



# Using eCoaching to Support Mothers' Pretend Play Interactions at Home

Amanda H. Passmore<sup>1</sup> · Marie Tejero Hughes<sup>2</sup>

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## Abstract

A unique component of early childhood involves understanding how caregivers and educators promote children's developmental outcomes, with play opportunities being a key avenue for enhancing these skills. Targeted coaching is one type of support that can tap into active family engagement during playful learning. This collective case study examined how remote-based eCoaching could support family-centered practices related to the facilitation of pretend play in caregivers of preschool children in the home setting. Four mother–child dyads of preschool children, with and without a disability, participated in eCoaching focusing on pretend play behaviors. During the implementation of eCoaching, three primary findings emerged related to knowledge acquisition, mothers' facilitation of play with their children, and changes in children's pretend play behaviors. In general, both mothers and children benefited from the eCoaching experience. In addition, mothers' perceptions of eCoaching as a means of family-based support were positive, and all deemed eCoaching easy to engage in and beneficial.

**Keywords** Coaching · Disability · Play · Preschool · Pretend

## Introduction

The act of playing in early childhood is a means of developing social competence (Nicolopoulou et al., 2015), self-regulation (Taylor & Boyer, 2020), language, and communication (Hutagalung et al., 2020). Theorists like Vygotsky (1930–1935/1978) saw play, specifically pretend play, as imperative for developing cognitive and social domains in young children. Interactions in social pretend play allow children to converse with their peers, share materials and viewpoints, engage in social problem-solving, and regulate emotional responses (Barton, 2016). Thus, pretend play is a multi-faceted endeavor as embodied in Smilansky's (1968) cognitive play stages of increasing complexity (i.e., functional, exploratory, constructive, symbolic or dramatic, and games-with-rules play).

Pretend play occurs when a child intends to dramatize situations, bring the inanimate to life, or engage with absent objects. To further examine pretend play, Barton and Wolery (2008) conducted an in-depth review of pretend play intervention literature (1988–2006) for children with autism spectrum disorder (ASD). Their study highlighted pretend play nuances that extend beyond children with ASD to detail a taxonomy of pretend play categories. The most basic of those categories includes functional play with pretense or using an object as intended during pretend play. Beyond functional play, children can engage in object substitution, imagining absent objects, and assigning absent attributes through roles or emotions. Sequencing, vocabulary, and vocalizations are also utilized with varying frequency during pretend play. The Barton and Wolery (2008) taxonomy provide a lens into children's complex behaviors during pretend play.

Delays in social understanding, specific skill impairments, and communication in children with various disabilities influence autonomous and social play, requiring systematic support (Thiemann-Bourque et al., 2012). The value of play in early childhood and the movement towards including children with disabilities in early childhood settings has increased conversations towards ensuring learning through play is accessible to all children. Interventions

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✉ Amanda H. Passmore  
apassmore@pnw.edu

Marie Tejero Hughes  
marieth@uic.edu

<sup>1</sup> School of Education and Counseling, Purdue University Northwest, Hammond, IN, USA

<sup>2</sup> Department of Special Education, University of Illinois at Chicago, Chicago, IL, USA

for young children featuring pretend play behaviors are targeted in various intervention structures, including prompting (e.g., Saral & Ulke-Kurkcuoglu, 2022), modeling (e.g., Lee et al., 2021), script-training (e.g., Thibodeau et al., 2016), and applied behavior analysis techniques (e.g., Kasari et al., 2006). These interventions demonstrate that pretend play skills can be supported and developed in young children with disabilities.

### Family Partnerships in Early Childhood Play

Families are a primary influence in young children's lives and development (Knoche et al., 2012), including play. Promoting play in the home aligns with individual family values and interests. As children mirror roles seen in their daily routines, the cultural influences of the family system guide how and what children choose to play (Göncü & Vadeboncoeur, 2017) and how play is defined (Rentzou et al., 2019). Caregivers influence what values are placed on play (Roonarine & Davidson, 2015) by allocating time and materials. Research indicates that active family engagement within daily routines, like play, during early childhood enhances children with developmental delays' behavior and functioning (Mahoney, 2009). One type of support utilized in early childhood is family-centered practices which focus on support in response to specific family concerns and priorities.

Family-centered practices recognize a child's needs, interests, learning opportunities, and preferred activities while incorporating a caregiver's natural abilities, interests, and influence to promote self-efficacy (Knoche et al., 2012). Friend and Cook (1990) describe this type of collaboration as one that sees caregivers as co-equals through shared decision-making and goal setting. Collaborative relationships between educators and families are also a central component of the professional standards of The National Association for the Education of Young Children (NAEYC, 2020) and recommended practices of The Division for Early Childhood of the Council for Exceptional Children (2014). Furthermore, when supporting children with disabilities, family involvement is a foundational principle within the Individuals with Disabilities Education Act (IDEA, 2004). Thus, the role of families in early education cannot be understated.

### Caregiver Coaching as a Mean of Remote Intervention

Remote service delivery is commonly used for supporting young children with disabilities and their families (ECTA, 2021). The use of remote services allows for consultation or coaching with families and caregivers in the home environment while acquiring and developing knowledge in new skills to support their individual child's needs. Per adult learning theory, adults benefit when new learning follows

embedded coaching (Knowles et al., 2015). Coaching is defined as a relationship where collaborators participate in a systematic process that involves: (a) setting goals, (b) developing solutions intended to facilitative goal attainment, (c) self-directed learning, and (d) personal growth (Rush & Shelden, 2020). The coaching of caregivers has increased both caregiver and child outcomes as noted in a literature review of in-person sensory processing and sensory integration interventions (Miller-Kuhaneck & Watling, 2018). An additional review of literature has shown coaching as a means for increasing the implementation fidelity of interventions provided for young children (Kemp & Turnbull, 2014). The virtual coaching model relies on technology through resources (e.g., video conferencing, telephone) to engage in coaching procedures. The increased availability of technology and pivot towards remote services in 2020 due to the COVID-19 pandemic has increased the utilization of virtual coaching.

Studies examining virtual coaching have found it a reliable support method that can be accomplished over a relatively short period. For example, in a study utilizing both in-person and virtual coaching done by McDuffie et al. (2013), outcomes were similar in both coaching groups. Miller-Kahaneck and Watling (2018) also indicated decreased stress for parents and improved performance outcomes for children through a literature review of in-person occupational therapy-based coaching for children with or at-risk of ASD over a short period (3–18 h). In addition to decreased stress, Ogourtsova et al. (2019) found increased self-efficacy during health-based professional coaching for children (1–16 years old) with ASD, cerebral palsy, and other developmental disabilities. Finally, while virtual coaching interventions have rarely targeted pretend play-specific outcomes, studies centering on various early childhood learning domains (e.g., communication, maladaptive behaviors) have demonstrated success (Lindgren et al., 2016; McDuffie et al., 2016).

### Purpose

Logistically eCoaching is an efficient way to reach caregivers while also reducing the time required for traveling between households (Meadan & Daczewitz, 2015); however, we still need to explore the impact that eCoaching may have on both the caregivers and children receiving this support. Consequently, this requires further examination of how eCoaching can support family-centered practices through play. The primary purpose of this study was to explore if eCoaching was a viable and meaningful way to support families of preschool children using pretend play. We were interested in seeing how eCoaching may enhance caregivers' knowledge and facilitation of pretend play with their preschool children. The research questions that guided this study included:

1. How does eCoaching influence the understanding of pretend play in caregivers of preschool children?
2. How does eCoaching develop caregivers of preschool children's facilitation of pretend play?
3. Does the quality and type of pretend play behaviors change for preschool children whose caregivers receive eCoaching?

## Methodology

We used a collective case study design (Creswell & Poth, 2018) to understand the singular focus of eCoaching as illustrated through four unique dyads. Case studies operate in real-life contexts and settings where multiple sources of information are gathered to provide rich descriptions of individual and collective cases (Yin, 2012). A case was characterized as the dyad of a caregiver and their child. Yin (2012) advocates that collective case studies adhere to the logic of repetition where similar procedures are provided across cases. Replicated procedures within eCoaching cycles and feedback make a collective case study design ideal. Utilizing multiple data sources also aided in creating rich and in-depth descriptions of each case.

## Participants

Recruitment of dyads occurred in the fall of 2020 via emails distributed among individuals in the first author's professional network (i.e., early childhood educators, researchers, and caregivers connected to the early childhood community). Enrollment occurred in the order in which caregivers responded via email. Participants needed to be primary caregivers of a preschool child who was 3–5 years old and not eligible for kindergarten enrollment. Four mothers of children with ( $n = 2$ ) and without ( $n = 2$ ) an identified disability agreed to participate in the study (see Table 1). Two mothers were stay-at-home former educators of male sons (4.5 years) receiving speech services for a disability. The other two mothers, working full-time,

had daughters (3.5 years, 4.5 years) not identified with a disability.

## Procedures

After completing the virtual pre-interview, mothers participated in six eCoaching cycles over about two months. An eCoaching cycle consisted of four phases, all of which occurred remotely (i.e., observation and video collection, a virtual debrief, post-debrief recap email, and implementation). See Fig. 1 for an overview of the eCoaching procedures and cycle in which the child selected play materials from their home environment. The coach (lead author) provided the eCoaching for all mothers and used questioning based on observational data to elicit ideas on goals and play facilitation that would align with their strengths as a mother while incorporating child-specific goals. During the observation portion of eCoaching, mothers played with their children while the coach watched and collected feedback-based data via Zoom. Immediately following virtual observations or within 24 h, virtual debriefs with the mother were conducted via Zoom. Each debriefing conversation progressed through the components of relationship building, identification, learning, and improvement as adapted from a Knight et al. (2015) framework ( $M = 21$  min, range 14–36 min). For details related to the essential elements of debrief conversations see Appendix 1. Following the virtual debrief, the mother received a post-debrief recap email to synthesize the goal set and next steps. Next, the eCoaching cycle continued into the implementation stage, where the mother practiced the strategy(s) outlined in the debrief conversation and email recap. Finally, the eCoaching cycle moved back into the observation phase and continued until six eCoaching sessions were complete. Scheduling of virtual observations and debrief conversations were for a time and date convenient to the mothers, with most mothers preferring to meet weekly.

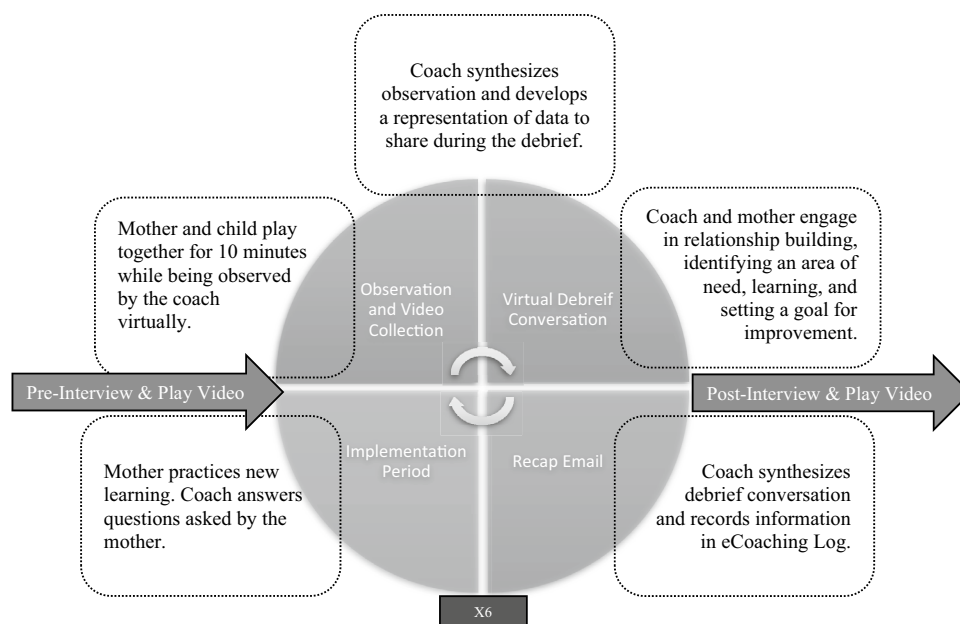
**Table 1** Dyad Information

Mother & child	Mother Information				Child's information			
	Gender	Ethnicity	Highest degree	Back-ground	Gender	Ethnicity	Age	Dis-ability
Shannon & Nick	F	White	Masters	Former teacher; stay-at-home mom	M	White	4.5	SLD
Kristin & Harris	F	White	Masters	Former teacher; stay-at-home mom	M	White	4.5	DD SLD
Laura & Mae	F	Latina	Bachelors	School employee	F	Latina	4.5	None
Rebecca & Amelia	F	Hispanic	Bachelors	Social worker; single mom	F	Hispanic & White	3.5	None

Names provided are pseudonyms

F female; M male; DD developmental delay; SLD speech language delay

Fig. 1 eCoaching cycle



## Data Sources

### Interviews

Mothers participated in a virtual pre- and post-interview. The semi-structured interviews were about family dynamics, home play, pretend play, and coaching. These sections were intended to gauge mothers' perspectives in areas associated with their knowledge and facilitation of specific play behaviors. The pre-interviews averaged 51 min (range 38–59), and the post-interview averaged 37 min (range 27–47). The post-interview also incorporated 5-point Likert scale questions adapted from Allen and Nimons' (2007) professional development evaluation survey and Johnson et al. (2016) Coach-Teacher Alliance measures. The questions within these two measures evaluated mothers' reactions to eCoaching as a means of professional learning and gathered information about changes in knowledge (e.g., The provided support that matched the needs of my family; My child benefited from my work with the coach.) To avoid any potential influence from the coach, the post-interview was conducted by a researcher not associated with the eCoaching cycle implementation. Interviews were audio-recorded, transcribed, and member checked through a transcript provided to mothers via email.

### Coaching Conversations and Logs

All eCoaching debrief conversations were video and audio recorded. Following each coaching conversation, information regarding coaching goals, resources shared with mothers, and discussions of next steps and visual representations

were added to an eCoaching log spreadsheet. In addition, the next steps, goals, and the date of the subsequent eCoaching session were emailed to the mother immediately following each session.

### Caregiver Observations

The observation data collection on mother and child interactions focused on a mother's play facilitation during a 10-min observation before virtual debriefing conversation. The determination of 10-min per observation was based on the time needed to gather data used to inform the subsequent debrief conversation. A total of six observations were conducted per dyad, serving the dual purpose of providing information for the eCoaching session and documenting possible growth over time in a mother's play facilitation. When viewing videos, mother and child interactions were given a code of 'good-fit' or 'poor-fit', using an adapted version of the integrated, responsive model of play intervention developed by Trawick-Smith and Dziurgot (2010) to capture interactions within dyad's play. Within this model, adults observe a child's natural play behaviors and determine an appropriate response (i.e., support or enhancement). A 'good-fit' interaction results in the child accepting the mother's support, and a 'poor fit' will not match the child's needs. See Appendix 2 for an overview of the adapted version of the integrated, responsive model used during eCoaching. Mother-child interaction coding incorporated interrater reliability between two researchers for 25% of observations equally distributed across participating dyads. The training was conducted on videos of dyads not included in the study, and maintenance training was conducted midway through the study. Interrater

reliability resulted in 93% agreement related to ‘fit’ and 83% agreement within subcategories (child need, adult behavior, child response).

### Child Observations

Children within each dyad were observed an additional five times. One observation was conducted before the start of six eCoaching cycles and another after all eCoaching cycles were completed. The remaining three videos were collected during three eCoaching sessions and were paced across the sessions with at least a week between observations. Data for child observations utilized a 10-s interval recording coded with Rubin’s (2001) Play Observation Scale (POS) and Barton and Wolery’s (2008) pretend play taxonomy. The adapted version of the Play Observation Scale (POS-A) allowed pretend and cognitive play behaviors to be captured. Throughout the study, POS-A coding incorporated interrater reliability between two researchers on 25% of data equally distributed across participating dyad. The training was conducted on videos of children not included in the study, with maintenance training conducted midway through the study. Total POS-A agreement was 93% across all categories.

### Researchers’ Positionality

Our positionality (predetermined set of beliefs and perspectives) and reflexivity (critical reflections throughout a study) is important to acknowledge when conducting qualitative research, since it is only through self-reflection that we can begin to understand how our experiences influence and contribute to our views (Trainor & Graue, 2014). Additionally, as we talk about our positionality and reflexive practices, the reader can then determine if our bias may have impacted the analysis. We both also have experience teaching in public schools. The lead author (coach) has seven years of teaching experience in early childhood and special education along with five years of experience as an instructional coach. The second author taught in early childhood/elementary classrooms for four years and directed an early childhood special education teacher preparation program for four years. Both authors have many years of experience working directly with diverse families. The first author identifies as a White female and the second author as a foreign-born Hispanic female. To facilitate program implementation consistency, only the first author worked directly with the dyads. Our frame of reference during data analysis was strongly influenced by our backgrounds and the mainstream education system in the United States, since we both participated in it in a variety of roles. Thus, our frame of reference was frequently subjected to critical analysis by us during the data analysis by employing an ongoing process of critical review (Merriam, 2009).

### Data Analysis

The data was organized and analyzed first as a unique case and then through a collective analysis. Individual case analysis involved qualitative, descriptive, and visual analysis across all instruments. Data analysis was ongoing and employed memoing and field notes to highlight initial trends. The individual case information was read, viewed, and reviewed to gain a sense of details per dyad (Creswell, 2009). An individual dyad analysis was followed by a cross-case analysis (Yin, 2017). During cross-case analysis, pattern matching was applied. Analysis attended to all evidence collected and plausible interpretations; components Yin (2017) considers high-quality case study analysis procedures. Pattern matching was utilized to support the overall internal validity (Yin, 2017).

Qualitative information was analyzed using an ongoing, interrelated, and simultaneous process that included (a) organization and data management, (b) reading and memoing of emergent ideas, and (c) describing and classifying codes into themes (Creswell & Poth, 2018). Sub-categories of codes (e.g., mom shares a facilitation idea, mom shares child strength from play observation) were collapsed into major themes (e.g., mom shares). A codebook was created using definitions and examples. Quantitative data included frequency of mother and child behaviors and duration data related to the eCoaching cycle to ascribe quantity. For this study, the eCoaching procedure fidelity, mother knowledge and understanding, mother facilitation, and child outcomes were matched across cases in conjunction with the theory that predicts eCoaching to impact these variables positively.

### Results

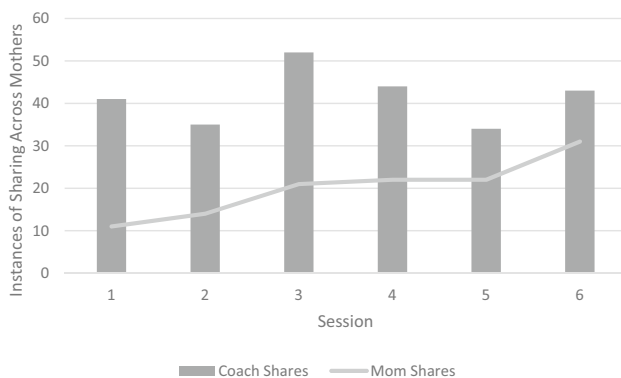
The research questions guiding our study examined the impact of eCoaching on caregivers’ understanding, facilitation, and influence on child behaviors. In the subsequent sections, we share cross-case results and themes related to these research questions. The final section of our results discusses the mothers’ perceptions of the validity of eCoaching.

#### Research Question 1: Understanding of Pretend Play

All mothers demonstrated increased identification of play-related developmental skills during their post-interview. These skills included increased mentions of vocabulary development, social skills, self-regulation, and creativity. During eCoaching debrief conversations, a primary strategy for building new knowledge was the mothers’ ability to connect to their background knowledge, experiences, and child’s development or interest. These instances were coded as “connections.” Over six sessions, Rebecca made the most

“connections” ( $n=22$ ), followed by Shannon ( $n=17$ ), Kristin ( $n=13$ ), and Laura ( $n=7$ ). Kristin and Shannon both had educational backgrounds and used their knowledge of pedagogy to connect with pretend play concepts, including the ‘goodness-of-fit’ model (Trawick-Smith & Dziurgot, 2010) and Vygotsky’s zone of proximal development (Vygotsky, 1930–1935/1778). Rebecca did not have a background in educator-specific pedagogy but connected to her role as a social worker regarding strategic observations and questioning during play. For example, when reflecting on the role of questioning with Amelia, Rebecca shared, “...there has just been a lot of work on that during my career...it has just flowed into this.” Laura, the only mother without a background in educational practices, demonstrated the least connections during debriefs.

Additionally, mothers increased their active participation in debrief conversations coded as “sharing.” Examples of “sharing” entailed observations mothers had made either inside or outside an eCoaching session, demonstrating the mothers’ ability to apply their knowledge to instances of pretend play. Kristin and Shannon, the two former educators, revealed the most instances of “sharing” and were the only two mothers who cited data from eCoaching session. For example, Kristin shared, “I think that he has gotten more verbal and using sentences and describing words once we have started the pretend play.” In contrast, Laura and Rebecca shared observations linked to instances outside the eCoaching observation. For example, Rebecca noted that throughout the week, she observed, “[Amelia] started giving little personalities and stories to play” with a baby doll. Each mother showed increased examples of “sharing” from their initial to final debrief conversation. Figure 2 shows the instances of “sharing” done by the coach during debriefs overlapped with mothers’ trajectory of “sharing.” The figure highlights mothers’ ability to actively engage in debrief conversations and become keen observers of concepts aligned with eCoaching goals.



**Fig. 2** Use of “sharing” during debriefs

As evidenced by post-interview responses, mothers expanded their understanding of pretend play and its benefits for their children. From pre- to post-interview, all mothers elaborated on what pretend play “could look like” for their child. These expressions were directly related to individual goals and behaviors in each dyad. Kristin and Shannon, the two mothers of sons with a disability, expressed goals specific to language and communication. Rebecca and Laura cited the ability to expand pretend play scenarios with a lens toward problem-solving and social interactions.

## Research Question 2: Facilitation of Play

As eCoaching progressed, mothers increased their efficiency in recognizing their child’s play needs and attending to that need appropriately, as evidenced by a moderate increase in the ability to resolve conflict demonstrated through ‘good-fit’ interactions. Trawick-Smith and Dziurgot’s (2010) definitions showed that the most common expressions of need across children were in *thinking/constructing knowledge*, *task completion/performance*, *engagement*, and *adult contact* (See Table 2). *Thinking/constructing knowledge* was most closely related to pretend play activities. Instances of *thinking/constructing knowledge* often relied on a request for pretend play participation based on the child’s ideas, an appeal for knowledge, or a question around a specific idea. For example, during play with Rebecca, Amelia insisted that the characters were “not sleeping because it is not nighttime.” *Task completion/performance* behaviors were most closely associated with games or craft-based activities where children often needed direct assistance to complete an action. Within the expressed needs of *thinking/constructing knowledge*, children repeatedly vocalized their desires as leaders of the play activity. Whereas in *task completion/performance*, children often relied heavily on their mother to guide them each step of the way.

**Table 2** Types of child interactions during eCoaching observations with mothers

Dyads & Groups	Shannon & Nick	Kristin & Harris	Laura & Mae	Rebecca & Amelia
TCK	31	39	38	32
TCP	30	9	60	23
Engagement	4	12	12	14
Adult contact	9	3	13	13
Social participation	0	1	0	0
Social conflict	0	1	4	0
Rules/routines	1	3	5	0
Overall	75	68	132	82

*TCK* thinking/constructing knowledge; *TCP* task-completion/performance

Across the six eCoaching sessions, mothers increased their capacity and efficiency in promoting ‘good-fit’ interactions with their children during play through an increased ability to attune to areas of need. For example, in encouraging Nick’s language while playing “office,” Shannon asked, “Is there an elevator in this building?” Nick responded that the building did have “two stories” and that the mattress was the second story. Kristin also demonstrated the ability to respond to Harris’s play through observation. For instance, when playing with dinosaur figurines, Kristin tried to encourage the utilization of characters by taking a “mother” dinosaur and exclaiming, “baby, where are you going?” Harris responded by removing the figure from his mom’s hand and putting it back in the block structure. After taking 26 s to observe Harris’s play intention, Kristin shifted to suggest an eating “lunch” scenario within the block structure. Harris accepted this suggestion by Kristin. When examining the mothers’ facilitation behaviors, mothers were generally more successful at achieving ‘good-fit’ interactions when the play activity related to pretend play based on the materials present (e.g., figures, functional play materials). Across mothers, play not utilizing the lens of pretend play resulted in an average of 80% ‘good-fit’ interactions compared to 95% when pretend play was the focus (See Table 3).

Kristin and Shannon demonstrated the highest percentage of ‘good-fit’ interactions from the beginning to the end of eCoaching. Rebecca initially exhibited a lower rate of ‘good-fit’ interactions but met Shannon’s levels by her final observation. Laura was the only mother to regress in her ‘good-fit’ interactions. The regression may have been due to variable play activities and a preference for games-with-rules play by her daughter. Variability in play actions contributed to a lack of consistency in applying coaching goals. By the final observation, Laura’s ‘good-fit’ interactions trajectory remained positive despite this regression. Across dyads, in the first and second eCoaching observations,

**Table 3** Percentage of ‘Good-fit’ interactions between mothers and their child

eCoaching Observation	1	2	3	4	5	6
Shannon & Nick	88	96	100*	84	89*	96*
Kristin & Harris	93	91*	62	97*	100*	100*
Laura & Mae	74	70	76	100*	90*	72
Rebecca & Amelia	87*	77	92*	81	96*	96*

\*Observation where pretend play was the primary activity and play behavior

pretend play-focused interactions represented only 25% of observations. Often children defaulted to a desire for play that involved games-with-rules or construction. However, pretend play interactions increased by the fifth (100%) and sixth (75%) sessions. As evidenced by the initial inconsistencies of pretend play-focused interactions, all mothers faced unique challenges in entering their child’s pretend play. In their post-interview, all mothers intended to continue facilitating play with their child directly in one-on-one interactions or by encouraging on the outskirts, as Shannon shared, being able to “seamlessly jump in and add an element” to expand her son’s play.

### Research Question 3: Children’s Play Behaviors

The five child observations revealed pretend play behaviors related to object substitution, assigning absent attributes, imagining absent attributes, and sequences (see Table 4). All children increased the presence of assigning absent attribute (AAA) behaviors in pre-, mid-, and post- observations, with Harris, a child with a developmental delay, not previously demonstrating AAA in his pre-observation. Nick and Amelia demonstrated AAA before eCoaching and increased these skills during eCoaching (Nick 5% to 72%; Amelia 36% to 77%). The use of roles was the main type of AAA used by both Nick and Amelia but by their post-observation, both used more emotions as part of AAA. Sequencing play behaviors showed moderate growth, with Harris demonstrating the largest growth trajectory, possibly due to the targeted goals set around this area during eCoaching.

No changes in behavior across children were observed related to imagining absent attributes (IAO). Observing IAO behaviors may be attributed to the tendency to imagine people, places, or things that occurred primarily in the child’s

**Table 4** Collective play behaviors on the Play Observation Scale (POS-A)

Child observation	All dyads				
	1	2*	3	4*	5
Pretend play behaviors	133	74	148	153	149
Verbalizations	62	68	97	98	104
Vocabulary	4	21	25	15	28
Functional play	61	28	46	31	84
AAA	25	55	72	91	127
IAO	11	24	3	24	3
OS	63	23	55	74	10
Sequences	63	45	131	87	134

AAA assigning absent attributes; IAO imagining absent objects; OS object substitutions

\*Data that was collected during mother and child interactions within eCoaching

head unless verbalized. For this reason, IOA was particularly present when children played with their mothers but less during independent play, particularly for Harris. Similarly, children did not demonstrate changes in their object substitution behaviors (OS), but unlike IOA behaviors, OS was not associated with the presence of a child's mother. However, OS was observed when blocks were incorporated into a child's pretend play, accounting for 139 of all OS intervals compared to 86 of OS intervals where blocks were not present. All children showed varied increases in their verbalizations and vocabulary within pretend play throughout eCoaching, with the largest gains associated with children exhibiting a speech-language delay (SLD).

During and following eCoaching, all mothers spoke of the admiration their child had expressed during time spent playing together. Shannon shared, “[Nick] would cherish the times, and so did I. I think I’ll probably incorporate a couple more sessions of times during the week where I could sit down and intentionally play with him more than I did before.” The benefit of dedicated play with her daughter was a major takeaway for Laura, who intended to make it a daily routine. The children's affinity in having their mothers as play partners was further highlighted in post-observation videos intended to capture independent play. Instead, all children sought ways to incorporate their mothers into their play, directly or indirectly. While mothers were encouraged to capture independent play, their child's desires often lent themselves to more direct engagement than previously experienced in the initial observation.

### Validity of eCoaching

When asked to reflect on their perceptions of eCoaching, all mothers valued the experience and knowledge they achieved. Praise for the coach-mother relationship and the eCoaching process were identified by all mothers and rated as “excellent” on the three components associated with the relationship (i.e., trust, approachability, and demonstrating a sincere desire to understand the mother's family and child). In her post-interview, Rebecca expressed:

[The coach] kind of got my personality as kind of sassy, kind of sarcastic...she is able to pick up on that...When she is talking to me about all sorts of things, it sounds like she is talking to me and not a student or a sponsor... she is not presenting to a board. She is just talking to me.

When discussing the idea of relationship, Shannon shared, “I think it was just good to feel like you had somebody else on your side to give you advice and feedback.” Shannon, Kristin, and Rebecca often felt isolated in their roles as mothers and saw eCoaching as a way to support their development as a caregiver. All mothers felt like the support

provided “matched the needs” of their families, and eCoaching goals were specific to their child. In her post-interview, Rebecca added that eCoaching felt “led” by her, with the coach serving as a “guide.”

Following six sessions of eCoaching, all mothers indicated that their “understanding of the facilitation” of pretend play was “excellent” (5 out of 5). All mothers indicated growth when rating their ability to “apply concepts to an actual problem or situation” around pretend play. Shannon shared that debriefing conversations were a valuable component of her learning. Shannon elaborated in her post-interview, “I liked to have [the coach] watch while we played and then report back. It was interesting that she was able to pick up on stuff I was not. That I had not really been thinking about.” Similarly, Rebecca shared, “[the coach] would pick out things that maybe I didn't notice or that I would not have thought to question.” Mothers expressed differing levels of satisfaction with eCoaching's ability to cover “topics in sufficient detail,” with an average rating of 4.25 out of 5. Laura, who indicated a rating of 3 out of 5, shared feelings about the lack of topics discussed outside of pretend play and a desire to discuss additional sub-topics (e.g., focusing on supporting child behaviors with losing a board game).

### Discussion

This study examined the influence of eCoaching on participating mothers' knowledge, understanding, and facilitation of pretend play while seeking to support their preschool child's play behaviors. Generally, the three mothers with prior knowledge and background experiences (e.g., connection to their job, educational background) enhanced their understanding of pretend play and play facilitation. They could draw on their existing knowledge to improve their understanding and support their child. Using existing knowledge is essential to adult learning principles as it allows for new information to be more accessible (Collins, 2004). Laura, the one mother with limited prior experience in eCoaching, demonstrated less reliance on background knowledge during debriefs. Consequently, Laura required more direct instruction to anchor her learning. Other virtual coaching frameworks have addressed the need for more direct upfront instruction (i.e., modules, group learning) before coaching (e.g., McDuffie et al., 2016). The contrast in how mothers could draw on prior knowledge to enhance their learning creates a need for eCoaching to consider this important element of adult learning.

Utilizing the adapted integrated responsiveness model, mothers increased their ability to facilitate ‘good-fit’ interactions with their child during play with a positive trajectory throughout eCoaching. Play interactions have been examined previously through the work of preschool-age



educators (e.g., Trawick-Smith et al., 2016). The mothers' interactions in this study expand previous interaction models to the home setting and link to similar responsiveness models applied to parents where caregivers were able to instinctively perceive their child's play needs and adapt where required (Haight & Miller, 1993). The two mothers without a background as educators demonstrated a more pronounced trajectory of change in terms of 'good-fit' as they experienced a lower percentage of 'good-fit' interaction at the onset of eCoaching. Further linking to the influence of prior knowledge, the two mothers with educational backgrounds were the only two dyads to eventually engage in play composed of 100% 'good-fit' interactions. Trawick-Smith and Dziurgot (2010) accounted for similar findings by associating advanced degrees in education and increased 'good-fit' interactions.

Additionally, the type of play mothers and children engaged in varied the ratio of 'good-fit' interactions observed, with pretend play more frequently yielding 'good-fit' interactions. The pretend play behaviors observed in these 'good-fit' interactions relate closely to the work of Vygotsky's (1930–1935/1978) zone of proximal development. Activities with lower ratios of 'good-fit' interactions, such as games-with-rules, have been deemed introductory for children ages four and five (Rubin et al., 1978; Smilansky, 1968). During these interactions, children demonstrated greater instances of 'much need' defined as an activity where the child could not proceed in their play topic and required more direct support from their mothers. By contrast, children demonstrated a greater frequency of the need for *thinking/constructing knowledge* when engaged in pretend play and required less mother-led support. Prior literature on the integrated responsiveness model of play has not made comparisons in the play activities or isolated context as a variable.

The engagement of mothers in children's pretend play allowed for incorporating skills less representative of other forms of play (e.g., AAA, OS). The utilization of adult prompting, a strategy frequented by mothers in eCoaching, has increased preschool-age children with disabilities' capabilities related to pretend play sequences (e.g., Barton et al., 2019), AAA (e.g., Stahmer, 1995), and vocabulary (Kim et al., 1989). Similarly, various discrete pretend play behaviors were observed, particularly mothers' facilitation of AAA, sequences, and vocabulary throughout eCoaching sessions. The context of pretend play allowed mothers to expand complex story sequences and emotions. Barton (2016) found pretend play relevant to social opportunities, and similarly, mothers voiced interest in the value of social problem-solving through sharing play ideas with their child.

Increased verbalizations and vocabulary were also elicited from children when playing with their mothers, particularly in the two children with an SLD. Within joint pretend play, both children and mothers relied on communication to

offer alternative ideas in the play (Bruner, 1972). In pretend play, expressive and receptive language development are key factors (Kızıldere et al., 2020). These behaviors increase in presence as shared communication is necessary to develop knowledge of non-literal actions inherent to pretend play (Fein, 1981). The creation of a shared understanding through communication is what Hakkarainen et al. (2013) considered a "joint play narrative." Pretend play narratives during adult-child interactions have been supported in previous literature as enhanced opportunities for higher-order thinking talk, specifically in children 4 to 5 years of age (Frausel et al., 2021). The American Academy of Pediatrics also highlights that less verbal children are more likely to express themselves through a playful context (Ginsburg et al., 2007).

### eCoaching as a Means of Support

Ultimately, mothers praised eCoaching as individualized and personalized—much of the foundation for these feelings related to the relationship mothers formed with their coach. This feeling aligns with what Gardiner and Weisling (2020) noted as holistic support that coaches provide involving relationship, trust, and rapport, as well as dissemination of knowledge. Additionally, Crane (2007) explains how trusting relationships lend themselves to connections and sharing within coaching, observed in mothers during their one-on-one debrief conversations. Mothers identified the coaching partnership as a supportive relationship, responsive to their child's needs, and grounded in collaborative work that established a sense of trust. Relationship-building within the eCoaching model aligns with the premise that coaches should take on a professional and emotionally supportive role (Bloom et al., 2005).

Adding to the literature on coaching, mothers in this study expressed feelings that they were the "greater beneficiaries" of eCoaching. Mothers expressed value in the opportunity to apply their learning and receive child-targeted feedback. Desimone and Pak (2017) have discussed coaching as a form of professional development and emphasize application practices. "Active learning" is associated with opportunities to practice and receive feedback on one's work, an underlying structure of the eCoaching procedure. This study highlights a similar sentiment around "active learning" practices in family-based professional learning.

### Limitations

While case studies provided rich descriptions of numerous variables that underscore the influence of eCoaching as support for family-centered practices through the medium of pretend play, limitations do exist. Creating a rich description of data and collecting multiple forms of data on dyads in a real-life setting relied on a small convenience sample

of participants and made it difficult to generalize findings across the field (Yin, 2017). In addition, data collection methods may introduce an influence of reactivity due to video collections and researcher engagement as a participant-observer. Participation as an observer adds a threat of bias (Becker, 1967) and unintended influence during eCoaching interactions (Bogdewic, 1992). Finally, observations relied on the selection of play that interested the child, which created inconsistencies in observations across and within dyads. More consistency across observation topics may have made the growth trajectory in mothers and children more distinct.

**Implications**

The study highlights important considerations for eCoaching practices in terms of learning structures. The process of eCoaching in the home setting holds potential for mothers wishing to support their child in various behaviors (e.g., language, social-emotional) through involvement in pretend play. The outcomes of this study contribute to the literature

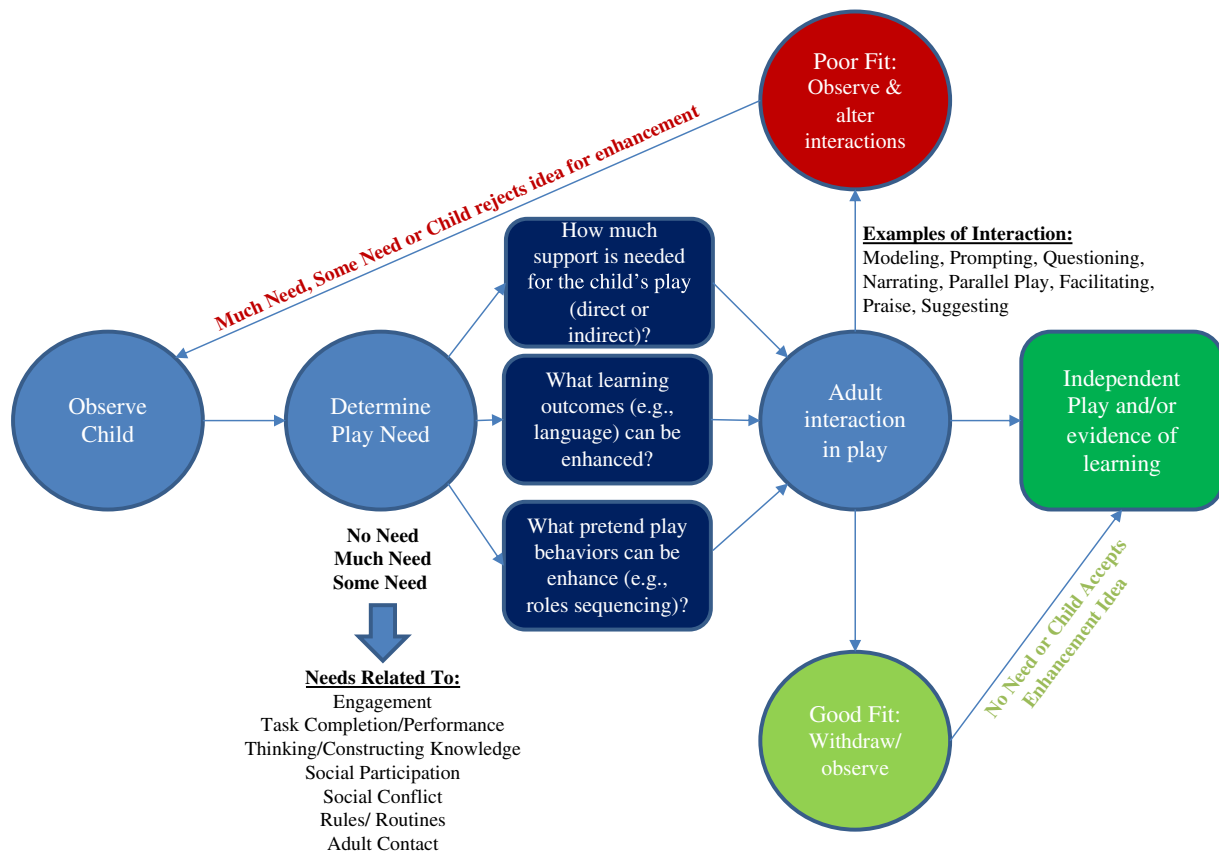
on play-based eCoaching as a viable method of support for caregivers. Early childhood educators and service providers may benefit from using an eCoaching structure focused on pretend play to facilitate family partnerships across several learning domains. This study also highlighted how individualized values, beliefs, and background knowledge contributed to eCoaching outcomes. For this reason, implementors of eCoaching should pay particular attention to caregivers’ background knowledge and experiences while exercising restraint towards assumptions of how to play is conceptualized for individual families and children. The ability to tap into individual family interests and needs requires providers to build trust and relationships, adhere to adult learning principles (Collin, 2004), and active learning (Desimone & Pak, 2017).

**Appendix 1: eCoaching Debrief Essential Elements**

Component	Coach actions
Relationship building	<input type="checkbox"/> Time is spent informally connecting with mother (e.g., how is your day going?, what did you do this weekend?).
Identify	<input type="checkbox"/> Coach prompts the mother on their perceived strengths from observation (e.g., what went well, how did you feel about...?). <input type="checkbox"/> Coach provides a representation of data gathered from the observation. The data representation may also include previous observations. <input type="checkbox"/> The coach and mother discuss the data or specific actions from observation. <input type="checkbox"/> Child behavior is connected to data gathered. <input type="checkbox"/> Coach and mother identify a goal related to the mother’s facilitation and/or child behavior. <input type="checkbox"/> Coach and mother identify a strategy connected to the goal set (e.g., prompting, play-planning, modeling).
Learn	<input type="checkbox"/> Coach targets learning around selected strategy. <input type="checkbox"/> Coach actively engages mother in method of learning (e.g., modeling, role play, direct instruction, video modeling). <input type="checkbox"/> Coach connects learning to previous learning, actions, and debriefs with mother. <input type="checkbox"/> Coach clarifies and checks for the mother's understanding of a strategy. <input type="checkbox"/> Coach connects learning to set goal (e.g., By prompting ____, we can support our goal of ____). <input type="checkbox"/> Coach connects learning to the mother’s strengths and/or child's needs and makes adjustments as needed to meet the family's needs.
Improve	<input type="checkbox"/> Coach and mother set goal related to strategy and data. <ul style="list-style-type: none"> <li><input type="checkbox"/> Goal is impactful to child needs</li> <li><input type="checkbox"/> Goal is attainable in given time</li> <li><input type="checkbox"/> Goal is child focused</li> <li><input type="checkbox"/> Goal connects data to strategy</li> </ul> <input type="checkbox"/> Coach and mother agree on date and time observation. <input type="checkbox"/> Coach and mother agree on date and time for next debrief.

Components adapted from Knight et al. (2015)

## Appendix 2: Integrated, Responsive Model of Play Intervention



Adapted from Trawick-Smith and Dziurgot (2010)

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