

**Real-Time Coaching with Bug-In-Ear Technology: A Practical Approach to Support
Families in Their Child's Development**

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Abstract

Variability in the quality of adult-child interactions among caregivers of young children can be problematic for children's development. However, professional development has been successful in improving caregivers' positive interactions with children. Blending principles of adult learning theory with technology-based coaching can provide a comprehensive intervention for caregivers of young children. This article highlights how bug-in-ear coaching can provide support to caregivers working with children who have disabilities or other risk factors. Suggestions are provided to support service providers in the planning and implementation of bug-in-ear coaching from a collection of research using bug-in-ear with both early childhood educators and parents.

Keywords: adult-child interactions, bug-in-ear, coaching, natural environments, professional development,

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Patrice had been struggling with her two-year-old daughter Adrianna's mealtime behaviors for six months. Unfortunately, in the past few weeks, Adrianna's behaviors had taken a turn for the worst. What began as simple refusals, had escalated into table pounding, throwing food, and running away from the table. Patrice had tried to manage Adrianna's challenging behaviors by keeping meals and snacks at consistent times and using predictable routines, such as sitting in the same chairs and using a mealtime mantra, "It's not a feat. It's time to eat! At the table, we are able!"

As early interventionist Manuela watched Adrianna and Patrice eat lunch at Adrianna's miniature table, she observed their typical mealtime challenges coupled with Patrice's frustration and exhaustion. During their previous early intervention session, Manuela had taught Patrice to use three behavioral strategies (contingent reinforcement, planned ignoring, and choice making), had modeled the strategies with Adrianna, and had provided Patrice with feedback and encouragement when she practiced using the strategies. However, in the heat of the moment, these three strategies were the farthest thing from Patrice's mind. "Patrice had mastered these strategies last week when I taught them to her! I wish there was a way I could help her apply the strategies in this situation," thought Manuela.

Experts and policy makers in early childhood special education unite in the concept that young children learn best through daily routines with familiar people in their natural environments (Division for Early Childhood [DEC], 2014). It is through these routines that practitioners and families have prime opportunities to interact with children in a manner that enhances healthy development. However, children are exposed to varying amounts of learning opportunities within their daily routines. For example, Noh, Allen, and Squires (2009) found that while early childhood special educators have embedded learning opportunities often during circle time and table activities, they seldom embedded

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learning opportunities into free play and snack activities. These, and other findings (e.g., Kashinath, 2002), suggest that while practitioners and families offer quality learning opportunities to children, they may need additional assistance generalizing the learning opportunities across daily routines.

Participant-based services (working with adults as they interact with children) are important because service providers can focus on the adult-child dyad, coaching families to provide more meaningful learning opportunities to children across routines (Campbell & Sawyer, 2009; Wallace & Rogers, 2010). Coaching aids in capacity-building by providing families with multiple opportunities to use new skills (Woods, Wilcox, Friedman, & Murch, 2011). Furthermore, practitioners, families, and children frequently benefit from coaching and recipients of coaching have reported positive experiences with the supports received (Buysse, Castro, & Peisner-Feinberg, 2010; Diamond & Powell, 2011).

An emerging practice in early childhood is real-time coaching. Real-time coaching is a process in which an individual (the coach) observes the adult-child interactions and offers suggestions and performance-based feedback to support the practitioner or family member to accurately perform targeted behaviors (Kretlow & Bartholomew, 2010). Real-time coaching follows the behavioral approach to coaching, which emphasizes promoting learning in the midst of real-world activities (Peterson, 2006). It also embeds key coaching elements recommended by Rush and Shelden (2011), such as solution-focused techniques, performance-based feedback, and hands-on opportunities in real-world contexts. The cycle of behaviors involved in real-time coaching is presented in Figure 1.

The purpose of this article is to describe a technology-enhanced form of real-time coaching that can enhance practitioners and families' capacities to provide learning opportunities across daily routines. Further, this article provides guidance for planning the location of coaching, materials to use, technology skills required, performance-based feedback, and evaluation of the coaching.

Bug-In-Ear Coaching

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Real-time coaching can positively impact adults' interactions with children, but it can also distract adults and children from the activity. Nonetheless, if real-time coaching is blended with technology there can be discretion in the provision of feedback, resulting in fewer distractions. Bug-in-ear (BIE) is a technology-based approach to real-time coaching that involves practitioners and family members wearing an earpiece and receiving feedback provided by their coach (Scheeler & Lee, 2002). BIE was first used to support novice psychologists administering assessments and counseling patients (e.g., Korner & Brown, 1962). In these studies and early educational studies (e.g., Crimmins, Bradlyn, Lawrence, & Kelly, 1984), coaches observed novice practitioners behind one-way mirrors in clinical settings providing feedback using FM radios or tape recorders. Since then, BIE coaching has transitioned to the child's natural home or community environment (e.g., Coogle, Rahn, & Ottley, 2014) and multiple advances in technology have occurred, such as using cell phones, web cameras, and video-conferencing (e.g., Ottley & Hanline, in press; Rock et al., 2014). Importantly, the advances in BIE technology continue to afford privacy so that practitioners and families can learn to use new skills accurately and effectively without the children becoming distracted and unengaged in the activity (Rock et al., 2012). Thus, BIE coaching can support practitioners and families' provision of learning opportunities presented to children and thereby enhance children's development.

BIE coaching has been used with pre-service and in-service teachers across various fields of education (e.g., early childhood, special education, physical education) and it has equipped practitioners and families for the real-world challenges faced by those working with children who have disabilities (e.g., Rock et al., 2009; Scheeler & Lee, 2002). For instance, BIE coaching has improved the quality and quantity of parent-child interactions and has assisted families in gaining strategies to manage their children's challenging behaviors (Crimmins et al., 1984). Researchers (e.g., Abrahamse et al., 2012) have demonstrated that BIE coaching not only improves outcomes for practitioners and families, but it

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also has the potential to improve young children's development. To illustrate, in Oliver's (2008) study, three mothers of children with autism spectrum disorder were taught to use prompts and praise with their children during routines at home. BIE coaching effectively enhanced mothers' use of these skills with their children and improved children's independence and engagement in routines.

Practitioners and families from diverse educational and racial backgrounds have enjoyed receiving BIE coaching and have perceived it to be an effective method for improving their interactions with young children (Ottley, Coogle, & Rahn, 2014). Practitioners have self-reported that BIE coaching helps them understand what they are doing well and what they could improve upon. Additionally, practitioners have (1) sustained the use of strategies after BIE coaching ceased, (2) generalized strategies to other routines, (3) taught the strategies to other practitioners in their center, and (4) improved in their instructional self-efficacy. Although some practitioners have reported challenges using BIE coaching in chaotic environments, these same practitioners have indicated that the intervention is manageable and less invasive than they thought it would be. Importantly, practitioners who have received BIE coaching report that they would recommend it to other practitioners and family members (Ottley et al., 2014).

Bug-In-Ear Materials

BIE materials are affordable and easy to use (Scheeler, McAfee, Ruhl, & Lee, 2006). The primary material is a communication system that electronically connects a coach's microphone to the practitioner or family member's earpiece. Possible BIE communication systems include technology such as the following: (1) portable, one-way (coach to coachee only) or two-way communication system (coach to coachee and coachee to coach); (2) cell phones; and (3) computers and tablets (e.g., iPad) with video-conferencing, web-based platforms. Most technologies offer two-way communication; although these capabilities are available, two-way communication is not necessary as long as the coach can observe the environment (either onsite or from a distance) and provide real-time feedback. In addition to

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the communication system, a microphone is required for the coach and an earpiece for the practitioner or family member. Some technology have these features embedded and would not require the extra materials; for example, if using a cell phone, the microphone for the coach to speak into is already embedded into the cell phone, and as such, a separate microphone is not required.

BIE Coaching with Manuela and Patrice

During a monthly staff meeting for Manuela's early intervention organization, the staff trainer described a type of coaching called BIE (for BIE trainings in professional development and higher-education contexts, see Riggie (2013) and Coogle and colleagues (2014), respectively). The trainer showed a video-clip of a practitioner receiving coaching during a child-led play routine in the classroom. In the video, Manuela observed the practitioner in socio-dramatic play with three children. As they were reading books to their baby dolls, the coach's voice was heard on the video praising the practitioner for asking an open-ended question and prompting her to offer wait time. At the conclusion of the video, the trainer passed out a one-page handout summarizing the steps for planning BIE and demonstrated BIE coaching live using a staff member as a recipient of the coaching. In the 30 minute demonstration, the trainer and staff had a discussion to plan the coaching sessions. Afterward they role-played a coaching situation typical of a book-reading activity. Staff members then asked questions about the intervention and had time to practice giving and receiving feedback with a colleague. Listening to the presentation, Manuela thought of multiple families who could benefit from real-time coaching and Manuela became increasingly excited about coaching Patrice during Adriana's mealtime routines.

After Manuela's training concluded, she gave Patrice a call to tell her about the new model of coaching. Manuela explained that BIE coaching could give her an opportunity to privately communicate with Patrice while she was interacting with Adrianna. Although this sounded interesting to Patrice, she was apprehensive about the real-time coaching. Manuela was empathetic about Patrice's concerns, but

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she encouraged Patrice to give BIE coaching a try, informing her that she would be receiving feedback from her supervisor on her performance coaching Patrice. This sounded good to Patrice, so she agreed. Their next step was planning for the BIE coaching.

Planning for Bug-In-Ear Coaching

The DEC (2014) has defined coaching as a way to support practitioners and families' interactions with children. BIE can be an effective means for providing practitioners and families with real-time coaching within a child's natural environment by enhancing the quality and quantity of instructional strategies that are embedded into routines. Importantly, BIE coaching aligns with DEC's (2014) recommended practices in the topic areas of environment, family, and instruction (see Table 1 for specific recommended practices that support BIE coaching).

Five chronological steps to planning BIE coaching are outlined below to support the implementation of the coaching intervention. At the end of each step, information is provided with respect to Manuela and Patrice's progression through the five steps.

Step 1: Determine the Coaching Location

When planning to use BIE coaching, the first step is to decide whether coaching will be provided onsite or from a distance (e-coaching). This step is important because it dictates the materials required to complete the coaching. Both onsite and distance coaching are effective methods for providing real-time feedback to achieve targeted outcomes for practitioners, families, and children (see Scheeler, Bruno, Grubb, & Seavey, 2009). Typically, the determining factor in deciding the location is *feasibility* for coaches. For example, when coaches are providing feedback to multiple individuals or when the individuals are located in remote places, e-coaching is often preferred (Rock et al., 2009).

Another factor in determining onsite versus e-coaching is the availability of high-speed internet access. A service provider may desire to use e-coaching with a family who resides 30 minutes away.

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However, if that family does not have the internet capabilities to support video conferencing then e-coaching is not possible because a requirement of BIE coaching is real-time feedback. For e-coaching this means the coach must be able to observe the adult-child interactions through the internet without experiencing disruption in the audio or video communication, as these disruptions create frustration (see Rock et al., 2014).

Finally, if coaching practitioners in an educational environment, the coach must determine if e-coaching is permitted. This typically requires obtaining prior permission to conduct the coaching sessions and careful consideration to ensure that all children's confidentiality is protected.

Importantly, for early intervention providers BIE coaching can be utilized in the same ways regardless of whether the coaching is provided in home- versus center-based settings. Both contexts offer the opportunity to support e-coaching, and similarly, both afford the opportunity to provide onsite coaching. Some subtle differences exist, however, in the provision of home versus center-based coaching. For example, when coaching in a center environment, it is important to determine whether coaching will occur when educators are using one-to-one, small group, large group, or a combination of these instructional groupings. In home environments, decisions regarding whether or not siblings will be included in the coaching session are considered. Families also frequently need support generalizing learning opportunities across routines and therefore, families may benefit more from BIE coaching that targets the generalization of behaviors across natural family routines (Oliver, 2008).

Step 1: Manuela and Patrice. *Manuela and Patrice discussed the options available for onsite versus distance BIE coaching. Manuela thought the BIE coaching could become a typical component of their regular, onsite early intervention sessions. Patrice was in agreement so they decided to conduct onsite BIE coaching.*

Step 2: Decide upon the Bug-In-Ear Materials

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After determining if BIE coaching will be provided onsite or from a distance, the next step is to decide upon the BIE materials. One of the most important considerations in determining BIE materials is the practitioners and family members' preferences. This could be in both the type of materials, as well as the quantity. For example, some families have extended family members residing in the home. In such a situation, it could be beneficial for multiple family members to wear walkie-talkies synced to the same frequencies. This would allow the service provider to coach multiple individuals who are involved in one routine. This could help build family members' capacities to support one another on an ongoing basis, even when the coach is not present. Finally, coaches should consult with practitioners and families to get a better understanding of the children in the environment and to gauge whether the type of materials selected are likely to distract the children. If this is a concern, then other BIE materials should be considered, such as those that are wireless, smaller in size, or typical for the child's environment (e.g., cell phones if they are commonly used by family members).

Another consideration is identifying the materials that are readily available. For example, if both the coach and the practitioner or family member have cell phones with unlimited minutes then these materials would be ideal for BIE coaching. Using materials that are currently available provide two main advantages. First, they save money because new materials would not need to be purchased. Second, because the materials have previously been used, it can be easier to implement BIE coaching as fewer technology-related skills will need to be learned (see Step 3).

Another factor to consider when selecting BIE materials is the anticipated cost for maintaining the technology. Some materials, such as walkie-talkies, have a one-time fee. There are the costs associated with purchasing the materials, but there are no ongoing fees associated with them. Other materials, such as cell phones, may have recurring fees. For example, coaches may use their own cell phone, but a second cell phone may be purchased so that practitioners and families do not need to use

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their personal devices. This means, there would be monthly fees for maintaining the phone's service. Determining if the funds are available to sustain the ongoing BIE materials is important to avoid interruption of coaching services.

In general, wireless earpieces (such as Bluetooth™) are preferred over wired earpieces so that the practitioner or family member wearing the earpiece has the most flexibility. Wireless earpieces are compatible with most cell phones and web-based platforms. Recent versions of one- and two-way communication systems also offer the option to sync with wireless earpieces and microphones that have “push-to-talk” capabilities. These accessories are making BIE coaching more feasible to implement.

A final consideration specific to e-coaching is the type of web-camera to use. Rock and colleagues (2012, 2014) have used wide-angle cameras to capture a larger picture of the environment. Other researchers (Coogle, Rahn, & Ottley, 2014) have used typical cameras with video-conferencing robots (such as Swivl™) that rotate the computer equipment (laptop, iPad™) to capture the environment as the adult and children move. Wide-angle cameras and video-conferencing robots enhance the feasibility of BIE e-coaching by presenting a better view of the environment for the coach to observe. Figure 2 presents a decision tree that can aid in the process of selecting BIE materials. Please note that this decision tree does not represent every situation that may be encountered when planning the type of materials to use and other questions may need to be asked based upon contextual needs and resources.

Step 2: Manuela and Patrice. *During a phone conversation, it was identified that both Manuela and Patrice had cell phones, so they decided together to use their phones as the communication system. Although Patrice did not have a wireless earpiece, she did have a set of in-the-ear headphones that synced with her phone. Therefore, these were selected for BIE coaching. Manuela suggested that Patrice only wear one of the two earbuds so that she could hear Adrianna clearly. This recommendation*

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pleased Patrice, so she agreed. Finally, to prevent Adrianna from becoming distracted by the phone, they decided that Patrice would keep the phone in her pocket during BIE coaching sessions.

Step 3: Confirm Technology-Related Skills

After BIE materials have been selected, it is important that everyone involved in the intervention understand how to use the technology. This includes the coaches, practitioners, and family members who will be giving and receiving BIE coaching. Table 2 provides an overview of technology-related skills helpful for these individuals participating in BIE coaching. To maximize the likeliness of effective implementation, it is beneficial to clarify these skills and procedures prior to starting BIE coaching.

Step 3: Manuela and Patrice. *Step 3 was easy for Manuela and Patrice because Patrice was using her own cell phone and earbud. Patrice already knew how to answer a call. She decided that before Manuela called her, she would have the earbud in her ear to make the initiation of coaching smoother. Additionally, if she was hearing static or the call quality was bad, Patrice decided she would hang-up the call. This would be Manuela's signal to call back, hoping for a better connection.*

Step 4: Determine Target Strategies and Bug-in-Ear Cues

Based upon the concerns and priorities identified by the family, strategies should be selected to be taught and coached. Lindell (2001) suggested that practitioners and families only learn a couple strategies at a time, so care should be taken in selecting two or three strategies that map onto the child's targeted developmental goals. For example, if a child is experiencing challenging behaviors, the strategies of positive reinforcement and choice making may be appropriate, whereas for communicative development, the strategies of descriptive talk and language modeling could be considered.

Importantly, when coaching practitioners and families to use target strategies, short, pre-established cues (avoiding sentences) should be used in the individual's preferred language to communicate the message in a concise manner. Families' priorities and concerns should be considered

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up-front, as well as throughout the coaching intervention so that the length of cues and the frequency in which they are provided is manageable. Additionally, coaches should ensure that the cues are positive and specific. Positive cues keep the individual encouraged throughout coaching sessions and specific cues provide precise information on the individual's performance. Along with a word cueing the practitioner or family member to use a target strategy, it is also important (especially at the beginning of coaching) to provide a word or two of extra guidance about how to use the strategy. For example, if a practitioner is targeting positive reinforcement, instead of simply providing a cue to "praise," the cue may be to "praise Jerome" or "praise sharing" (stating either the name of a child or a specific behavior). These types of cues are helpful in scaffolding practitioners and families how to use the new strategies.

When implementing BIE, coaches should avoid using the cues while practitioners, families, and children are speaking. Once there is a pause in the adult-child interactions, coaches should use these moments to provide praise for the strategies performed well in the previous interaction or prompts for practitioners/families to use a targeted strategy. After a few coaching sessions, practitioners and families should inform their coach if the cues are helpful as is or whether a cue either shorter or longer would be more beneficial. These aspects about when and how to cue are important considerations for BIE coaching to prevent the communication from distracting practitioners and families from their children and the environment. Finally, identifying a signal that the practitioner or family member can use to cue the coach of a question or concern is often beneficial in the event of technological difficulties.

Step 4: Manuela and Patrice. *During Adrianna's next home visit, Manuela and Patrice discussed the behavioral strategies. Manuela thought Patrice should continue to work on the previously selected mealtime strategies of contingent reinforcement, planned ignoring, and choice making. Patrice agreed emphasizing that mealtimes were still the most difficult part of the day. Manuela reviewed the behavior strategies with Patrice and the two of them selected the coaching cues praise, ignore, and*

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choice. Patrice wanted the cues to be brief, so Manuela said she would provide only one or two words of extra guidance on how to use the strategy. Manuela then called Patrice on the phone and they briefly practiced the cues before the morning snack routine began.

Step 5: Evaluate Bug-In-Ear's Effectiveness

After every couple of coaching sessions it is important to evaluate the effectiveness of the selected strategies and the BIE coaching. Although a strategy may have research literature indicating effectiveness it may not work with all children or in all contexts. Therefore, an openness to change strategies if they are ineffective is critical to ensure that children develop on their targeted outcomes. Furthermore, ongoing evaluation is a method to monitor the child's progress and mitigate problems early before they escalate into more serious concerns.

With respect to BIE coaching, the most common challenges experienced are multi-tasking and technology-related. For example, practitioners have indicated that it can be difficult to embed learning opportunities into classroom routines during times when the environment is chaotic (Ottley, Coogle, Rahn, 2014). Therefore, educators have chosen to ignore the coaches' feedback so that the immediate needs of the classroom could be addressed. Then educators would respond to the feedback when it was more manageable. If this or other multi-tasking challenges arise (e.g., a mother cooking during the mealtime routine), it would be beneficial for the coach and coachee to discuss the situation and identify a feasible solution to the challenge.

Technology-related challenges can be frustrating for coaches, practitioners, and families. Therefore, it is important to identify and resolve technology-related problems immediately. For example, some practitioners in Riggie's (2013) study found it difficult to focus when children were crying or the environment was loud. As a result, the coach muted the cell phone when feedback was not being provided so that the noise was not constantly heard through the earpiece. This simple action

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provided the much needed solution to this problem. However, had the practitioners not communicated this problem with the coach, the cell phone would not have been muted and the practitioners may have decided to cease coaching because of the discomfort.

Step 5: Manuela and Patrice. *Keeping procedures consistent with their previous home-visit sessions, Manuela and Patrice decided that they would debrief at the end of each BIE coaching session. During this time, they talked about the effectiveness of the strategies and the BIE coaching process. Manuela asked Patrice to try BIE coaching at least three times before she decided whether or not she would continue or discontinue the intervention. Manuela also asked Patrice to be completely honest with her at the end of each BIE session with respect to any negative aspects of the coaching so that they could be remedied before the next BIE session. Patrice liked the idea of sharing her concerns regarding BIE after each session and she agreed to try the intervention at least three times.*

Implementing Bug-In-Ear Coaching

Patrice and Adrianna's BIE interactions are described below, with Manuela's coaching presented in bold font. A photograph of the mealtime routine is provided in Figure 3 to aid in visualizing BIE coaching in natural environments.

*Adrianna is sitting at the table for her afternoon snack. "Adrianna, please eat." "No!" replies Adrianna shaking her head. "**Choice of food.**" "Adrianna, are you going to eat the pretzel or the banana first?" A long pause. "**Choice again.**" "Adrianna, are you going to eat the pretzel or the banana first?" asks Patrice pointing to the food items. "**Good choice.**" After another pause, Adrianna picks up a pretzel and takes a bite. "**Praise bite.**" "Great job, Adrianna! You chose to eat the pretzel first. Are you going to take another bite of the pretzel or will you eat a banana?" "**Great praise and choice!"** "Pretzel!" exclaims Adrianna holding it up and then eating the rest of it. "Great job finishing your first pretzel. You only have three more to eat." "No!" shouts Adrianna throwing a pretzel. "**Ignore***

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throw. Offer choice.” “Are you going to eat the banana or the pretzel next? It’s Adrianna’s choice!”
Adrianna shakes her head no. “Banana or pretzel?” asks Patrice holding one in each hand. “**Good ignore and follow-up choice.**” Adrianna takes the banana and eats it. “Good pick, Adrianna! I like how you are eating your banana.” “**Perfect praise!**”

Summary of BIE Coaching Implementation

These types of interactions continue until the mealtime routine concludes. Then, as Adrianna went off to play, Manuela and Patrice talked about the strategies and the coaching. Patrice indicated that she thought the choice making was very helpful for Adrianna. Manuela added that ignoring and reinforcement were keeping Patrice and Adrianna’s interactions positive in nature. Patrice added that the prompts helped her remember to use the strategies and the praise was encouraging because she knew she was using the strategies correctly.

From this short vignette, it is apparent how BIE coaching can be utilized to provide immediate and specific feedback to practitioners and families. In the mealtime routine, Patrice used the targeted strategies when she was prompted to do so, but, consistent with research, she spontaneously used the strategies as well (Coogle et al., 2014). Furthermore, Patrice received positive feedback multiple times from Manuela, building her confidence and reinforcing her continued use of the strategies.

Conclusion

Practitioners and families receiving BIE coaching enjoy receiving feedback and report satisfaction with the outcomes (e.g., McKinney, 2012; Ottley et al., 2014). A major benefit of BIE over other coaching methods is the opportunity for practitioners and families to receive real-time feedback in the midst of natural routines without interrupting the activity (Scheeler, Ruhl, & McAfee, 2004). Aligned with DEC’s (2014) recommended practices, BIE coaching is family-centered, provided in natural environments, and encourages collaboration. Thus, BIE coaching can be more meaningful to

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practitioners and families by quickly strengthening adult-child relationships and enhancing their capacities to implement evidence-based strategies. In turn, this can improve the quality of learning opportunities provided to children and thereby children's targeted skills. Nevertheless, careful thought must be taken when planning BIE coaching to maximize its success. Through thoughtful planning of the coaching location, materials, technology skills, strategies, and feedback, coaches can build the capacity of practitioners and families to interact more positively and intentionally with children with delays and disabilities, improving the likelihood of children achieving their targeted developmental outcomes.

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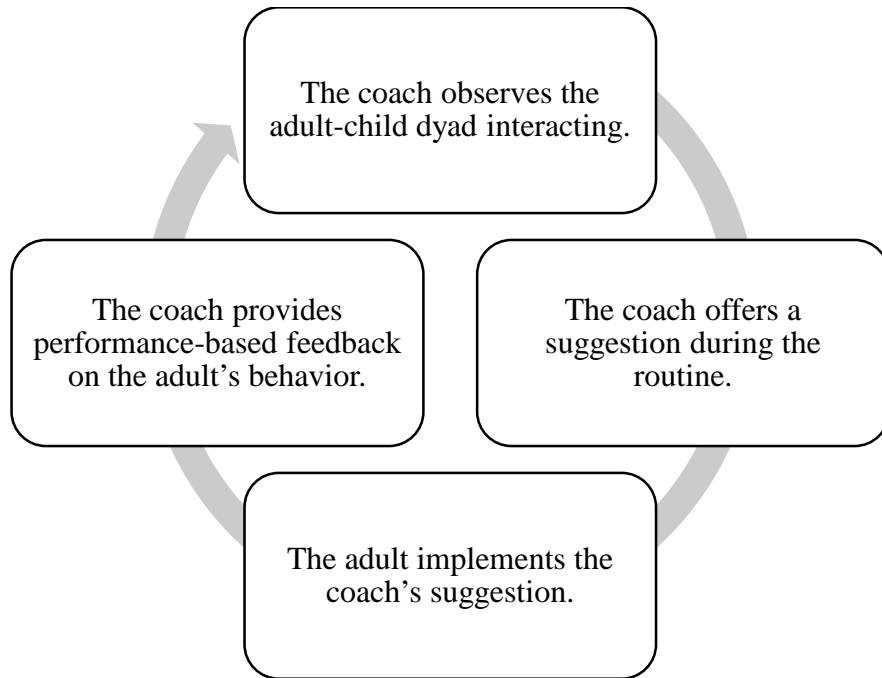


Figure 1. The continuous cycle of actions performed in real-time coaching.

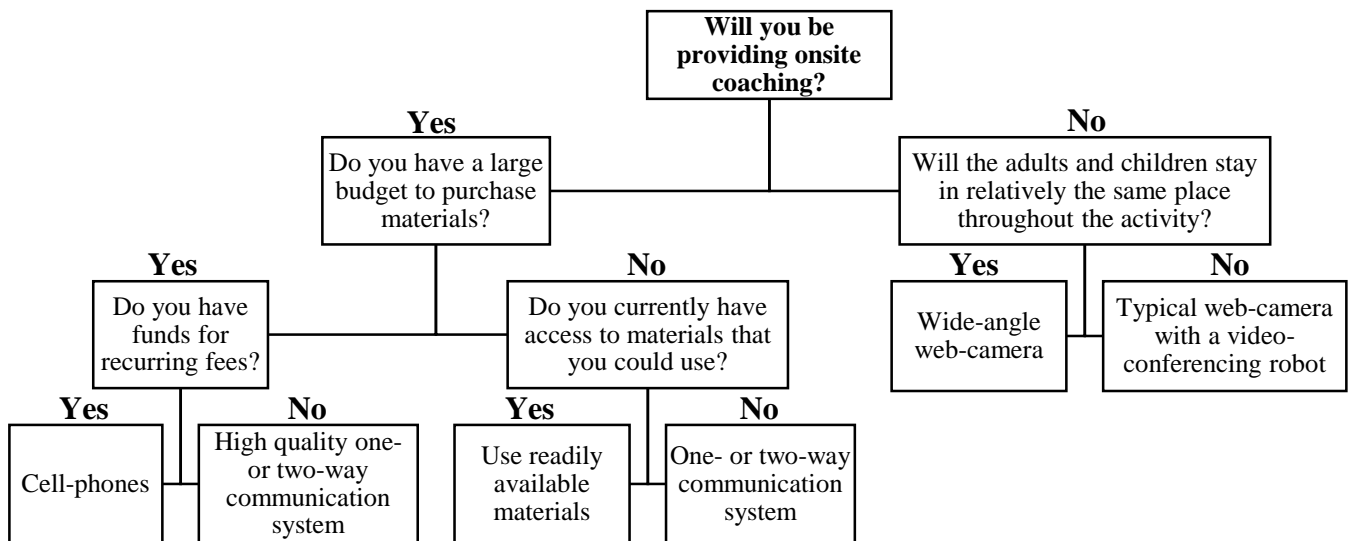


Figure 2. Decision tree of considerations and possible materials when planning for bug-in-ear coaching. Start with the bold question at the top of the decision tree. Then answer each question until you arrive at a communication system to consider for bug-in-ear coaching.



Figure 3. Bug-in-ear coaching with Patrice and Adrianna. The photograph was taken from Manuela's point of view. Manuela is sitting outside of the mealtime routine in close enough proximity to hear and see the interactions between Adrianna and Patrice. Manuela speaks into her cell-phone to provide Patrice with bug-in-ear coaching on the three targeted behavioral strategies. Patrice is wearing a wired earpiece plugged into her cell-phone which she placed in her right pocket. Patrice is only wearing the left earbud so that she can hear Manuela's coaching while listening and remaining attentive to Adrianna.