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What Happens During Language and Literacy Coaching? Coaches' Reports of Their Interactions With Educators

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Abstract

Research Findings: This study investigated coaches' interactions with educators in the context of a large-scale, state-implemented literacy professional development (PD). We examined log data and open-comment reports to understand what coaches found salient about their interactions with educators as well as how those reports aligned with the initial design of the PD. Coaches reported spending a large proportion of their interactions with educators completing administrative tasks. Our findings also indicate that coaches disproportionately targeted instructional content from the PD while also adding unrelated instructional content to their coaching. Although coaches reported focusing on relationship building, they reported using less efficacious coaching strategies (e.g., observation and discussion) more frequently than coaching strategies demonstrated to be more efficacious (e.g., modeling and co-teaching).

Practice or Policy: Our findings suggest an explanation for the mixed evidence around coaching, as coaches in the study seemed to move beyond the specifications of the PD in their coaching interactions. This work has implications for the design of PD for both improving coach training and allowing some flexibility to

meet educators' learning needs that may be secondary to the content of the PD. Findings also support the need for more nuanced mechanisms for investing in coaching and coaching outcomes.

In recent years, there has been an increase in the use of coaching as a professional development (PD) tool (Schachter, 2015; Walsh, 2014). This includes several federal and state efforts that use coaching to support professional learning experiences for educators teaching in both early childhood education programs and elementary schools (Deussen, Coskie, Robinson, & Autio, 2007; Ohio Department of Education, 2013; U.S. Department of Education, 2011). Despite the proliferation of coaching throughout education systems, there are still many questions about the value of coaching as a PD tool. In part this is related to the mixed findings about the efficacy of coaching for changing outcomes. Whereas some studies suggest that coaching-based PD can have positive effects on educator practice (e.g., Neuman & Cunningham, 2009; Sailors & Price, 2015) and learning outcomes for students (Bean, Draper, Hall, Vandermolten, & Zigmond, 2010; Biancarosa, Bryk, & Dexter, 2010; Vernon-Feagans et al., 2012), other studies have not found effects related to coaching (e.g., Gamse, Bloom, Kemple, & Jacob, 2008; Garet et al., 2008; B. Jackson et al., 2006). These mixed findings suggest that not all coaching is alike or has the same impact. Moreover, little is known about what actually happens during the coaching process (Gupta & Daniels, 2012; Wasik & Hindman, 2011), and this is particularly true of large-scale language- and literacy-focused PD initiatives (Walsh, 2014) that have been increasing in popularity because of policy initiatives. More information about the coaching process within large-scale PD is needed in order to understand these mixed findings and the process of coaching. This study responds to a gap in the literature by examining coaches' reports of their coaching interactions with educators within the context of a large-scale, state-sponsored language- and literacy-focused PD.

Why coaching strategies matter

In general, coaching is a unique form of PD that is relationship based, in which coaches work one on one or in small groups with educators to improve knowledge, skills, and dispositions (Aikens & Akers, 2011; National Association for the Education of Young Children, 2011). Coaching can take place in educators' immediate context and typically tends to be ongoing rather than a single, onetime training (Joyce & Showers, 1980; Neuman & Kamil, 2010; Rush & Shelden, 2005). Both the PD and adult learning theory literatures provide a rationale for the use of coaching as a means of improving practice. Within the PD literature there is a general consensus

that PD should be intensive, ongoing, individualized, and practice based (Borko, 2004; Buysse, Winton, & Rous, 2009; Desimone, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; National Association for the Education of Young Children, 2009; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Coaching, when used in one-on-one contexts, can achieve many of these criteria. Similarly, adult learning theory posits that there are factors that may promote more successful ways for adults to learn (Knowles, 1970; Mezirow, 1997). Across the adult learning theory literature, these common factors include relationship building, use of learners' experiences, undergoing an event that triggers the need to learn, and reflection (Knowles, 1970; Mezirow, 1997). Coaches can develop relationships with educators that facilitate the learning process, helping educators build from their experiences as well as improve and reflect on practice.

These two literature bases not only provide theoretical foundations that coaching should be an efficacious way to promote changes in teaching practice but may also provide insight into the best strategies for successful coaching. For example, the adult learning theory literature suggests that relationships are an important component of coaching and that coaches should build a sense of trust and affinity with the educator (Vella, 2008). These strategies also include engaging in critical reflection, planning, acquiring new skills, building confidence, and actively engaging with content (Mezirow, 1997; Vella, 2008). Some researchers have compiled lists of recommend coaching strategies (e.g., Koh & Neuman, 2009; Rush & Shelden, 2005) that incorporate many strategies from adult learning theory while also including the need to assist educators in implementing new knowledge in classroom contexts. There is also some empirical research suggesting that interactive coaching strategies such as modeling, co-teaching, conferencing, and immediate feedback are important for successful coaching outcomes (Bean et al., 2010; Elish-Piper & L'Allier, 2010; Walsh, 2014).

In sum, there seems to be an emerging conception of the needs of educators as adult learners and recommendations for coaching strategies to meet these needs. In turn, researchers have used this information to design coaching PD focused on language and literacy instruction (e.g., Diamond & Powell, 2011; Koh & Neuman, 2009; Landry, Anthony, Swank, & Monseque-Bailey, 2009). The plans for such coaching models intentionally use strategies derived from the literature. These can inform what Powell and Diamond (2013) referred to as the structure and process domains of coaching (p. 104). *Structure* refers to the organizational elements of the PD, for example, the intensity of coaching (e.g., twice a week), and *process* refers to the actions that are used to bring about changes in practice (e.g., coaches' use of modeling to demonstrate a desired practice). Powell and Diamond (2013) also noted the importance of the content domain of coaching, or what is addressed during the coaching session (e.g., implementing a specific evidence-based practice).

This encompasses the substantive focus of the coach. Note that all three aspects (structure, process, content) are considered important in the design, implementation, and ultimately success of coaching PD.

Limited knowledge about the process and content of coaching

Although researchers have been fairly consistent in reporting on the implementation of the intended structure of PD, few have reported on the implementation of the intended process or content of PD (Powell & Diamond, 2013). This is important for two reasons. First, it is unclear how theoretically and empirically supported PD strategies are actually implemented by coaches and whether what coaches do with educators aligns with the intent of the PD. Second, without understanding the process of coaching, it is unclear what it is about the coaching interaction that actually brings about changes in practice. Both of these are necessary, as some have suggested that there is still much that researchers do not know about the specific coaching strategies that contribute to changing practices (Mangin & Dunsmore, 2014; Wasik & Hindman, 2011; Wayne, Yoon, Zhu, Cronen, & Garet, 2008). Others have argued that researchers do not know enough about the relationship and interactions between coaches and educators and how they influence various language and literacy practices (Hemmeter, Snyder, Kinder, & Artman, 2011; Powell & Diamond, 2011). Specifically, more information is needed about how coaches engage educators in learning (the process) and what coaches choose to focus on during those interactions (the content). Given the mixed findings on the efficacy of coaching, understanding this level of detail could be particularly informative.

Some studies (Atteberry & Bryk, 2011; Bean et al., 2010; Elish-Piper & L'Allier, 2010; Sailors & Price, 2015; Scott, Cortina, & Carlisle, 2012) have begun to examine the process and content of PD, and these provide important initial insights into what occurs during coaching. For example, Scott et al. (2012) found that literacy coaches structured their time in different ways but in general observed that coaches spent little time interacting with educators; rather, most of their time was spent in administrative tasks. Elish-Piper and L'Allier (2010) reported that coaches spent about 50% of their time interacting with educators. Other studies confirm this broad range both in how coaches spend their time (Bean et al., 2010; Sailors & Price, 2015) and in the amount of coaching received by educators (Atteberry & Bryk, 2011). Overall, this research suggests that coaches may not always be spending their time as originally intended, which is a critical problem, as some researchers have found that more time spent in coaching is related to more positive changes in practice (Bean et al., 2010; Sailors & Price, 2015).

From studies of coaches' interactions there is also emerging evidence that the content coaches focus on as well as the process that they use to deliver

the content are important for improving educators' teaching. Sailors and Price (2015) found that coaches did not evenly target the intended instructional content that was part of the PD. Similarly, in their examination of coaches' logs, Neuman and Wright (2010) observed that coaches tended to target some PD instructional content areas more than others across coaching sessions. In addition, they noted that although coaches used strategies consistent with the PD, they used fewer teaching-related coaching strategies (e.g., planning, co-teaching, modeling). They seemed "to guide rather than directly interact with teachers during lessons" (p. 77). In a study of elementary school coaches, Mangin and Dunsmore (2013) found that coaches ended up reifying existing instruction rather than improving instruction. Together, these studies seem to indicate that coaches do not always spend their time directly interacting with educators, and when they do the content and process of these interactions can vary substantially.

The need for a more nuanced understanding of large-scale coaching PD

Although the studies described previously have begun to look at the interactions between coaches and educators, much is still unknown about what happens during interactions between coaches and educators, regarding both the process and the content of coaching. There is still a great deal that can be learned about the nature of these interactions and whether coaching strategies are being used as intended. This is important because coaching is often designed to be aligned with empirically and theoretically supported strategies. Moreover, because of the lack of information about the process of coaching, it is unclear as to what strategies are being used generally by coaches. Some of the mixed findings regarding the efficacy of coaching may be due in part to the way in which the process and content components of coaching are implemented; however, most studies do not provide this level of detail.

This lack of clarity is problematic in the context of large-scale implementations of coaching, which seem to be increasing (Deussen et al., 2007; Landry et al., 2009). As coaching is scaled up to meet the needs of more educators, the diversity of learners and of coaches may increase. Those studies that have looked more in depth at coaching interactions have often looked at small samples of coaches (e.g., five coaches, Elish-Piper & L'Allier, 2010; four coaches, Mangin & Dunsmore, 2014; 20 coaches, Bean et al., 2010), which does not provide as much information about how large numbers of coaches interpret and implement coaching within a specific PD model. Understanding coaching strategies in statewide PD models is particularly important, as there is evidence that when interventions are brought to scale they tend to come at a cost to implementation, almost never reaching 100% fidelity and varying greatly by implementer (Durlak, 2010; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005).

Another problem with current understanding of coaching interactions is that many of the studies of coaches' and educators' interactions have depended on fixed-response coaching logs to track these interactions (e.g., Little, 2012; Neuman & Wright, 2010). One limitation of these studies is that the choice of coaching strategies to log was predetermined by the researchers, and thus the logs may have missed the nuance of the coaching interactions and what the coaches viewed as important to report. There might be other ways to understand coaches' work with educators. For example, Elish-Piper and L'Allier (2011) used coaches' journals to create categories of types of coaching strategies and then generated a coaching log. Others have used interviews (e.g., Bean et al., 2010; Matsumura, Garnier, & Resnick, 2010). Mangin and Dunsmore (2014) used a combination of logs, interviews, and observations to understand coaches' perspectives on their work. All of these methods permitted coaches to determine and describe what was important to them about coaching and thus provided a different perspective on coaching. This allowed insight into how coaches enacted coaching, which is critical for understanding why any coaching model is or is not effective.

Study goals

The purpose of this study is to understand the perspectives of coaches as they implemented a state-sponsored language- and literacy-focused PD. Several theoretical frames shape our work. Following Powell and Diamond (2013) we focus on key elements of coaching—the process and content of enacted PD, which are often only partially examined in studies of coaching—thus addressing one gap in the literature. In addition, we believe that an integral part of understanding the implementation of coaching involves focusing on the perspectives of those actually implementing the coaching. Thus, we focus on the perspectives of the coaches themselves as they seek to implement coaching in the real-world context of a statewide coaching model. Through these frameworks, our study responds to gaps in the current literature by providing key insights into oft-neglected areas of PD (process and content) while seeking to understand how these fit with the stated design of the PD.

We asked the following guiding research question: What do coaches report as the content and process of their interactions with educators? Specifically, we asked the following: (a) What instructional content areas do coaches target, and how is this aligned with the PD? and (b) What coaching strategies do coaches use within their coaching interactions, and how is this aligned with the PD? This allowed us to look at the process and content of PD as they were enacted and also to understand coaches' perspectives on their work with educators.

Method

Participants

Data were collected as part of a 4-year, large-scale study evaluating the efficacy of a Midwestern state's sponsored language and literacy PD. The PD was designed to last 1 year; thus, this study involved four sequential cohorts of educators participating in the year-long PD. For the purposes of this study, we focused on the coaching aspect of this PD, which was implemented by 72 coaches. Some coaches ($n = 31$) were involved in multiple iterations of the PD and/or coached multiple educators (range = 1–6). The state coordinated the recruitment of coaches to implement the coaching component of the PD. As this was not managed by the researchers, little descriptive information about the coaches is available. Based on state documentation, to be eligible for coaching coaches were expected to have worked in early childhood settings and have demonstrated leadership skills through recommendation by either a supervisor or a higher education faculty member. Coaches and coachees were matched based on geographic location and similarity of program-type employment (e.g., both worked in a Head Start agency) such that coaches would have an understanding of the educator's instructional context. Coaches were volunteers and were not compensated for their time.

Within the larger study of the statewide PD, 179 educators received coaching. The analytic sample for this study was the 124 educators in the coaching condition for whom there were coaching log data. In general, there were few differences between the full sample of educators receiving coaching and the analytic sample; differences are noted in the text. (More information regarding the full sample is available in Piasta, Justice, et al., 2017.). Educators all reported working with children ages 3 to 5. The vast majority were female (99%), and all identified themselves as non-Hispanic/Latina (100%). Most were Caucasian (83%), 16% were African American, and 1% indicated "other" (Native American, Asian, Hawaiian, or Pacific Islander). Participants' average age was 42 years ($SD = 10.46$, range = 21–70), and their average number of years of teaching experience was 12 ($SD = 7.17$, range = 0–32). Educators' highest level of education was high school diploma (13%), associate's degree (27%), bachelor's degree (23%), or master's degree (34%); 3% did not report their education. The analytic sample had a slightly higher level of education than the full sample, of which 14.5% reported a high school diploma, 23.5% an associate's degree, 24.0% a bachelor's degree, and 26.3% a master's degree; 11.7% did not report their education. Educators taught in a range of early childhood programs, including public school settings (54%), center-based

child care (43%), and home-based child care (3%). Many taught in Head Start programs (35%), given that Head Start comprises the majority of publicly funded programs in the state. In addition, 22% of educators identified themselves as working in special education, self-contained classrooms. Center locations were evenly distributed across urban (32%), suburban (36%), and rural (32%) communities, which differed slightly from the full sample, which reported 26.8% urban, 29.8% suburban, and 33.5% rural (9.9% did not report on this variable).

Design and implementation of the coaching PD

Educator/coachee PD

Educators were expected to attend 30 hr of language and literacy coursework and receive 48 hr of coaching related to the coursework. The PD, both the coursework and coaching, was provided for free by the state to educators, and coursework sessions were offered in regional locations at times convenient to educators working with young children (e.g., on weekends). Each course was facilitated by a regional Early Language and Literacy Specialist (ELLS) who held at least a master's degree in a relevant field. The course targeted five literacy domains: the physical literacy environment, play that supports language and literacy development, oral language, early reading, and early writing. Educators received 6 hr of coursework per domain and were provided with a binder detailing each domain topic along with instructional strategies to use in their classrooms. In each session the ELLS introduced the targeted language and literacy content, discussed educators' existing knowledge and practices regarding the content, explained ways to use new knowledge in practice, and helped educators plan their into-practice assignments. The latter required educators to select a specific practice from the session to try on their own in their classroom. For example, for early writing, an educator might select the practice of engaging in shared writing and create a plan for how to enact this in his or her classroom. Educators were asked to complete these into-practice assignments connecting coursework content to their classroom instruction as well as compile a portfolio documenting their progress pertaining to each of the five domains. The course was attended by the educators over 2 to 5 months with the coaching occurring simultaneously and then extending across the remainder of the academic year, for a total of 8 months. The frequency and length of the coaching sessions varied across participants. Educators typically received 13 coaching sessions that lasted more than 90 min (see Weber-Mayrner, Piasta, Ottley, Justice, & O'Connell, in press, for more detail).

Coach PD

Coaches were encouraged to complete the same 30-hr coursework attended by the educators. In addition, concurrent with the educator PD, from September to April, coaches received 24 hr (four 6-hr days) of state-implemented training spread throughout the year. All coach training was provided for free by the state and facilitated by the ELLS. During the training, coaches received a coaching binder detailing the coaching process. The coaching binder included information about the instructional content to be addressed (the five literacy domains), information about specific coaching strategies to use with educators, and suggested documentation of the coaching process and educator change (e.g., before and after photos, child work samples). The coaching was designed as a cyclical model using promising strategies for coaching and included observations, engagement of educators in reflection, goal setting, and documentation of practice and progress. The latter three were conversation-based strategies for engaging with educators about PD content and practice. The coaching cycle then repeated, and coaches completed logs documenting coaching activities (see Piasta, Justice, et al., 2017). No feedback on how to use the coaching logs was provided to the coaches. Each coach was supported by an ELLS assigned by the state; however, no formal data were gathered regarding the nature of the interactions between the ELLS and the coaches.

Data and analysis

Data collection

At the beginning of the study, educators (coachees) completed a survey about their background information. During the PD implementation, coaches electronically logged their interactions with educators using a website. Coaches entered responses to fixed-choice items about the date of the interaction, the duration of the interaction, the type of interaction, and the domain in which the interaction occurred (e.g., site visit early reading, site visit other, portfolio work, e-coaching; see the Appendix for a sample log and list of fixed choices). In addition, there was also a note option through which coaches could write comments in their own words about their coaching interactions. There were a total of 1,859 coaching log entries. The note option was frequently used by coaches and often documented the process-related aspects of coaching not available in the fixed-choice responses.

Analysis

Multiple analytic methods were used to examine the log data in order to address our research questions. First descriptive analyses were used to analyze the 1,859 fixed-choice entries. The frequency of coaches' reports of the

type of interaction and instructional content (e.g., site visit [type] environment [content]) was examined. Next, to further investigate the nature of the coaching sessions and understand coaches' perspectives on the process, a more in-depth examination of how coaches described the focus of their interactions with educators in their open comments (notes) was conducted. We chose to use the individual coach-log entries as the unit of analysis in order to focus on the experience of the coach during the coaching process. In order to do this, we first confirmed that the comment data were fairly representative of the sample as a whole and could be used to expand on the findings from the fixed-choice answers (Maxwell, 2012). We did this by observing the number of responses by individual coaches and the number of responses connected to individual educators. Overall, the data were fairly representative of the larger corpus of fixed-choice entries. In total, 71% of entries ($n = 1,319$ of 1,859) contained comments about interactions with 96% of educators ($n = 119$ of 124) entered by 96% of coaches ($n = 69$ of 72). On average, each coach entered almost 20 comments (range = 1–76), regardless of the number of educators with whom he or she worked. We did not control for the number of coach comments, as we viewed the data to be representative of coaches' experiences during the coaching process.

We used both an inductive and deductive process to design our coding framework for the open comments such that the coding could address questions related to the coaching process and content as these aligned with the PD while also allowing coaches' perspectives to emerge. A content analysis (Cavanagh, 1997; Hsieh & Shannon, 2005) was conducted to understand instructional content areas targeted and the coaching strategies used during interactions with educators. Because we were interested in how coaches' reports of coaching activities aligned with the PD, we used some a priori categories identified based on the instructional content of the PD and the coaching strategies incorporated into the design of the PD (i.e., content in the educators' coursework binder and coaching strategies identified in the coaching binder) to code both coaching process and content. This allowed us to determine how coaches' activities followed the design of the PD. In addition, we allowed for new themes to emerge as they related to our research questions (Corbin & Strauss, 2008). This enabled us to identify emerging categories from coaches' reports that were important to coaches but may not have been specific to the categories generated from the PD.

Instructional content. The content analysis coding was used to examine coaches' reports of the instructional content targeted during coaching interactions. This could have included areas targeted by the coursework (e.g., the physical literacy environment) as well as other instructional content areas (e.g., working with diverse learners) that emerged in coaches' reports. Both the educator and the coaching binders were used to create the a priori

coding categories that identified activities/topics from the five literacy domains that were aligned with the PD. Reports of content areas not listed in the initial categories were cross-referenced to ensure that they were not in the binders. If not featured in the binders, these new instructional content areas were created as emerging codes. **Table 1** lists and defines the types of instructional content included in the coding.

Coaching strategies. A similar coding process was used to examine comments about the use of coaching strategies during interactions with educators. These strategies could have been those listed in the coaching binder (e.g., using reflection questions) as well as additional coaching strategies used by coaches not included in the binder (e.g., building relationships). Similar to the process used for coding instructional content, the coaching binder was used during this process to confirm whether coaches' reported strategies were in the binder or new, unrelated coaching strategies. Codes, definitions, and examples are provided in Table 1.

Alignment with the PD. Coaching interaction alignment with PD was determined based on whether coaches reported addressing instructional content specific to the coursework or coaching binders (e.g., play) or using a coaching strategy in the coaching binder (e.g., documenting practice). We confirmed these codes by referencing the binders provided to the educators and the coaches. Each comment was coded as related, not related, both related and unrelated (when the interaction included instructional content or coaching strategies related to the PD and instructional content or coaching strategies unrelated to the PD), or unclear (when not enough information was provided to make a determination; e.g., "site visit").

All 1,319 comments were double-coded by the first two authors independently. Initial interrater reliability was 73% for instructional content, 70% for coaching strategies, and 85% for alignment. The coders then met to review the coding; all disagreements were reconciled through discussion, during which a final code for a comment was decided. This approach allowed for multiple readings of the large corpus of data to ensure inclusiveness of coding while also ensuring trustworthiness of coding (Nowell, Norris, White, & Moules, 2017). It is important to note that coaches commonly reported targeting multiple instructional areas and/or using multiple coaching strategies during a single interaction. Thus, comments could receive multiple codes for the content addressed as well as multiple codes for the strategies used. For example, one coach commented, "Following my observation of play, [educator] reflected on the data to determine level of engagement. We discussed ways to support specific children, the environment and her role." Here the coach reported using observation, assessment data, and discussion as coaching strategies to focus on instruction related to play and the

Table 1. Coaching codes, definitions, and examples.

<i>Code</i>	<i>Definition</i>	<i>Example</i>
<i>Coaching strategies</i>		
Administration	Correspondence related to scheduled site visits or related to the completion of administrative paperwork	"Reminder emails to complete surveys + links"
Environment	Entries about the physical classroom environment (one of the five domains)	"... Ideas for changing the environment"
Early reading	Entries about early reading (one of the five domains)	"Discuss into practice early reading"
Play	Entries about play (one of the five domains)	"Reflective practice for play"
Oral language	Entries about oral language (one of the five domains)	"Emailed oral language reflection questions"
Early writing	Entries about writing (one of the five domains)	"Emailed XXX the rest of the Early Writing Reflection Questions for her to reflect on"
Behavior management	Entries related to behavior management, including setting up rules or routines or helping with other behavior problems	"Read articles about teaching practices (routines and rules) ..."
Family engagement	Entries related to working with families or engaging families	"Sent family engagement pieces"
Educator collaboration	Entries related to working on educator collaboration	"Several different texts to discuss educator collaboration"
Letter of the week	Entries related to working on the letter of the week	"Articles on Letter of the Week"
Technology	Entries related to the use of technology in the classroom	"Reflective questions about technology"
Diverse learners	Entries related to working with diverse learners that do not overlap with the five domains of the course, including emergent bilinguals and children with special needs	"Reflective questions about ... diversity of learners"
Socioemotional development	Entries related to working on socioemotional development	"Many materials and books on social-emotional behavior were used for resources"

Table 1. Coaching codes, definitions, and examples (continued).

<i>Code</i>	<i>Definition</i>	<i>Example</i>
Curriculum	Entries related to working on a specific curriculum	"Discussed project approach and difficulty getting student buy in"
Assessments not related to the PD	Entries related to discussing assessment not linked to PD	"Discussed how to measure educator success tied to child outcomes"
Math and science	Entries related to math or science instruction	"Observed provider implementing activities to mixed age group that met science ... areas"
<i>Code</i>	<i>Definition</i>	<i>Example</i>
Gross motor	Entries related to gross motor instruction or outdoor play	"Planning for gross motor time with the children"
State requirements	Entries related to work around state requirements	"Discussed various new requirements by state"
Initial visit	Entries in which the content is only listed as "initial visit"	"Initial visit"
Unclear	Entries in which the content is not clear	"Information sent," "Follow up on classroom visit"
Other	Entries in which there is clear content but it is not included in the present list	"Researched fairy tale games to use in classroom"
Assessment data	The use of data as part of the coaching process; this could include informal and formal assessment methods pertaining to children or the educator	"... Included information about CLASS tool ..."
Reflection	Strategies that encourage educators to reflect on various aspects of practice, including using reflection questions via a journal or using videos	"Reflection questions"
Discussion	When the word discuss or other vague language (e.g., review, revisited) is used to relay that some sort of back-and-forth conversation took place	"Continue discussion about how to engage in early reading activities with students during free play"
Telling strategies	Telling specific Coaching strategies to the educator	"... Suggestions for enhancing early reading beginning early writing ..."

Table 1. Coaching codes, definitions, and examples (continued).

<i>Code</i>	<i>Definition</i>	<i>Example</i>
Sharing resources	Giving resources to the educator for use in some way; this knowledge comes from a resource, not directly from a coach	"Shared some resources based on concerns ..."
Providing physical materials	Giving physical materials that are to be used in the classroom; materials include those that physically become part of practice or the classroom environment	"Copy, laminate and distribute visual cue cards for Jenna to use in her classroom with DLL"
Providing feedback	Providing feedback or commentary on something about the educator's practice	"Feedback on lesson plan"
Homework	Related to work on the into-practice assignment or portfolio	"Focused on into-practice"
Modeling practice	Modeling practice for the educator	"Modeling of small group activity to support letter recognition"
Observation	Observing the educator's practice in some way	"Did observation during classroom time ..."
Goal setting	Coach and educator working together on setting goals related to practice	"Mrs. Jackson want to add more print to her bulletin boards and have them more on children's eye level"
Planning for instruction	Coach and educator working together to plan for some type of practice	"... Jointly planning new strategies to implement ..."
Relationship building	Specific references to developing a relationship with an educator, including the initial visit	"Initial visit"
Other	Coach uses a strategy that is not captured within the current coding schema	
Unclear	Not clear what the coach did but a coaching interaction occurred	"Oral language"

environment. This comment received four coaching strategy codes (observation, reflection, assessment data, and discussion) and two instructional content codes (play, environment).

In order to examine patterns within the qualitative data and address our research questions, we used enumeration (Dey, 2003) to provide frequency counts related to our categories of interest. This is a common method of treating large sets of qualitative data and has also been used in the analysis of coaching logs (e.g., Neuman & Wright, 2010). However, although we used this approach to examine patterns within the data, we also examined these patterns in the context of coaches' comments in order to further explain the findings and illustrate the complexity within the reported coaching interactions (Creswell, 2003). Using these methods, we established overarching themes around our research questions.

Findings

Coaches reported interacting with educators about a variety of instructional content areas using multiple coaching strategies. In general, 83% of all interactions were at least in part aligned with the instructional content or suggested coaching strategies of the PD. By using the coaches' comments to contextualize and elaborate on the responses provided in the fixed-choice answers, we were able to understand more nuance in coaches' reports of coaching. Next, we discuss our findings in relation to the instructional content targeted and coaching strategies used, examining the differing types of data concurrently.

Instructional content areas

In order to address our research question regarding the instructional content areas targeted by coaches, we first examined coaches' fixed-choice responses related to the type of interactions that they had with educators. **Table 2** presents the distribution of coaching interactions by type and content focus. One finding from an inspection of these data was that coaches frequently reported "other" as the content of their site visit (32% of all site visits), which indicates that they were not necessarily focused on content from the PD.

When using the comment data to elaborate the fixed-choice responses, we observed that some of the coaches' comments about the interaction did not match their fixed-choice responses. For example, coaches commented, "Met to plan our meeting schedule" or "Reminder emails to complete surveys + links," reporting these as interactions related to emergent reading.

Table 2. Distribution of coaches' interaction types overall and by site visit topic (reported as percentages of total interactions).

Task	Based on Fixed-Choice Response	Adjusted Based on Coaches' Comments
Administrative	17%	22%
Electronic correspondence/e-coaching	11%	8%
PD-related site visit	44%	43%
"Other" site visit	23%	22%
Portfolio work (cumulative PD project)	5%	5%
Site visit focus (% of all site visits)		
Environment	15%	
Early reading	13%	
Early writing	11%	
Oral language	11%	
Play	11%	
Other	32%	

PD = professional development.

These activities, although a necessary part of the work of coaching, were not actually focused on improving practice; rather, they were focused solely on administrative tasks that coaches needed to complete, such as collecting paperwork or scheduling appointments. Thus, when logged into emergent reading rather than "other" they were not accurately describing the nature of the coaching interactions. Based on these comments, we recoded these entries to reflect the fact that they were administration-related interactions. This subsequently shifted the distribution of coaches' interaction types to reflect an increased number of administrative tasks, also reported in Table 2. According to these numbers, 22% of coaches' interactions were related to administrative tasks such as collecting paperwork or scheduling subsequent visits. This illustrates that more than one fifth of coaches' interactions with educators were not about instruction. These comments indicating administrative tasks were not included in the subsequent analysis of the comment data, as they were not related to the PD content or process. This resulted in 934 comments about coaching interactions focused on instruction.

Next we examined the number of interactions by coursework domain using the open-comment data to confirm or extend the fixed-choice responses. When contextualizing these reports within the open-comment data, we found that coaches frequently reported targeting more than one domain during their interaction or at times did not target the domain in which they entered the comment. Thus, we also used these data to sum the number of interactions by content area. The counts by domain and type of coaching

Table 3. Instructional content addressed in coaching interactions: Frequency of appearance based on all comments and then by "other" site visit, e-coaching, and portfolio.

Content	Total (Across All Comments)	"Other" Site Visit	E-Coaching	Portfolio
<i>Environment</i>	245	46	16	21
<i>Early reading</i>	178	16	10	12
Unclear	162	57	60	20
<i>Oral language</i>	150	14	15	15
<i>Emergent writing</i>	139	7	8	21
<i>Play</i>	137	13	5	14
Behavior management	60	26	7	1
Assessment not related	40	28	2	2
Educator collaboration	21	7	2	0
Curriculum	13	3	0	0
Socioemotional development	13	9	0	0
Diverse learners	21	7	0	0
State requirements	9	1	0	0
Other	9	1	1	0
Math and science	6	0	0	0
Family engagement	5	3	1	0
Gross motor skills	4	0	0	0
Technology	4	0	2	0
Letter of the week	3	2	1	0

Italics indicates professional development instructional content target.

interaction are reported in **Table 3** and are based on the number of interactions, not percentages, to account for the reporting of multiple instructional contents. The most frequently targeted instructional content was the first domain taught during the coursework, the environment ($n = 245$), followed by the fourth domain taught, early reading ($n = 178$). The remaining three domains of the coursework were targeted more frequently than "other" non-PD instructional content areas, with play and emergent writing targeted the least out of the five domains ($n = 137$ and $n = 139$, respectively). A variety of additional instructional content areas were addressed by coaches in their interactions with educators beyond the five domains. These instructional content areas did not align with the PD. Definitions and examples of these domains are provided in Table 1. The most commonly targeted noncoursework instructional content was behavior management ($n = 60$), followed by the use of assessments not related to the PD ($n = 40$). The most infrequently targeted instructional content areas were gross motor skills, technology, and the letter of the week ($n = 4$, $n = 4$, $n = 3$, respectively), none of which aligned with the PD.

In addition to choosing a specific instructional content area as the focus of the visit, coaches could also log an interaction as “other” site visit (not one of the content-specific site visits), e-coaching, or portfolio work. We also coded these comment types for instructional content, displayed in Table 3, even though these interactions were not domain specific. It seems that the high number of reported site visit “other” may have been a way for coaches to record discussing multiple instructional content areas within one coaching interaction. For example, in the “other” category one coach noted focusing on two content areas, saying, “Conducted coaching conversation with educator reflecting on current practices and jointly planning new strategies to implement—extensions to early reading activity and new activity to support early writing.” In addition, the “other” and e-coaching interactions also incorporated a great deal of the unaligned instructional content areas. This is exemplified in comments such as “completed [Classroom Assessment Scoring System (CLASS)] observation” addressing assessment not related to the PD, “determined action steps for improving large group management” addressing behavior management, and “sent family engagement pieces” to support family engagement.

Coaching strategies

As the fixed-choice responses did not provide any information about coaching strategies, only the open-comment data were used to address the second research question. In their open comments, coaches reported using a variety of coaching strategies, some aligned with the PD and some not from the PD. All are defined in Table 1. As with the instructional content, coaches commonly reported using multiple coaching strategies in one interaction; thus, sums of the frequency, not percentages, of individual strategies used are listed in **Table 4** by PD domain and type of interaction. Based on coaches’ reports, the most frequently used coaching strategy was classroom observation ($n = 205$), and it was used across all domains. It was not always clear from coaches’ reports, however, what occurred after the observation, as sometimes coaches only reported observing (e.g., “observed classroom”) and in other cases they would report additional coaching strategies (e.g., “discussed observation”). However, this was included as a coaching strategy, as it was reported by coaches as an activity that they engaged in during the coaching process and was also listed as a strategy in the coaching binder.

Other commonly used coaching strategies were discussion ($n = 173$) and interactions around PD-related assessment data ($n = 113$). Although discussion was a frequent strategy, this code was used only when a more specific type of interaction between coaches and educators (e.g., feedback, reflection) could not be determined. It is important to note that the PD design focused on the use of specific conversation-based coaching strategies such as

Table 4. Coaching strategies used by coaches

Coaching Strategy	Total	Environment	Play	Oral Language	Early Reading	Early Writing	Other	E-Coaching	Portfolio
<i>Observation</i>	205	49	22	19	33	22	51	3	6
Discussion	173	22	28	20	28	21	31	16	7
Unclear	122	10	10	10	9	4	14	5	1
<i>Assessment data</i>	113	9	9	18	9	11	41	14	2
Telling strategies	111	15	18	24	18	17	19	10	0
<i>Goal setting</i>	105	23	8	12	12	15	23	3	9
Sharing resources	99	7	4	3	17	9	14	43	2
<i>Reflection</i>	87	9	12	6	8	12	16	18	6
<i>Providing feedback</i>	82	9	14	8	12	2	18	19	0
<i>Homework</i>	77	7	6	5	5	3	16	5	30
Relationship building	66	5	2	6	1	1	31	17	3
<i>Planning for instruction</i>	65	13	7	12	5	6	15	1	6
Providing physical materials	26	7	1	0	6	9	3	0	0
<i>Modeling practice</i>	5	2	0	0	2	0	1	0	0
Other	5	0	0	0	1	0	4	0	0

Italics indicates professional development coaching strategy.

providing feedback, engaging educators in reflection, setting goals, and planning for instruction, which were coded when that information was available; all of these were used less frequently ($n = 82$, $n = 87$, $n = 105$, and $n = 65$, respectively). Sometimes these were used together, such as in the following example: “Reflection meeting regarding the small group and deciding on next steps.” Here the coach commented on reflecting with the educator regarding a small-group activity and then transitioned to goal setting—picking where to focus on improving instruction. Even though modeling was listed as a strategy in the coaching binder it was infrequently reported by coaches as a coaching strategy ($n = 5$).

In all, coaches reported using six coaching strategies that were not aligned with the PD. One such coaching strategy that was used somewhat frequently ($n = 66$) was a specific focus on building relationships with educators. This category emerged as coaches seemed to report these interactions as distinct from those focused directly on instruction, which indicates that coaches viewed these types of interactions as an individual coaching strategy. For example, coaches reported, “Met educator for the first time and began building relationship” or “observation getting to know educator.” Often these were reported in the “other” site visit category. Included in this coaching strategy were brief check-in visits or emails to educators to maintain the relationship, commonly reported as “short pop in” or a “check in.”

Similar to the instructional content, the open-comment coding also revealed that coaches were frequently engaging in multiple coaching strategies during their interactions with educators. For example, a coach reported in one comment that the interaction involved “classroom observation approaches to early reading approaches to early writing discussed [*sic*].” Here the coach reported using both observation and discussion, two coaching strategies, to target two domains, early reading and early writing.

Discussion

This study provides important insight into the process and content of coaching within the context of a large-scale, state-implemented language- and literacy-focused PD. It both describes coaches’ reports of the coaching process and identifies patterns in the use of coaching strategies and targeting of specific instructional content areas. This work represents a unique contribution to the field, as there are few large-scale examinations of how coaching is enacted exploring both the content and process of coaching. Moreover, focusing on coaches’ reports provides a nuanced way of understanding and studying coaching (Elish-Piper & L’Allier, 2010; Matsumura et al., 2010; Scott et al., 2012). The PD experiences and coaching interactions described here have important implications for large-scale, state-implemented coaching models.

Although our findings suggest that coaches’ interactions in general were aligned with the PD, our findings also reveal that coaching interactions were more complex than what could be captured from our fixed-choice log data alone. These results have implications that can potentially improve the design and study of PD. In particular, they support focusing on how coaches spend their time, identifying when and how coaches differentiate content for their learners as well as creating supports for coaches themselves—all while using robust tools to document coaches’ work and perspectives. This work extends the literature by providing unique insight into the content and process of coaching. It is important to note that these findings suggest an explanation for the mixed evidence around coaching, as coaches seemed to move beyond the specifications of the PD in their interactions with educators. Indeed, findings regarding the efficacy of the PD indicate no effects of coaching on educator outcomes (Piastra, Justice, et al., 2017; Piastra, Mauck, et al., 2017). This work calls for continued nuanced research that goes beyond fixed-item coaching logs in order to better understand how coaching content and processes may mediate the success of coaching-focused PD. Next we discuss our findings related to the content and process of coaching along with implications.

Content of coaching

When coaches were focused on instruction, they tended to address the instructional content of the PD. However, coaches also included non-PD instructional content in their interactions. The nuances that emerged in coaches' reports of the content targeted during coaching provide insights into the nature of coaching as PD and how these strategies might relate to educator needs and learning outcomes.

One main finding from this study is that a large proportion of coaches' interactions with educators were not related to any instructional content. This pattern in the literature (e.g., Atteberry & Bryk, 2011; Elish-Piper & L'Allier, 2010; Scott et al., 2012), confirmed here in a largescale study, is important in many ways. First, as the amount of time coaches spend with educators seems to influence the outcome of the coaching (Bean et al., 2010; Sailors & Price, 2015), this could lead to decreased effectiveness of coaching and thus might help explain some of the mixed findings about the efficacy of coaching. A second important implication is that the administrative work involved in coaching should be accounted for in the design and evaluation of PD. This might be particularly true for coaching within large-scale, state-implemented PD, in which there is more administrative work in general (Jackson et al., 2011 (2007), which may result in less time being available for focusing on improving instruction. Those developing and studying coaching models may need to anticipate this use of time through either reducing the number of administrative tasks for coaches or building extra time for administrative work into the design of PD.

Moreover, the variability in how coaches spent their time and the differences between the fixed-choice responses and the comment entries suggest that coaching logs may not accurately or comprehensively represent the work of coaches. Thus, researchers interested in understanding the process and content of coaching as well as the efficacy of coaching may need to consider other ways of studying the coaching process. This may include using coaching journals (e.g., Elish-Piper & L'Allier, 2011), interviews (e.g., Bean et al., 2010), or a combination (e.g., Mangin & Dunsmore, 2014; Matsumura et al., 2010) to understand coaching in more nuanced ways. Alternative methods of investigating the content and process of coaching and their relationship to PD effects may be even more imperative for large-scale coaching PD models, as there is the potential for more variation in coaching (Durlak, 2010; Fixsen et al., 2005). This could include purposive sampling of coaches and engaging coaches in interviews about the process or review of coaching documentation, all of which would provide more insight into the enacted coaching.

In general, coaches were addressing the content of the PD. However, they targeted the literacy domains unevenly. One way of interpreting this finding is that perhaps coaches unevenly targeted content areas because they were differentiating their coaching to meet the needs of individual educators. Indeed, this is one of the advantages of coaching as a PD tool, as it allows coaches to meet educators at their own developmental level and focus on what is most relevant for them and their practice (Borko, 2004; Buysse et al., 2009; Desimone, 2009; Garet et al., 2001; Rush & Sheldon, 2005). Thus, in this study coaches may not have focused on instructional content areas that were already strong and instead focused on instructional content that they perceived as needs of the educators. This strategy has the potential to have positive impacts for educators and children.

However, a closer examination of the differential attention to the instructional content areas when interpreted within the larger early childhood research corpus suggests that the coaches' foci may not have been due to differentiation alone. For example, the most frequently targeted instructional content was the physical environment. In some ways, this finding is not surprising, as this was the first content area addressed by the PD and also mirrors the findings of Neuman and Wright (2010), who reported that coaches logged coaching more on the environment than other content areas. It may be that targeting the environment is an easier entrée into coaching, as this aspect can result in concrete, observable changes. However, this may be the instructional area least in need of improvement, as there is evidence of increasingly better physical literacy environments in classrooms (e.g., Fuligni, Howes, Huang, Hong, & Lara-Cinisomo, 2012; Onchwari & Keengwe, 2008) and there is evidence that the quality of literacy instruction itself is rather low (Cabell, DeCoster, LoCasale-Crouch, Hamre, & Pianta, 2013). Thus, in the case of the environment, coaches may not be differentiating to meet the needs of their learners, and focusing on the physical literacy environment may not be the best use of time- and cost-intensive coaching. This could perhaps begin to illuminate why some coaching is less effective—the focus is not on the most critical area.

In fact, instructional areas generally found to be most in need of improvement in early childhood education—oral language, emergent writing, and play (Ashiabi, 2007; Cabell et al., 2013; Dickinson, Darrow, & Tinubu, 2008; Gerde, Bingham, & Pendergast, 2015)—were the content areas of the PD that received the least amount of attention across coaching interactions. This suggests that coaches may need more support in evenly targeting PD content and in determining how to identify areas of need such that they support teachers in those practices. It is interesting that play was the second area targeted in the PD, and oral language was the third. Thus, there should have been ample time for coaches to address these content areas. Writing

was covered last in the coursework, which may have contributed to the lesser frequency of writing-focused interactions. This pattern in the targeting of specific content areas, particularly those found to be generally less than optimal, might in part explain some of the mixed findings about the efficacy of coaching more generally. It could be that more challenging instructional content areas such as oral language and writing are addressed less when they need to be addressed the most, and thus practice is not improving in meaningful ways. It may be that coaches' own beliefs about instruction led to this disproportionate finding. For example, coaches may not have believed that young children should engage in emergent writing, hence the low attention to this instructional content. We did not collect information regarding coaches' language and literacy beliefs; however, it is important to note that the coaches had all of the same training and materials as the educators and so at least understood how language and literacy instruction was perceived within the context of the PD. More research should focus on how coaches' beliefs about language and literacy instruction shape their coach training and their coaching interactions.

We found that 83% of interactions contained some PD-related elements, yet coaches were integrating other content as well; thus, it seems that participants were compelled to target other instructional content areas outside of the PD, presumably based on the needs of the educators. Although these additions might seem problematic, in that coaches were adding instructional content beyond the PD, these additions did not necessarily decrease the number of interactions that were at least in part related to the PD. Indeed, it may be that coaches were adding to the content of the PD to meet the needs of their learners and adjust to individual contexts.

These strategies are supported by adult learning theory and the PD literature. For example, a common factor across adult learning theories suggests the importance of educator experiences and relevance to current situations (Knowles, 1970; Mezirow, 1997; Vella, 2008). Given evidence that coaches were focusing on areas of instruction beyond that targeted in the PD, it may be appropriate to leave some opportunities for coaches to differentiate instruction when designing coaching PD. These opportunities should be specific to the contextual problems of participating educators and thus cannot necessarily be anticipated beforehand. This may be more prevalent in the context of large-scale PD models with more diverse educator needs and broader coaching targets. However, these additional foci might also contribute to diminished effects for the PD. This may be because the areas of practice being targeted are not measured because they are not aligned with the PD or because the intensity of the PD is being reduced. Future research should examine whether the relative emphasis on intended PD content and the affordance of learner-driven coaching opportunities moderate the effects of PD.

Considering the instructional content targeted by coaches can also assist in the development of PD models that can be more comprehensive to meet the needs of educators beyond that of the specific PD focus. For example, the most frequently targeted content unrelated to the PD was behavior management. It seems that coaches were helping educators manage this component of their practice. Perhaps this is an area that coaches or educators felt they needed to address before they could fully master the content of the PD or at least target in tandem with implementing new practices from the PD. Given the frequency with which this content emerged in coaches' reports, designers of PD may need to consider how to address behavior management as part of the PD and coaching process.

It may also be important for PD programs to at least consider the multiple requirements that educators are faced with in day-to-day practice (Schachter, 2017). A key finding related to instructional content is that coaches were focusing on state-mandated or federally mandated requirements not addressed in the PD. For example, there was a fair amount of coaching around the Classroom Assessment Scoring System (Pianta, La Paro, & Hamre, 2008), part of the Head Start recertification process, as well as a marginal amount of coaching on other state requirements. Neither of these were directly addressed in the state-implemented PD. Thus, there could have been more alignment between the state's design of the PD and its requirements for educators. Similarly, the coaches who reported working on the letter of the week may have been supporting educators to implement curricular practices commonly required in early childhood contexts regardless of the alignment of these practices with the PD. This may also indicate that coaching as implemented may be more closely aligned with educators' current needs, again underscoring key components of adult learning theory and the PD literature (Desimone, 2009; Knowles, 1970).

Process of coaching

Although coaches used coaching strategies promoted by the PD, there was variable use of the strategies as well as the inclusion of many non-PD-aligned strategies. Examining the actual strategies that coaches reported using is important for understanding the process and efficacy of the PD. There is evidence that the types of strategies used by coaches matter and that some coaching strategies are more efficacious for improving instruction than others (Sailors & Price, 2015; Scott et al., 2012). Specifically, modeling and demonstration of practice and provision of feedback are crucial coaching strategies. According to their reports, coaches did not seem to be using these strategies or even PD-supported strategies with high frequency. Our findings align with others' regarding coaches' limited use of strategies such as

modeling and co-teaching (e.g., Neuman & Wright, 2010; Sailors & Price, 2015). The most commonly reported coaching strategies were observation and discussion; however, these are very broad constructs that leave much to understand about the process of coaching. It could be that using less focused strategies such as discussion may not be as effective and thus contributes to the mixed findings about coaching. Overall, our findings suggest that it may be necessary for coaches to receive additional training to support the use of coaching strategies that will have the most impact on practice.

Although several coaching strategies used were not directly aligned with the PD, some of these were reflective of adult learning theory and recommended strategies. In particular, many coaches reported engaging in strategies that allowed them to build relationships with educators, which has been deemed an important component of adult learning theory (Mezirow, 1997; Vella, 2008) and successful coaching (e.g., Garner, McLean, Waajid, & Pittman, 2015; Huguet, Marsh, & Farrell, 2014), although it was not emphasized in the PD coaching binder. Lizakowski (2005) had a similar finding, with coaches reporting that to ensure the success of their efforts, they made a point of establishing direct and personal relationships with coaching participants from the very start of the project. In addition, the coaches frequently reported telling educators teaching strategies and providing them with resources that had the advantage of being context specific and, at least for telling strategies, actually focused on practice. It could be that coaches selected these specific strategies based on what they found best supported the individual adult learners whom they coached, thus differentiating their coaching to meet specific learning needs. The finding that coaches integrated their own strategies aligned with adult learning theory and recommended PD strategies into their interactions suggests that coaches can adapt the coaching process in ways that have the potential to positively improve the coaching process. The strategies that coaches naturally drew on should also be incorporated into and supported in the design of PD.

Limitations and future directions

Although the present descriptive study is unique in examining coaches' reports of their interactions with educators within the context of a large-scale, state-implemented PD model, some limitations should be noted. The unit of analysis was coaches' individual interactions with educators rather than a percentage of time spent coaching. Although we were able to examine the process and content of interactions using this method, it was difficult to ascertain the structure aspect (Powell & Diamond, 2013) of the coaching; this could and should be explored by other researchers. Another limitation of this study is that we were unable to look at the structure and development of the

coaching strategies over time. This should be considered by other researchers examining the content and process of coaching, particularly in light of the importance of building relationships for participants.

More information about the coaches themselves would have been beneficial in understanding the participant sample and linking coaches' characteristics with coaching practices. This could include education, knowledge, beliefs, and self-efficacy around language and literacy instruction, which have been shown to impact instruction (e.g., Guo, Piasta, Justice, & Kaderavek, 2010; Schachter, Spear, Piasta, Justice, & Logan, 2016), as well as similar constructs as they pertain to the work of coaching, as these may also inform the work of coaching. Furthermore, understanding how coaches use support systems, such as the ELLS within the present study, would help illuminate how coaches make sense of the coaching content and process within large-scale PD. However, given that the state was in charge of collecting much of the data, this fits with the difficulties of conducting research on large-scale, non-researcher-implemented interventions (Coyne et al., 2013; Hulleman & Cordray, 2009). Future studies should collect this type of data as well as examine whether alignment, instructional strategies, and content addressed are related to either coach or educator characteristics. Indeed it would be important to understand whether and how coaching content and process vary across the needs of specific adult learners, as we have seen the great variability in coaching even within the structured coaching PD examined in this study.

Finally, the study depended solely on coaches' reports of practices, which may not have accurately reflected their implementation. Although the purpose of this study was to examine coaches' perspectives on coaching, this should be considered more generally when understanding the work of coaching. As we mentioned previously, there is a need for more robust ways of understanding the work of coaches, including more large-scale studies that use a variety of data collection strategies to examine the process and content of coaching and that also address the reliability and validity of coach reports.

Conclusion

Our findings as well as these limitations have multiple implications for future directions both in research and in the design of PD. Researchers may need to account for the number of administrative tasks coaches are implementing both in understanding efficacy as well as in creating structures to minimize this type of work. In addition, it may be that coaches need more flexibility in the coaching process to both build relationships and address specific instructional needs of educators within the coaching PD structure.

It is important to understand individual differences in coaching, and thus an important next step is to examine different coaching patterns in order to understand the overall enactment of coaching, including structure, process, and content as they are implemented over time with specific adult learners. This study underscores the need to consider the black box of coaching content and processes as a critical means of not only understanding the equivocal state of the current literature regarding coaching effects but also propelling the field forward in designing and evaluating future coaching PD with sufficient nuance and complexity.

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Appendix. Coaching Log Information

Coaching data entry log

<i>Date</i>	<i>Time</i>	<i>Educator Leader (Coach)</i>	<i>Protégé (Educator)</i>	<i>Task</i>	<i>Comment</i>
xx/xx/xxxx	hr/min	Assigned ID	Assigned ID	Fixed choice	Open comments

Fixed-choice options for “task” question

- Agreement—Signed & Submitted
- Registration Form—Submitted
- Protégé Presurvey Submitted
- Protégé Postsurvey Submitted
- Video Release—Submitted
- Progress Portfolio Complete
- E-Coaching
- Email Correspondence
- Monthly Lunch Talks
- Educator Leader Collaboration
- Regional Meeting
- Coaching Strategies Presentation
- Site Visit Summary—Environment
- Site Visit Summary—Early Reading
- Site Visit Summary—Early Writing
- Site Visit Summary—Oral Language
- Site Visit Summary—Play
- Site Visit Summary—Other
- Progress Portfolio Review & Progress
- Other Professional Development