A, Collins, L. W, Evanovich, L. L, & Cook, S. C. (2016). [An evaluation of the evidence base for performance feedback to improve teacher praise using CEC's quality indicators.](#) *Education & Treatment of Children*, 39(4), 419-444. doi:10.1353/etc.2016.0019
- Tripp, T. R., & Rich, P. J. (2012). [The influence of video analysis on the process of teacher change.](#) *Teaching and Teacher Education*, 28(5), 728-739.
- Weidler-Lewis, J., & Fullerton, S. (2015, February). [The Coaching Companion: Computer-mediated instructional coaching.](#) In *Proceedings of the 18th ACM conference companion on computer supported cooperative work & social computing* (pp. 251-254). Association for Computing Machinery.
- Yin, R. K. (2002). *Case study research: Design and methods*.
- Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. L. (2007). [Reviewing the evidence on how teacher professional development affects student achievement.](#) *Issues & answers*. (Report No. 033). Regional Educational Laboratory Southwest (NJ1).
- Zaslow, M., Tout, K., Halle, T., Whittaker, J. V., & Lavelle, B. (2010). [Toward the identification of features of effective professional development for early childhood educators: Literature review.](#) Office of Planning, Evaluation and Policy Development, U.S. Department of Education.

Appendix

Methods

Research Approach and Design

A multiple-case study (Yin, 2018) method was used to document, describe, and analyze the progress of seven entities who used the custom Coaching Companion to support coaches and coachees in early childhood programs. A multiple-case-study methodology was appropriate for this study because it allowed for state, region, or other organizational structure as the unit of analysis. Archival records, including meeting notes and work orders, interviews (individual and focus groups) with key informants, and surveys were used to develop a case study for each site or entity, which ultimately revealed a comprehensive illustration of how each entity was using the Coaching Companion. Case studies were then analyzed to identify potential themes or variables that appeared to influence the successful implementation of the tool as well as factors that interfered with successful implementation. Finally, customization features used by each entity were identified.

To identify participants, project records were reviewed indicating that seven entities had used the Coaching Companion for approximately one year prior to the start date of the study. Cases included four state systems, one service region within a large state, one large city, and one research study involving two universities. Variation within each case was significant.

Data Collection and Analysis

Before data collection began, the research team met to discuss research questions, the proposed design, and case methodology. Brief descriptions of each site were written using archival records and knowledge of each site. Variables to be considered were identified and procedures were drafted accordingly. Site 1, a service region within a large state with a well-established coaching system and a commitment to the Coaching Companion, served as the study's first setting. The research team met every other week during the 7 months of data collection and analysis. The COVID-19 pandemic began shortly after data collection commenced. The sites responded differently, with some experiencing complete shutdown of programs and others moving to remote service delivery for some or all children. While coaching activities also changed, data collection continued with coaches and administrators.

Members of the research team met with the lead coach and administrator for Site 1. An open-ended conversation initiated to better understand the challenges the site was attempting to solve by using the Coaching Companion. Next, the research team generated a set of interview questions

and a short online survey for coaches. A member of the research team conducted a virtual group interview with the coaches. After the group interview, the coaches were asked to complete the online survey that included items related to their experience using the Coaching Companion, their usage and their caseload. Twenty-seven coaches completed the survey. Participants also had the opportunity to comment on the interview and survey questions.

The research team met to review the findings and comments from Site 1. An online survey was created for program administrators at the remaining sites. The survey assessed the challenges being addressed, how their efforts were progressing, and training and incentives for coaches. It included an opportunity for comments, as well. Program administrators were invited to participate in a telephone interview to provide a deeper explanation of their responses.

Based on the Site 1 findings and comments, the research team revised the online survey for coaches. The coach survey asked for descriptive information about their work as a coach, how they used the Coaching Companion, and the benefits and challenges of the Coaching Companion. Coaches were offered the opportunity to participate in a short semi-structured telephone interview.

After surveys and interviews were completed for the additional six sites, all survey responses were summarized by site. Interview transcripts and responses to open-ended questions were transcribed. The interview and survey data were placed into a spreadsheet for each site with responses organized by question. Responses to questions related to experiences, benefits, and challenges with the Coaching Companion were color-coded to reflect positive, neutral, or negative responses. These responses were then sorted into categories with emerging themes. The emerging themes were plugged into a strength-of-evidence table. The research team returned to the raw data and to the spreadsheets to identify data that confirmed these emerging themes and to identify data that did not support the themes. Themes were revised based on the consistency of findings across sites. Themes were also examined in relation to an eighth case that was near the end of a planning period for implementing the Coaching Companion.

More extensive case descriptions for each site were written based on the data collected. These descriptions outline the problem statements and the successes and challenges in using the Coaching Companion.

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