



Coaching Quality in Pre-kindergarten Classrooms: Perspectives from a Statewide Study

Ragan H. McLeod¹ · Jessica K. Hardy² · Jill F. Grifenhagen³

Published online: 20 April 2018

© Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

Forty-nine coaches, 947 teachers, and 189 administrators in a state-wide prekindergarten program responded to survey questions about coaching dosage and activities. The survey responses were aligned with the Coaching Quality Framework, an organization of characteristics of quality coaching proposed by the authors, and analyzed to identify similarities and differences in stakeholders' perspectives of coaching. The vast majority of coaches, teachers, and administrators surveyed agreed that coaching was an effective professional development strategy for supporting teachers' use of evidence-based practices. Coaches and teachers responded similarly to questions of dosage and many of the coaching quality indicators. Coaches and teachers disagreed on some aspects of the coaching activities, particularly planning for coaching, that may affect the perceptions and effectiveness of coaching. Qualitative analyses of coach and teacher responses reveal programmatic planning components that support or impede coaching. These results have implications for how coaches, teachers, and administrators prepare for large-scale coaching.

Keywords Coaching · Professional development · Pre-kindergarten

Introduction

There is an often-cited “research to practice” gap in education (e.g., Greenwood and Abbott 2001; Grifenhagen et al. 2016; Odom et al. 2005). This means that evidence-based practices are not always implemented in “real-life” educational settings. Central to addressing the “research to practice” gap is implementation, which has been defined as “a specified set of activities designed to put into practice an activity or program of known dimensions” (Fixsen et al. 2005, p. 5). To ensure positive outcomes for children, it is essential to have both evidence-based interventions, as well as effective implementation of those interventions (Fixsen et al. 2013).

Coaching is one method of increasing the implementation of evidence-based practices that has been supported by significant recent scholarship. Coaching is defined differently depending on the specific model or authors (Artman-Meeker et al. 2015); however, drawing from different definitions of coaching, there appears to be general agreement that coaching: (1) is a partnership; (2) is designed to help teachers sustain positive practices, improve their practices, and learn new practices; (3) includes the use of observation, reflection, conversation, and problem solving between the coach and coachee; and (4) is designed to build capacity in the coachee (Colorado Coaching Consortium 2009; Jablon et al. 2016; Kucharczyk et al. 2012; Rush and Shelden 2011; Snyder et al. 2012; Webster-Stratton et al. 2011). Some coaching definitions include additional components: (5) providing feedback to teachers based on their performance (Buysse et al. 2008; Costa and Garmston 1994; Neuman and Cunningham 2009; Rush and Shelden 2011; Shanklin 2006; Snyder et al. 2012); and (6) setting goals and planning how to meet the goals (Buysse et al. 2008; Costa and Garmston 1994; Glazer and Hannafin 2006; Neuman and Cunningham 2009). Based on these six components, we define coaching as a partnership between two or more people designed to help one or more members of the partnership implement

✉ Ragan H. McLeod
rhmcLeod@ua.edu

¹ Department of Special Education and Multiple Abilities,
University of Alabama, Tuscaloosa, AL 35487, USA

² Department of Special Education, University of Louisville,
Louisville, KY, USA

³ Department of Teacher Education and Learning Sciences,
North Carolina State University, Raleigh, NC, USA

and sustain the use of evidence-based, recommended practices through the use of goal setting and action planning, observation, conversation, reflection, problem-solving, and performance-based feedback.

Coaching has been used in research to successfully help early childhood teachers implement evidence-based practices. For example, coaching has been used to help teachers use strategies that support students' social-emotional development (e.g., Artman-Meeker and Hemmeter 2013; Fox et al. 2011; Hemmeter et al. 2015, 2016). Coaching also has been used to help teachers use language and/or literacy practices (Hindman and Wasik 2012; Neuman and Cunningham 2009; Neuman and Wright 2010; Powell et al. 2010; Wasik and Hindman 2011) and mathematical practices (Rudd et al. 2009). For a thorough review of the early childhood coaching literature, see the literature review by Artman-Meeker et al. (2015).

There is initial evidence of the effectiveness of coaching to support teachers in using recommended practices. Further, there is evidence of variability in the quality of coaching (Walpole et al. 2010) and fidelity to coaching models or interventions (Hemmeter et al. 2016; Neuman and Wright 2010; Powell et al. 2010). High levels of implementation of coaching models in research has been associated with changes in teacher practice and implementation of research-based practices (Clements and Sarama 2008; Duchaine et al. 2011; Kretlow and Bartholomew 2010; Matsumura et al. 2010; Neuman and Cunningham 2009; Payne and Eckert 2010; Wasik and Hindman 2011). However, additional

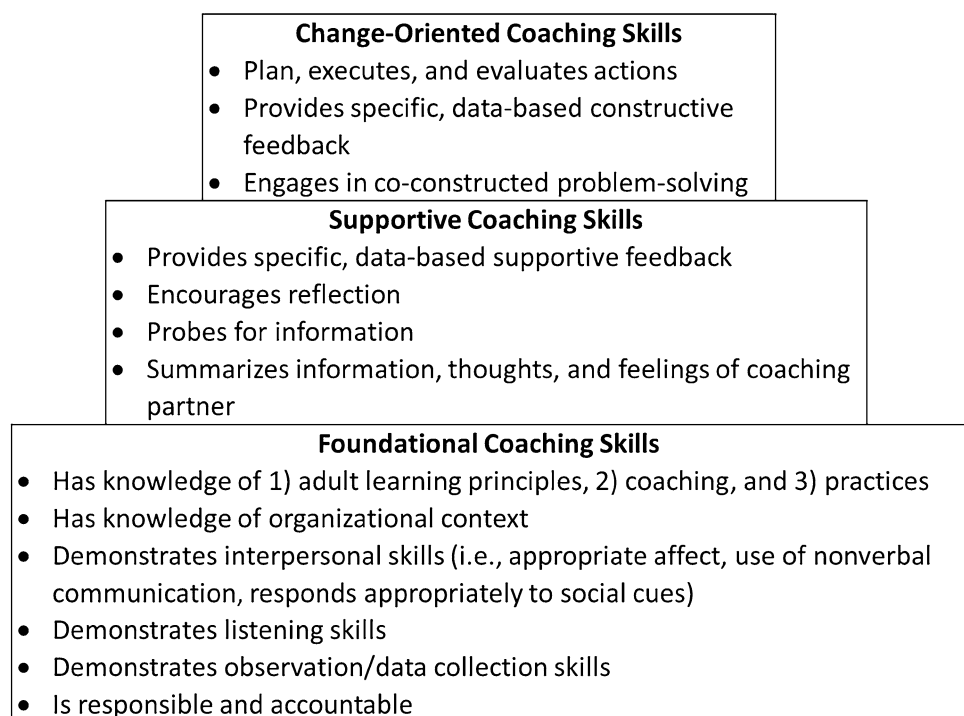
questions and areas for further research related to quality remain. First, how is quality defined in the field of coaching? Second, how can the field ensure that coaching is of high quality? To address these issues, it is necessary to articulate a framework for measuring coaching quality.

Framework for Conceptualizing Coaching Quality

Based on the literature on coaching coupled with our experiences coaching, training coaches, and assessing coaching fidelity, we developed the Coaching Quality Framework (see Fig. 1). The components of the framework are drawn from the literature on coaching and are organized into three tiers: (1) foundational coaching skills, (2) supportive coaching skills, and (3) change-oriented coaching skills. The tiers build on one another, in that the effectiveness of skills in the higher tiers depends on coaches successfully demonstrating the skills in the lower tiers.

Foundational coaching skills include: demonstrating listening skills, having knowledge of adult learning principles, and knowing the organizational context. These skills lay the groundwork for the supportive and change-oriented coaching skills. Supportive coaching skills include: providing specific, data-based, supportive feedback; encouraging the teacher to engage in reflection; probing for information; and summarizing what is shared by the teacher. The skills in this tier help the coach ensure that the teacher continues

Fig. 1 Coaching Quality Framework



using positive practices and reflects on his/her own practices. The third tier includes the following skills: plans, executes, and evaluates actions; provides constructive feedback; and engages in co-constructed problem-solving. These skills help the coach guide the teacher towards implementation of identified goals. All three tiers must be in place for the coach to successfully support the teacher in improving his/her practices and building capacity for reflection and problem-solving.

The Coaching Quality Framework may be effective in providing guidance about how to design and measure coaching quality, but the field also needs to address how to support the use of coaching in real-life, beyond research. It is necessary to understand how coaching is currently being implemented in early childhood settings, what dosage is provided, whether it is effective, and whether coaching is sustainable.

Purpose

In this paper, we describe a survey study that was done to provide information about how one state-funded preschool system implemented coaching in its state. Coaches, teachers, and administrators answered a series of questions about their background characteristics, the dosage of coaching provided, their experiences with coaching, and their perceptions of the effectiveness of coaching. The following research questions were addressed:

- 1) What dosage of coaching was provided to teachers?
- 2) What did stakeholders report about their experiences with coaching, as related to the tiers of the Coaching Quality Framework? How did reports differ across stakeholders?
- 3) What were stakeholders' perceptions of the effectiveness of coaching, as related to the tiers of the Coaching Quality Framework, and did perceptions differ across stakeholders?

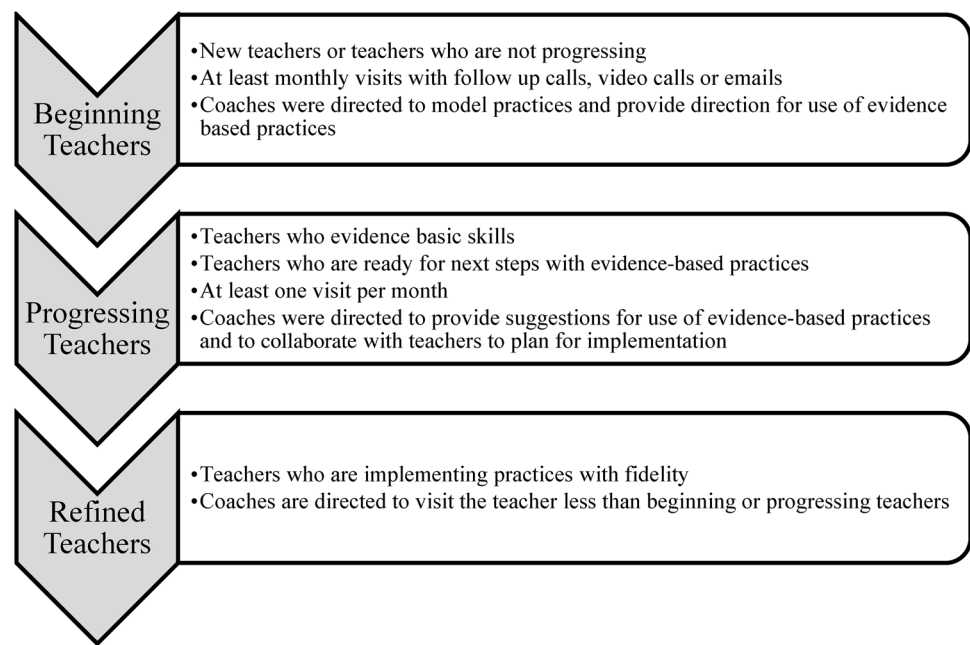
Methods

Setting

Surveys were distributed to all teachers, coaches, and directors employed by state-funded pre-kindergarten (pre-K) in a southeastern state. The state-funded voluntary pre-K system included 211 grantees, 661 classrooms, 1322 teachers (including assistant teachers) and 53 coaches. In the 2016–2017 year, the state pre-K system served 25% of eligible children in the state. Grants to fund pre-K classrooms can be obtained by any number of state organizations including public schools, Head Start, and private childcare centers.

A diversity of children and families enrolled is encouraged, and the amount families pay for their children to attend varies across programs or communities depending on the type of grant awarded. Some pre-K programs are fully funded, which serve low-income areas and populations, some programs provide scholarships or sliding scale pay options to parents, and some programs require parents to pay an amount similar to the cost of other local childcare options. The pre-K programs serve 4- and 5-year-olds only, and it is expected that parents participate for at least 12 h per year with the programs through activities such as home visits, orientation, volunteering, etc. Lead teachers in the classrooms are required to have a bachelor's degree in early childhood education or child development, and auxiliary teachers are required to have a Child Development Associate's degree. The ratio of children to teachers is 9:1 and classrooms are required to have 18 students total. Since 2005, the state program has consistently met all ten benchmarks of quality standards for pre-K programs determined by National Institute for Early Education Research (National Institute for Early Education Research 2015).

Each of the classrooms was assigned a coach. Coaches were expected to meet regularly with classroom staff to support the implementation of the classroom guidelines. Classroom guidelines were developed at the state program to align with the National Association for the Education of Young Children's (NAEYC) *Developmentally Appropriate Practices* (Copple and Bredekamp 2009). Coaches were expected to develop goals with classroom teachers to move towards implementation of classroom guidelines. Coaches were trained to implement coaching practices during a one-day workshop that included lecture, video examples, and discussion of the content. Through the workshop, coaches were trained to complete a needs assessment with teachers on current practice use and then to engage in joint planning of shared goals. Needs assessment data were gathered on teachers' practice use through program-developed observational measures and checklists, standardized measures, and teacher self-assessments. Coaches were trained to conduct observations and gather data about teachers' use of practices outlined in the co-developed action plans and to follow up observation with reflection and feedback based on the teachers' perceived use of practices and coaches' observations. Coaches were trained to focus on coachee strengths and to provide resources to build practice (e.g., modeling, video and written examples). A tiered model of support was developed for coaches to identify and support teachers at three different levels: beginning, progressing, and refined (see Fig. 2). Beginning teachers are new to teaching or have been teaching but are not showing adequate progress. Progressing teachers have basic understandings of the fundamentals of teaching in early childhood and are developing their teaching skills appropriately. Refined teachers

Fig. 2 Tiered model of support for teachers

are intentional implementers of the identified classroom guidelines. Coaches were expected to visit beginning and progressing teachers once per month and refined teachers less frequently.

Participants

Of the 1322 teachers who were sent the survey, 947 (72%) of teachers responded. Of these, 862 (65%) completed the full survey. The majority of teachers had been working with young children for 5 or more years at the time of the survey (70%). Sixty-three percent of the respondents indicated they had a certification in early childhood education, and 59% held at least a Bachelor's degree. See Table 1 for additional demographic information.

Of the 53 coaches who were sent the survey, 49 (92%) responded and completed the full survey. The majority of coaches (59%) had been coaching for 1–5 years at the time of the survey and had taught in early childhood settings for more than 10 years (84%). The majority of coaches had a graduate degree (88%) and certification in early childhood education (82%).

One hundred eighty-nine administrators of state pre-K programs also responded to a survey which included questions about coaching in their pre-K programs along with monitoring and program management questions. Of these 189 respondents, 185 (98%) completed the survey in full.

The open-ended questions had a lower response rate than the survey as a whole. Of teacher participants who completed the full survey, 90.1% responded with answers to open-response questions about their coaching experience. Of coach participants who completed the full survey, 95.9%

Table 1 Participant demographics

Characteristic	Teacher (<i>n</i> = 945)	Coach (<i>n</i> = 49)
Early childhood experience		
< 1 year	53 (5.6%)	0
1–5 years	279 (29.5%)	2 (4.1%)
5–10 years	236 (25.0%)	6 (12.2%)
> 10 years	377 (39.9%)	41 (83.7%)
Highest degree ^a		
CDA/Associate	152 (16.1%)	0
Bachelor	397 (42.0%)	3 (6.1%)
Graduate	158 (16.7%)	43 (87.8%)
Other	133 (14.1%)	0
None	105 (11.1%)	3 (6.1%)
Certification ^b		
EC Ed	597 (63.2%)	40 (81.6%)
EC Special Ed	20 (2.1%)	1 (2.0%)
Elementary Ed	301 (31.9%)	10 (20.4%)
Special Ed	30 (3.2%)	1 (2.0%)
Other	114 (12.1%)	8 (16.3%)
None	205 (21.7%)	6 (12.2%)
Coaching experience		
< 1 year		15 (30.6%)
1–5 years		29 (59.2%)
5–10 years		5 (10.2%)
> 10 years		0

^aHighest degree is highest degree in early childhood and/or special education

^bMultiple responses were possible for certification

responded with answers to open-response questions about their coaching experience.

Data Collection

Surveys were administered using Survey Methods software, and data were compiled in a Microsoft Excel spreadsheet. The surveys included 35 questions for teachers, 42 questions for coaches, and 45 questions for administrators. The expectation was that surveys would take 30–45 min to complete.

The surveys were developed to gather information about the survey respondents' experiences with and perceptions of coaching in their pre-K programs. Questions were based on fidelity data from previous coaching studies that used a similar coaching model that included collaborative planning, observation, and reflection and feedback (Hemmeter et al. 2016). Materials provided to coaches were also used to develop survey questions to mirror the language used during coach training. Questions were refined based on input from coaching experts and state professional development personnel.

Each survey included questions regarding dosage of coaching, activities in coaching, and perceptions of coaching effects, although the number of questions asked and the depth of information about these aspects of coaching varied by respondent type. See Appendix A for a list of survey questions.

Data Analysis

This study employed a mixed-methods design. Survey responses were analyzed with both quantitative and qualitative methods to examine deeply the respondents' perspectives on coaching quality. Mixed-methods research can be used to verify and validate findings, elaborate analysis to expand the interpretation of quantitative data, and examine quantitative data with respect to a particular theoretical framework (Collins et al. 2006; Johnson and Onwuegbuzie 2004). In this study, to fully address the research questions about participants' perspectives and analyze responses using the Coaching Quality Framework, a QUAN → qual mixed methods analysis was optimal.

Surveys were sent electronically to participants by the state preschool office. Responses were compiled by the state preschool office, de-identified, and sent to the authors. De-identified data analysis is not considered human participant research according to university policies and, therefore, no institutional review board approval was needed for this study. For the closed-response questions, descriptive analyses were conducted, including calculations of percentages and frequencies. Calculations were completed in Microsoft Excel.

Following the quantitative analysis, analysis of qualitative data from open-response helped us better understand our quantitative results and explore participants' perspectives on the components of the Coaching Quality Framework. The open-response questions were qualitatively coded by the third author and a trained graduate student. We used a two-phase coding process to develop a system of classification by comparing notes and discovering commonalities in the data (Goetz and LeCompte 1984).

The first phase was open coding of emerging concepts, generating codes from each participant's responses. Using the constant comparative method to analyze and reduce the data into categories (Glaser and Strauss 1967; Strauss and Corbin 1997), we sought to identify salient themes about the teacher-coach partnership from each perspective. In the open coding phase, the data were coded independently. Next, we discussed generated themes and came to consensus for inter-coder reliability.

The second phase of coding consisted of analysis of relevant responses through the lens of the Coaching Quality Framework. These responses identified as related to the framework in the first phase were then coded for connections to the tiers (foundational, supportive, and change-oriented) as well as specific skills. Through secondary coding, we integrated the initial codes with framework concepts to determine the features of the framework that were most salient to the teachers and coaches. In this phase, a subset of participants' responses were coded by both coders to ensure reliability, and discrepancies were resolved to consensus.

Results

The results of the survey are reported for each of the three research questions. Results for all research questions draw on quantitative analysis of the closed-response questions. Results for Research Question 3 also draw on qualitative analysis of the open-response questions. Results of questions regarding ongoing coaching activities are reported for both teachers and coaches, and differences in results based on respondent type are highlighted. Administrator responses are provided only for questions regarding the overall effectiveness of coaching, as these participants did not respond to questions about coaching activities.

Research Question 1: Dosage

Dosage data were gathered from the teacher and coach survey responses. The majority of teachers (88.3%) reported meeting in person monthly with their coaches. The majority of coaches also reported monthly face-to-face contact with both beginning/progressing teachers (79.2%) and refined teachers (90%). The remaining coaches reported

seeing beginning/progressing teachers more frequently (18.8% every other week, 2.1% weekly) and refined teachers less frequently (10% quarterly). Face-to-face was the most common primary form of contact reported by both teachers (50.1%) and coaches (93.9% for beginning/progressing; 75.6% for refined). Email contact was the most common primary method of contact reported by teachers (46.8%) and coaches (4.1% for beginning/progressing; 24.4% for refined). Observations were most commonly reported as occurring monthly by both teachers (80.4%) and coaches (81.3% for beginning/progressing; 85% for refined). Again, the remaining coaches reported observing beginning teachers more frequently (16.7% twice per month; 2.1% once per week) and refined teachers less frequently (15% once per quarter). The majority of coaches reported observing more than 1 h on average for both beginning/progressing teachers (100%) and for refined teachers (95%). The majority of teachers (63.9%) also indicated that, on average, observations were more than 1 h. The majority of coaches reported that on average, meetings lasted 30–60 min with beginning/progressing teachers (64.6%). Forty-five percent of coaches indicated that meetings with refined teachers lasted 30–60 min and 45% also reported average meeting length of less than 30 min with refined teachers. Of teachers, 51.7% reported meetings lasting 30–60 min, while 41.4% reported meetings lasted less than 30 min. See Table 2 for a summary of coaching dosage data.

Coaches and teachers reported the content of coaching. For this question, respondents could choose all content areas that had been a focus of the coaching. The categories were: language/literacy teaching practices, math teaching practices, social-emotional teaching practices, approaches to learning, classroom organization, working with diverse populations, challenging behavior, and other. Teachers indicated that the top four areas of focus for coaching were language/literacy teaching practices (43.6%), approaches to learning (53.1%), classroom organization (43.0%), and challenging behavior (49.8%). However, every possible focus of coaching was chosen by some percentage of teachers. For beginning or progressing teachers, more than half of coaches indicated that language/literacy practices (68.8%), math practices (54.2%), social-emotional teaching practices (79.2%), approaches to learning (70.8%), classroom organization (95.8%), and challenging behavior (85.4%) were areas of focus. For refined teachers, the top four areas of focus were language/literacy practices (41.7%), approaches to learning (62.5%), challenging behavior (58.3%), math teaching practices (33.3%) and social-emotional teaching practices (33.3%). Overall, coaches more often indicated that math, social-emotional, classroom organization, and challenging behavior were a focus of coaching than teachers.

Table 2 Coaching dosage reported by teacher participants

Dosage	n	Percentage
In-person meeting frequency		
Twice per week	9	1.0
Once per week	27	2.9
Once per month	821	88.3
Once a quarter	17	1.8
Once to twice a year	3	0.3
Other	51	5.5
Never	2	0.2
Email/phone contact frequency		
Less than once per week	9	1.0
Once per week	281	30.3
Twice per month	286	30.8
Once per month	145	15.6
Once a quarter	18	1.9
Once to twice a year	12	1.3
Other	61	6.6
Never	22	2.4
Coach observation frequency		
Once per week	28	3.0
Twice per month	80	8.6
Once per month	747	80.4
Once a quarter	30	3.2
Once to twice a year	7	0.8
Other	32	3.4
None	210	22.2
Length of observations		
Less than 60 min	594	63.9
30–60 min	286	30.8
Less than 30 min	49	5.3
Length of meetings		
Less than 60 min	64	6.9
30–60 min	480	52.7
Less than 30 min	385	41.4

Research Question 2: Coaching Framework Experiences

Foundational Coaching Skills

Coaches and teachers rated the coaching partnership for positivity and productiveness. Of coaches, 100% indicated that the partnership with coachees was positive and 98.0% indicated that the partnership was productive. Of teachers, 98.2% rated the partnership as positive and 97.9% rated the partnership as productive.

Both coaches and teachers reported coach demonstration of foundational skills. The majority of coaches rated themselves as demonstrating the following skills always or often: knowledge of adult learning principles (71.4%),

knowledge of coaching practices (85.7%), competency in early childhood teaching practices (100%), classroom experience (100%), listening skills (95.9%), observation and data collection skills (83.7%), interpersonal skills (91.8%), and accountability (98.0%). The majority of teachers also rated their coaches as demonstrating these skills always or often: knowledge of adult learning principles (79.1%), knowledge of coaching practices (86.8%), competency in early childhood teaching practices (91.9%), classroom experience (90.3%), listening skills (90.4%), observation and data collection skills (91.0%), interpersonal skills (88.0%), and accountability (90.1%). Only 2.0% of coaches rated themselves as rarely or never exhibiting knowledge of adult learning principles, interpersonal skills, or accountability, with all other items being rated as sometimes or higher. However, for each foundational coaching skill, small percentages of teachers indicated coaches exhibited the skills rarely or never: knowledge of adult learning principles (6.1%), knowledge of coaching practices (3.2%), competency in early childhood teaching practices (2.0%), classroom experience (2.6%), listening skills (2.0%), observation and data collection skills (2.4%), interpersonal skills (2.4%), and accountability (3.0%).

Supportive Coaching Skills

Coaches and teachers were asked to choose coaching supports that were provided during coaching. Coaches reported that they provided information about practices through readings or videos (93.9%), provided help in the classroom (89.9%), modeled teaching practices in the classroom (87.8%), and, to a lesser extent, role-played teaching practices with teachers (34.7%). A smaller percentage of teachers indicated that these coaching supports were provided: providing information about the practices (74.1%), providing help in the classroom (44.4%), modeling teaching practices (42.2%), and role-playing (22.6%). When asked how often the coaches support teachers to reflect on practices, the majority of both teachers (74.2%) and coaches (69.4% for beginning/progressing teachers; 65.9% for refined teachers) indicated this was done once per month. Of the remaining coaches, 26.5% indicated that they support beginning/progressing teachers to reflect on practice more often than once per month. Regarding refined teachers, 31.7% of the remaining coaches indicated they support the teachers to reflect less than once per month.

Coaches and teachers responded to questions regarding the frequency and types of feedback given. The majority of both teachers (73.2%) and coaches (75.5% for beginning/progressing teachers; 68.3% for refined teachers) indicated that feedback was given once per month. Coaches indicated that they gave feedback to beginning/progressing teachers more often than once a month (24.9%) and to refined

teachers less often than once a month (31.7%). When asked to identify the focus of feedback, supportive feedback was selected by the majority of both teachers (87.5%) and coaches (100%). Coaches (81.6%) indicated they provided feedback on effects of practice implementation on children more often than teachers (47.3%). The majority of coaches and teachers indicated that data sharing was included in feedback often or every time (55.1 and 63.7% respectively).

Change-Oriented Coaching Skills

Coaches and teachers were asked questions to gather information about the change-oriented elements of the framework including the use of constructive feedback, development of action plans, and support for solving classroom problems. To support the use of effective practices, 91.8% of coaches agreed that they provided constructive feedback and 77.3% of teachers indicating that they received constructive feedback.

Coaches and teachers were asked a series of questions about the development and use of action plans in coaching. Ninety-two percent of coaches indicated that action plans were developed with teachers. However, only 51.2% of teachers indicated that action plans were developed with coaches. For coaches that indicated that action plans were developed, 84.5% responded that beginning/progressing teachers provided at least a moderate amount of input, and 92.1% responded that refined teachers provided at least a moderate amount of input in the plan development. Teachers who identified that action plans were developed similarly reported that they had some input in the development of the action plan (83.9%) with 8.6% indicating they developed the action plan and 7.1% indicating they had very little or no input in the development of the action plan.

For those coaches and teachers who indicated action plans were developed, similar percentages indicated the following items were included in the action plan: a goal for using practices (79.6 and 88.7%, respectively), procedures for reaching the goal (65.4 and 55.4%, respectively), a timeline for reaching the goal (55.1 and 48.5%, respectively), and resources needed (75.5 and 61.8%, respectively).

Teachers and coaches also provided information about the support for problem-solving in the classroom. One hundred percent of coaches indicated that they supported teachers in solving classroom problems, whereas 91.5% of teachers indicated that their coach supported solving classroom problems. Coaches indicated that they provided suggestions (95.9%), had collaborative discussions (95.9%) and provided support materials (93.9%) to support problem-solving. Of those teachers who responded that coaches support problem-solving, providing suggestions was chosen by almost all respondents (98.7%) with collaborative discussions (75.9%)

and providing support materials (65.5%) also selected by a majority of respondents.

Research Question 3: Perceptions of Coaching Effectiveness

Overall, the majority of coaches (89.8%) and teachers (77.5%) indicated that coaching was very effective in supporting the use of evidence-based teaching practices, with no coaches and 5.5% of teachers indicating coaching was slightly or not at all effective. Additionally, 85% of administrators indicated that coaching was very effective in supporting teaching practices, with 13.9% indicating it was slightly or somewhat effective, and none indicating that it was not at all effective. Of the administrators, 96.3% agreed that teachers benefited from the coaching.

Perceptions of Framework Components

Overall, teachers' and coaches' perceptions of the tiers of the Coaching Quality Framework and their relation to coaching effectiveness were strikingly similar. Both sets of stakeholders shared views that represented foundational coaching skills as critical to coaching effectiveness, change-oriented coaching skills as important to coaching effectiveness, and little consideration of supportive coaching skills as a component of effective coaching.

Foundational Coaching Skills

Foundational coaching skills—the coach's knowledge of early childhood content, coaching skill, and adult learning principles—were central to the teachers' perceptions of coaching effectiveness. Teachers consistently reported foundational skills as being the most useful coach practices in the coaching process. First, teachers recognized coaches' knowledge of intended practices as important to their learning. They valued the coach providing knowledge, resources, and examples to facilitate implementation of desired practices including the Teaching Strategies GOLD framework (Lambert et al. 2010). For example, one teacher noted her coach was most influential on her practice in general when “giving examples and photographs of other teachers” and “drawing on [their] own experience in the classroom.” Another highlighted her coach's specific knowledge of a particular tool as useful:

The most influential strategy my coach provided me with this year was for GOLD. She showed me how to take good quality documentation and to use the GOLD / Dimensions to check to find out [in] which areas of GOLD I needed to observe students.

Second, teachers identified coaches' interpersonal skills, particularly communication skills, as useful in effective partnerships. One teacher reported about her coach, “having a coach that is available via phone call, email, or text whenever I need her has been a huge help! She always listens and provides resources.”

Foundational coaching skills were central to coaches' perception of their own effectiveness, similar to teachers' perceptions. The majority of coaches felt they were well-prepared (75.5%) to coach teachers to use effective practices. However, almost a quarter of coach respondents (24.5%) felt only somewhat prepared. Coaches said they could be more supported with more training in a variety of areas, such as technology, feedback strategies, and use of the CLASS (Pianta et al. 2008), as well as mentoring such as “side by side coaching with more experienced coaches.” Coaches consistently reported foundational skills as being necessary for their work. First, coaches identified their own knowledge as critical in their preparation to coach. Specifically, most coaches mentioned their own knowledge of research-based or developmentally appropriate practices (prior to the coaching role), experience in the organizational context (prior to or in a coaching role), as well as training in coaching strategies and tools as critical to coaching success (as part of the coaching role). As one coach reported:

I would say my 31 years experience teaching Kindergarten and Pre-K has been most effective in preparing me to coach teachers. I have experienced the same issues and have knowledge to help the teachers with effective ways to guide them and give support and suggestions to help them.

Second, many coaches noted the need for further support or training in coaching; desired teaching practices, particularly for addressing challenging behavior; and observational or data-collection tools in order to increase coaching effectiveness. Finally, coaches identified strong interpersonal skills as important for effective coaching, but they viewed these skills as inherent characteristics of the coach rather than a malleable skill.

Supportive Coaching Skills

Supportive coaching skills were not salient or integral elements of perceived effective coaching for either the teachers or the coaches. A few teachers identified supportive feedback as a helpful element of coaching, but only in the context of a set of other coach actions or skills. One teacher summed up that coaching was useful because “the support of having a coach to talk with, getting positive feedback/suggestions when needed to help my children and informing my parents to have a successful year.” Teachers also cited supportive coaching skills as necessary

for coaching to be more helpful, such as identifying the need for coaches to model best practices or observe and access resources for individual children with disabilities or challenging behavior.

A few coaches identified feedback in general or helping teachers reflect as one important component of coaching and an area for growth toward increased effectiveness. “I needed to do a better job of having each teacher work with me to...reflect on the growth shown each month,” shared one coach. Coaches frequently reported helping teachers feel supported as a critical part of their coaching role but defined this construct more in terms of interpersonal relationships than coaching skills or actions. As one coach put it, “I have learned to build up teachers and focus on their strengths.”

Change-Oriented Coaching Skills

Change-oriented coaching skills were secondary elements of effective coaching as perceived by both teachers and coaches. These skills were present in both samples’ discussion of key elements of effective coaching but mentioned less frequently and given less emphasis than foundational skills. Of the coaches and teachers that indicated an action plan was developed, the majority agreed that the action plans were useful or very useful (77.8, 85.9% respectively) in supporting the use of teaching practices.

Teachers frequently reported change-oriented skills as useful in the coaching process. Teachers often identified action planning and constructive feedback as helpful in implementing evidence-based practices. One teacher mentioned her coach “offers feedback after observations, which is extremely helpful. It helps me see what I need to work on...” while another noted, “the verbal, written, and action strategies have been most helpful for me.” Teachers often asked for more help from coaches with problem-solving, such as the teacher who identified “spending more time in the classroom observing my most challenging children and helping me develop a plan to support them” as a way her coach could better support her.

Coaches frequently referenced providing constructive feedback as an area for personal growth towards increased effectiveness in coaching. For example, one coach reported, “I often feel I do not give adequate feedback but I am working on this, I probably am too nice when I need to be able to give more constructive help.”

Like the teachers, coaches often identified action planning as an important component in their work to help teachers implement desired practices. Coaches reported they would be more effective if they worked with teachers to “set specific goals” and were “more intentional in developing an action plan.”

Other Practices Related to Effective Coaching Partnerships

From these data emerged several other themes about the coaches’ perceptions of effective coaching work and related challenges that impede coaching effectiveness. First, intensive support is necessary in coaching. Coaches viewed time as a critical component in their effectiveness, desiring more time with their teachers to support the implementation of desired practices. Time constraints, due to heavy caseloads, geographic distribution, or other structural factors, were salient limitations on coaching effectiveness. Second, coaches need support to be effective. Training and professional learning communities among coaches were seen as critical to their coaching success. Many coaches desired more training, mentoring, and collaboration with a team of coaches to continue to improve their practice, especially in addressing challenging behavior. This was particularly true of the many new coaches who identified a steep learning curve in this role. Finally, coaches demonstrate a resistance to rapid change. Many coaches were challenged by the implementation of a large number of desired practices and related tools across developmental domains: language, cognitive, social/emotional. They identified this breadth as an impediment to effective coaching. This was challenging for both veteran coaches, who had to shift practices, and new coaches, who had to learn a large number of practices and tools quickly in order to effectively coach their teachers.

Discussion

Coaches, teachers, and administrators, on the whole, agreed that coaching was a positive experience that benefits teachers. Agreement was apparent in the amount of coaching, and, for most questions about how, when, and for how long coaching was delivered, different stakeholders provided similar responses.

The qualitative analysis reiterates the perceived importance of a collaborative partnership as the foundation for high-quality coaching. The foundational coaching skills of the Coaching Quality Framework were cited by both teachers and coaches as fundamental to coaching effectiveness. Logically, a coaching relationship with shared trust and communication fosters comfort to try new practices, reflect on practice implementation, and to receive feedback. Additionally, perceiving the coach as knowledgeable in content and coaching skills promotes confidence in the coach further building the shared trust of the collaborative partnership. There has been little research on the impact of the collaborative partnership on the effectiveness of coaching (Artman-Meeker et al. 2015). Further systematic analysis of these foundational relationship-building skills are warranted.

The most striking difference between coach and teacher responses was in regards to the use of action plans to drive the coaching process. Ninety-one percent of coaches indicated that action plans were developed during coaching, whereas only 51% of teachers responded that action plans were developed. Development of action plans is included as a coaching skill in the change-oriented tier of the Coaching Quality Framework. The difference in coaches and teachers responses could indicate that (1) coaches develop action plans with only a subset of the teachers they support or (2) a misperception of the action planning process by either the coaches or teachers. In either case, almost half of teachers indicated that they did not develop systematic plans for reaching teaching practice goals. The disparity between stakeholders in the understanding of the development of action plans may link to other differences between responses, notably the focus of coaching and the supports provided during coaching.

Coaches and teachers had differing perceptions of the content of coaching. For example, coach respondents indicated that math practices were a focus of coaching; over half chose this as a focus for beginning or progressing teachers and a third for refined teachers. Approximately one-quarter of teachers indicated that math practices were an area of focus. Similarly, over three-fourths of coaches indicated that social-emotional practices were a coaching focus for beginning/progressing teachers and a third indicated this was a focus for refined teachers. However, only a third of teachers overall indicated that social-emotional practices were a focus during coaching. Without consistent plans and agreed upon steps to achieving goals, the focus of coaching may have been difficult for some teachers to identify.

Additionally, coaches and teachers indicated that different supports were given during coaching. For all types of supports, a higher percentage of coaches than teachers indicated that these supports were provided with the exception of the use of role play. Most strikingly, less than half of teachers indicated that modeling the teaching practices in context was used, while almost 90% of coaches indicated they used this support. Similarly, in the open-ended responses, few teachers or coaches highlighted supportive coaching skills as important components of coaching effectiveness. The disparity between coach and teacher reports of coaching strategy use indicates that teachers were getting variable supports. Perhaps coaches were not trained to use these skills, or coaches used the strategies variably with teachers depending on need or comfort in the coach/coachee partnership. Alternatively, teachers and coaches may take these skills as inherent to the coaching process or relationship and not discuss them when thinking about effectiveness.

Action plans with specified goals serve the purpose of making the coaching process transparent and to establish shared goals and actions for achieving those goals. Without

agreed upon action plans, the content of coaching may be unclear and the strategies and supports to implementing best practices may be inconsistently agreed upon by coaching partners.

As with teachers and children, the strengths and needs of coaches are varied. In the responses to open-ended questions, the coach participants reiterated the importance of ongoing training and support to their work. Ongoing support and identification of coach strengths and needs could support systematic and consistent use of coaching skills including action planning and communication with coachees. Currently, there is minimal research on effective supports for coaches in early childhood settings. In a recent review of coaching research studies, only half of the studies included a description of the training and supports provided to coaches (Artman-Meeker et al. 2015).

Barriers to coaching are a common concern for coaches, teachers, and administrators which is reiterated by the respondents to this survey. Program-level planning for coaching initiatives seems a particularly important element of developing quality coaching programs (Rush et al. 2003). The coaches in this sample express concerns for the program level supports for coaching, particularly time for coaching, which is tied to both large caseloads and large service areas.

Limitations

There are limitations of this study to be considered when reviewing the results. The sample was limited to the state preschool program of one southeastern state. This state preschool program is of high quality and coaching is an important component of the preschool program with all classrooms receiving coaching. This may not be consistent with voluntary preschool programs in other states.

A limitation in the analysis of the results is the inability to link teachers, coaches, and administrators. Surveys were de-identified prior to researcher analysis, so it is not possible to link the participants across surveys. The coach and administrator could not be identified for an individual teacher. Therefore, it is unclear if there is unknown bias in the participants that responded and specific responses cannot be linked for comparison (e.g., if a coach says they focused on language and literacy and teacher says they focused on math). Because the survey was anonymous and the analysis was post hoc, member checking for confirmation of the concepts and trends identified from the survey results was not possible. Future research of coaching quality through teacher-coach partnerships should include further data collection with a subset of teacher-coach dyads through observations, participant interviews, or artifacts to triangulate the results and allow for member checking.

As with any survey research, this study relies on self-reported data that may represent a social desirability bias

(King and Bruner 2000). This is a particular limitation in this study, as the data were initially collected by the agency administering the statewide program. Though the field acknowledges this bias as inherent to valuable survey research on teacher professional development (Desimone 2009), the resulting bias may have skewed the results more positively by all stakeholders. Presumably, this bias would have been evenly distributed across stakeholders.

Because the survey was voluntary and not all stakeholders in the population responded to the survey, there may be some limitations to the conclusions drawn from the survey responses. In particular, approximately 35% of teachers who received the survey did not complete any or all of the questions, and therefore these data may include some unobserved bias related to the types of teachers who respond to surveys about coaching. Approximately 10% of teachers and 5% of coaches who completed the survey did not complete the open-ended questions. The qualitative analysis may also include unobserved bias related to the teachers and coaches who responded to these questions.

Implications for Research and Practice

The results of this study provide descriptive data about stakeholder perceptions around coaching in one state. Further research must be conducted with a wider range of participants (i.e., other early childhood coaches and teachers in diverse programs and locations). In such future research, it would be ideal to collect data in a way that allows for the linking of coaches' and teachers' responses. Beyond additional descriptive research, other types of data collection and analyses should be conducted to provide information about whether coaching is effective in producing change in teachers' practices and whether there are associated gains in children's learning. As coaching gains prominence as a professional development strategy, this research is of paramount importance.

Also of note, almost 30% of coaches indicated that they did not often use adult learning principles in their coaching. Although expertise in early childhood teaching practices are necessary for supporting teachers to use these practices, knowledge of how best to engage and scaffold learning for the teachers is also necessary. This finding indicates that training for coaches needs to include explicit information about adult learning practices and continued support for coaches to implement these practices.

Due to the descriptive nature of the current study, implications for practice must be viewed cautiously. The differences in how coaches and teachers report the use of action planning is of note in the current study. Action planning is presumed to be critical to high-quality coaching, and therefore, coaches must be explicit about the practices they are

coaching on and develop co-constructed action plans with their coachees.

Additional research also must be conducted to provide evidence regarding the validity and utility of the Coaching Quality Framework. Specifically, research is needed to confirm that the constructs identified in the framework are essential to high-quality coaching. It also would be valuable to understand how the Coaching Quality Framework can be used to support high-quality coaching, both in research and practice.

Conclusion

Coaching early childhood practitioners to implement evidence-based practices is an important area of focus for current research. Identifying skills coaches need to support teachers is necessary for ensuring high-quality coaching, use of effective teaching practices, and, ultimately, improved child outcomes. The results of this study indicate that, within a statewide program with a systematic coaching initiative, there are consistencies across coaches and teachers perceptions of how much coaching is provided and how coaching is delivered. However, there are inconsistencies in the supports for behavior change (i.e., action planning and content focus). Further research needs to be conducted on how to train and support coaches to obtain and use high-quality coaching skills. Additionally, ways to ensure program level supports for coaching to be implemented and sustained with quality need to be further explored to provide the context for coaching to be implemented with quality.

References

- 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*, 183–196.
- Artman-Meeker, K. M., & Hemmeter, M. L. (2013). Effects of training and feedback on teachers' use of classroom preventative practices. *Topics in Early Childhood Special Education, 33*, 112–123.
- Buyse, V., Rous, B., & Winton, P. (2008). *What do we mean by professional development in the early childhood field?* Chapel Hill, NC: National Professional Development Center on Inclusion.
- Clements, D. H., & Sarama, J. (2008). Experimental evaluation of the effects of a research-based preschool mathematics curriculum. *American Educational Research Journal, 45*, 443–494.
- Collins, K. M., Onwuegbuzie, A. J., & Sutton, I. L. (2006). A model incorporating the rationale and purpose for conducting mixed methods research in special education and beyond. *Learning Disabilities: A Contemporary Journal, 4*(1), 67–100.
- Colorado Coaching Consortium. (2009). Coaching competencies for Colorado early childhood education. Retrieved from http://www.cocoaches.net/uploads/Coaching_competencies_Oct_2010.pdf.
- Copple, C., & Bredekamp, S. (2009). *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from*

- Birth through Age 8* (3rd ed.). Washington, DC: National Association for the Education of Young Children.
- Costa, A. L., & Garmston, R. J. (1994). *Cognitive coaching: A foundation for renaissance schools*. Norwood, MA: Christopher-Gordon Publishers.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199.
- Duchaine, E. L., Jolivet, K., & Fredrick, L. D. (2011). The effect of teacher coaching with performance feedback on behavior-specific praise in inclusion classrooms. *Education and Treatment of Children*, 34, 209–227.
- Fixsen, D., Blase, K., Metz, A., & Van Dyke, M. (2013). Stateside implementation of evidence-based programs. *Teaching Exceptional Children*, 79, 213–230.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).
- Fox, L., Hemmeter, M. L., Snyder, P., Binder, D. P., & Clarke, S. (2011). Coaching early childhood special educators to implement a comprehensive model for promoting young children's social competence. *Topics in Early Childhood Special Education*, 31, 178–192.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago, IL: Aldine.
- Glazer, E. M., & Hannafin, M. J. (2006). The collaborative apprenticeship model: Situated professional development within school settings. *Teaching and Teacher Education*, 22, 179–193.
- Goetz, J. P., & LeCompte, M. D. (1984). *Ethnography and qualitative design in educational research*. New York: Academic Press.
- Greenwood, C. R., & Abbott, M. (2001). The research to practice gap in special education. *Teacher Education and Special Education*, 24, 276–289.
- Grifenhagen, J. F., Barnes, E. M., Collins, M. F., & Dickinson, D. K. (2016). Talking the talk: Translating research to practice. *Early Child Development and Care*, 187, 509–526.
- Hemmeter, M. L., Hardy, J. K., Schnitz, A. G., Adams, J. M., & Kinder, K. A. (2015). Effects of training and coaching with performance feedback on teachers' use of Pyramid Model practices. *Topics in Early Childhood Special Education*, 35, 144–156.
- Hemmeter, M. L., Snyder, P. A., Fox, L., & Algina, J. (2016). Evaluating the implementation of the Pyramid Model for promoting social-emotional competence in early childhood classrooms. *Topics in Early Childhood Special Education*, 36, 133–146.
- Hindman, A. H., & Wasik, B. A. (2012). Unpacking an effective language and literacy coaching intervention in head start: Following teachers' learning over two years of training. *The Elementary School Journal*, 113, 131–154.
- Jablon, J., Dombro, A. L., & Johnsen, S. (2016). *Coaching with powerful interactions: A guide for partnering with early childhood teachers*. Washington, DC: NAEYC.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26.
- King, M. F., & Bruner, G. C. (2000). Social desirability bias: A neglected aspect of validity testing. *Psychology and Marketing*, 17(2), 79–103.
- Kretlow, A. G., & Bartholomew, C. C. (2010). Using coaching to improve the fidelity of evidence-based practices: A review of studies. *Teacher Education and Special Education*, 33, 279–299.
- Kucharczyk, S., Shaw, E., Smith Myles, B., Sullivan, L., Szidon, K., & Tuchman-Ginsberg, L. (2012). *Guidance and coaching on evidence-based practices for learners with autism spectrum disorders*. Chapel Hill, NC: The University of North Carolina, Frank Porter Graham Child Development Institute, National Professional Development Center on Autism Spectrum Disorders.
- Lambert, R. G., Kim, D. H., Taylor, H., & McGee, J. (2010). *Technical manual for the Teaching Strategies GOLD® assessment system*. Charlotte, NC: Center for Educational Measurement and Evaluation.
- Matsumura, L. C., Garnier, H. E., Correnti, R., Junker, B., & Bickel, D. D. (2010). Investigating the effectiveness of a comprehensive literacy coaching program in schools with high teacher mobility. *The Elementary School Journal*, 111, 35–62.
- National Institute for Early Education Research. (2015). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: Rutgers Graduate School of Education.
- 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, 532–566.
- 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, 63–86.
- Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. H., Thompson, B., & Harris, K. R. (2005). Research in special education: Scientific methods and evidence-based practices. *Teaching Exceptional Children*, 71, 137–148.
- Payne, A. A., & Eckert, R. (2010). The relative importance of provider, program, school, and community predictors of the implementation quality of school-based prevention programs. *Prevention Science*, 11, 126–141.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system™: Manual K-3*. Baltimore: Paul H Brookes Publishing.
- 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.
- 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.
- Rush, D. D., & Shelden, M. (2011). *The early childhood coaching handbook*. Baltimore, MD: Brookes.
- Rush, D. D., Shelden, M. L., & Hanft, B. E. (2003). Coaching families and colleagues: A process for collaboration in natural settings. *Infants & Young Children*, 16(1), 33–47.
- Shanklin, N. L. (2006). *What are the characteristics of effective literacy coaching?* Denver, CO: Literacy Coaching Clearinghouse.
- 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, 188–212.
- Strauss, A., & Corbin, J. M. (1997). *Grounded theory in practice*. Thousand Oaks, CA: Sage.
- Walpole, S., McKenna, M. C., Uribe-Zarain, X., & Lamitina, D. (2010). The relationship between coaching and instruction in the primary grades: Evidence from high-poverty schools. *The Elementary School Journal*, 111, 115–140.
- Wasik, B. A., & Hindman, A. H. (2011). Improving vocabulary and pre-literacy skills of at-risk preschoolers through teacher professional development. *Journal of Educational Psychology*, 103, 455–469.
- Webster-Stratton, C., Reinke, W. M., Herman, K. C., & Newcomer, L. L. (2011). The incredible years teacher classroom management training: The methods and principles that support fidelity of training delivery. *School Psychology Review*, 40, 509–529.