

From Uncertainty to Confidence: Implementation of a Cyrano de Bergerac Coaching Model in a Virtual Reading Clinic

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From Uncertainty to Confidence: Implementation of a Cyrano de Bergerac Coaching Model in a Virtual Reading Clinic

Cover Page Footnote

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From Uncertainty to Confidence:

Implementation of a Cyrano de Bergerac Coaching Model in a Virtual Reading Clinic

Christian stands under Roxane's balcony and speaks to her, using eloquent and poetic words to convey his feelings for her. Unbeknownst to Roxane, Cyrano de Bergerac stands beneath the balcony, whispering the exact words to say to Roxane. It works! Roxane comes to believe that Christian is a talented wordsmith and poet.

This is a scene from Edmond Rostand's 1897 play, *Cyrano de Bergerac*, and is the foundation for the current pilot study where we, the instructor and two graduate teaching assistants, used Bluetooth technology to feed prompts to tutors in a virtual reading clinic setting, a procedure that has been labeled as "Bug-in-Ear" (BIE) coaching. While our purpose was not akin to Christian's, we wanted to find a method to ensure that our preservice teachers (PSTs) develop a repertoire of what to say when a young child encounters a point of difficulty while reading instructional level text.

This study took place in the context of one university's reading clinic, where PSTs work one-to-one with elementary grade children who need additional support in reading. During this particular semester, all tutoring was conducted virtually over a web-based conferencing tool due to the COVID-19 pandemic. As part of their educator preparation program, our PSTs take several reading courses, depending upon their certification area, where they learn about the instructional method of guided reading. They learn how to: assess students' reading to determine where to begin instruction, write a guided reading lesson plan, and provide actual guided reading instruction to a child in a reading clinic setting. Other than the brief seven weeks of tutoring a child, they are afforded few other opportunities to practice what they have learned at the university prior to entering their field-based semester. Even fewer opportunities exist for reading

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clinic instructors to provide thorough feedback, as the reading clinic is run by one instructor who is responsible for teaching and observing 25 PST tutors. Coaching, where the instructor meets one-to-one with the PST tutor after observing their lesson occurs even less often, if at all. These coaching moments are crucial, because, during their tutoring sessions, the tutors are often unsure about what to say to their tutee when they encounter a point of difficulty during the reading of continuous text, forcing them to rely on one or two prompts (e.g., “Sound it out.”) over and over again (Hoffman et al., 1984). As such, we recognized a need to provide more intensive coaching and feedback that would be meaningful and timely and that would help our PST tutors internalize ways to prompt and reinforce strategic reading. This, in turn, would also ensure that the children they were serving would benefit more from lessons as they had before. Our response to this problem is that we might be able to accomplish these goals if we could be “in the ear” of our tutors while they engaged their tutees in guided reading instruction.

The purpose of this qualitative case study, then, was to explore the use of BIE coaching with PST tutors in a virtual reading clinic setting. The research question that guided this study was: In what ways does bug-in-ear (BIE) coaching impact PST tutors’ delivery of prompts and teaching points during the guided reading portion of their virtual tutoring sessions with second-grade children?

Theoretical Framework

Because this study was conducted with PSTs who, during this course and at the time of this study, were just beginning to learn and to practice how to prompt young readers while reading instructional level text, the coaching models coach as expert (Armstrong, 2012) and directive coaching (Ippolito, 2010) were implemented. The instructor’s role was to “provide information to help teachers understand whether they are implementing various strategies or

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approaches effectively” (Bean, 2021, p. 204). The “practice-based opportunities” (Benedict et al., 2016) were provided to the PSTs in this study as part of their coursework offered prior to their final year in the educator preparation program. This early experience was a prime time for the instructor to offer explicit demonstrations, or “expert performance” (Benedict et al. 2016), that can help students learn and implement best practices (Regan & Weiss, 2020).

Because the BIE coaching was implemented during the portion of the guided reading lesson where the child reads an instructional level text orally for the tutor, the live feedback included prompts and teaching points designed to help the child build a “self-extending system” (Clay, 2005b). This means that the tutor is helping the child to be independent by working strategically on text. These strategies include searching for sources of information (i.e., sense/meaning, visual cues and sounds; and structure/grammar); cross-checking one source against another; self-monitoring and confirming responses; and self-correcting miscues. Clay (2005b) asserted that the “teacher’s prompts and questions are critical” (p. 115) because the teacher is encouraging the child to try a new strategy (teaching), nudging the child to use a strategy they have been using, but using inconsistently (prompting), and celebrating a strategy the child has learned to use and is beginning to use independently (reinforcing).

Literature Review

Coaching is an effective method to provide preservice and in-service teachers with professional development (Coogle et al., 2018). Traditional post-observation is the most commonly implemented model of coaching. In contrast to post-observation feedback, however, which can take hours or even days to receive, real-time feedback is delivered immediately. During this method, a coach can observe, model, coteach, and provide feedback within the context of instruction (Schaefer & Ottley, 2018). Real-time feedback can be delivered in a side-

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by-side coaching model, where the observer is positioned next to the teacher; however, this may not be ideal because the learners are able to hear the feedback, and this might be distracting (Schaefer & Ottley, 2018). The capabilities of real-time feedback have been enhanced through the use of bug-in-ear technology (BIE).

Preparing Preservice Teachers for Facilitative Talk During Guided Reading

Responsive teaching, delivered in the form of teaching, prompting, and reinforcing, are components of guided reading that distinguish it from other small group reading instruction (Fountas & Pinnell, 2012). When teachers teach, prompt, or reinforce a strategy during guided reading, they are responsive to the specific behavior of the learner and to guide the learner to problem solve when they encounter a point of difficulty (Fountas & Pinnell, 2017). The teacher uses succinct language for the purpose of helping the reader use a previously taught strategic behavior (Fountas & Pinnel, 2017; Lipp & Helfrich, 2016). To ensure that the text does not present too many obstacles for the reader, texts are selected at the readers Zone of Proximal Development (ZPD, Vygotsky, 1978), based on oral reading accuracy (Marinak, 2009) in order allow readers to expand their independent skillset (Copple & Bredekamp, 2009).

Fountas and Pinnell (2017) provide a gradual release progression of instructional moves for supporting students' use of self-correction behaviors. First the teacher models the desired behavior and say "*Watch me check it, (read the sentence). Yes, it looks right and makes sense*" (Fountas & Pinnell, 2017, p. 393). Once the strategy has been modeled, the teacher can prompt the student to use the strategy with a question such as, *Does that sound right?* After seeing the student successfully use the strategy without being prompted, the teacher can reinforce the student's use of the strategy by saying, *You made that look right sound right and make sense*

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(Fountas & Pinnell, 2017, p. 393). See Table 1 for examples of teaching, prompting, and reinforcing (Fountas & Pinnell, 2017, p. 135).

Table 1

Prompts for Attending to Visual Information

Reading Behavior	Prompt
Use visual information (first letter) to predict a word.	<i>Get your mouth ready for the first sound.</i>
Use visual information to predict, check, or confirm reading.	<i>Say _____. What letter would you expect to see at the beginning or end of that word?</i>

**from Fountas & Pinnell, 2017*

Hoffman and colleagues (1984) offered recommendations for providing prompts during guided reading instruction, such as limiting feedback to miscues that impact meaning of the reading. They also found that students engage in more self-correcting behaviors when teachers provide wait time and limit “terminal feedback,” also known as telling the student the word (Hoffman et al., 1984, p. 381). Teaching during guided reading necessitates a skillful qualitative analysis of the reader’s miscues (Clay, 2005; Goodman, 1967).

Teacher preparation programs face the task of developing metacognitive awareness in PSTs so that they can make decisions about when to use facilitative language and responsive teaching (Griffith et al, 2016). Learning to make the most of communicative choices during guided reading lessons can feel ambitious and overwhelming (Mikita et al., 2018). The challenge for PSTs is compounded due to placements in clinical settings where scripted literacy curricula are used in combination with overemphasis on accountability measures (Griffith, 2008). And currently, there is a push in schools to use structured literacy approaches in place of balanced literacy approaches (Griffith, 2008). In fact, a study of PSTs’ use of prompting during guided reading revealed that 46% of all in the moment decision making was done to select word solving prompts or decoding strategies (Davis et al., 2019).

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Bug-In-Ear Coaching

Historically, barriers and concerns to implementing BIE coaching have included high cost and limited access to technology (Brzycki & Dudt, 2005) as well as the necessity of tethering the teacher to a communication device with wires (Sanders, 1966; Stumphauzer, 1970). Bluetooth technology has helped to alleviate these concerns by increasing access to low-cost technology that enables an instructor or coach and the teacher or tutor to be free of wires and cords, whether in person or remotely (Randolph et al., 2020; Scheeler et al., 2012).

In terms of social validity, authors of BIE coaching single case studies (Artman-Meeker et al., 2017; Scheeler et al., 2012) reported that teacher participants found the immediate, in-context feedback to be helpful, and they did not find the Bluetooth device distracting. Participants in the study conducted by Artman-Meeker and colleagues (2017), however, indicated that they found BIE feedback harder to follow while working with more than one student at a time. Participants in Scheeler and colleagues' (2012) study reported that it was necessary to explain the use of the webcam and earpiece to students, and that once these items were explained to students they were not distracting.

Another important aspect of the success of BIE coaching is the relationship between the instructor/coach and the teacher/tutor for the purpose of fostering openness to receiving real-time feedback while teaching (Herold et al., 1971; Regan & Weiss, 2020). Herold and colleagues (1971) conducted a study of real-time feedback for teachers using a portable radio, and an implication of this study was the importance of the coach to understand the teacher's feelings about being given unsolicited advice while teaching. The authors stated that the coach and teacher need to reach an agreement regarding the behavioral objectives of the intervention prior to the coaching session, thus working to develop a solid working relationship (Regan & Weiss

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(2020). Artman-Meeker et al. (2017) echoed this by recommending that BIE sessions are followed by a debriefing with the coach. There should be an understanding that the BIE coaching process is intended to foster professional growth and improve instructional practices; it is not an evaluation of the teacher or tutor. Lesson observers should emphasize to participating teachers that BIE coaching is a partnership and an opportunity for taking risks and becoming empowered by receiving feedback within the context of instruction.

Coaching Preservice Teachers in a Clinical Setting Using Bug-in-Ear Technology

Research indicates the utilization of virtual BIE coaching is a viable means to support new teachers when working with students in the classrooms (Goodman et al., 2008; Horn et al., 2021; Israel et al., 2013), as it increases effective instruction and student learning (O’Handley et al., 2021). Successes of this type of virtual coaching are also prevalent in research on BIE coaching for PSTs (Rock et al., 2009; Scheeler et al., 2006; Scheeler et al., 2010). PSTs who have participated in virtual coaching share that the support is helpful and manageable (Coogle et al., 2016), and they find the technology in the ear to be non-distracting (Scheeler et al., 2010; Scheeler et al., 2012). Specifically, researchers have posited that BIE coaching provides PSTs with a positive experience that includes specific, effective, and immediate feedback (Randolph et al., 2020; Regan & Weiss, 2020; Wake et al., 2017).

A systematic review of single case studies using BIE coaching conducted by Schaefer and Ottley (2018) revealed that it is an empirically supported, evidence-based practice for providing instruction to PSTs. Of the 17 studies included in the review, 79% reported that it was important to familiarize participants with the technology prior to the coaching session. A salient point of this review indicates that BIE coaching is well-suited for teachers residing in remote or rural locations, or teacher preparation programs that cover large geographical areas. Ault et al.

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concurrent with the use of BIE in rural schools, especially during the COVID-19 times (Ault et al., 2020). It is also prudent to note that research also indicates technological challenges such as technology setup and audio difficulties.

Methods

This qualitative multi-case study examines the real-time coaching of PST tutors, conducted by their instructor in a virtual reading clinic setting. Data was collected in the form of tutoring session and coaching recordings and transcripts, a focus group interview recording and transcript, and the primary researcher's field notes.

Role of the Researchers

The first author was the instructor of record for the course, Reading Assessment and Intervention. She has over 20 years in the field of reading education, having served as an elementary classroom teacher, reading specialist, Reading Recovery© Teacher, and literacy coach. She is currently an associate professor at a regional university and researches literacy coaching, reading clinic design and implementation, and emergent readers' processing of texts. The second and third authors are doctoral students in curriculum and instruction. One has a background in special education, and the other has worked extensively with preschool learners.

Setting

This study took place at a regional university in Texas. PSTs who were seeking certification in Early Childhood-6 reading, special education, bilingual education, or secondary content areas tutored children as part of the requirements for a reading assessment and intervention course during the fall 2021 semester. Pre-pandemic, the tutoring sessions occurred on the University campus; however, from fall 2020 up until the spring 2022 semester, all tutoring occurred via Zoom. The tutors taught from a location of their choice, and the children

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participated from home in the evenings or on weekends using laptop devices that their school provided for them. The tutoring sessions began the sixth week of the course and ran for seven weeks, one hour per week. The tutors were provided with a lesson plan template that included high frequency word work, letter identification and letter formation work, the reading of a new text, and phonemic awareness and phonics lessons.

Participants

Study participants included both PST tutors and their tutees (children). We asked PSTs to participate based on their superb attendance in the course and their positive interactions with their tutees. Three students demonstrated interest in participating. All identified as white females; two were traditional aged juniors, and one was a second-career student enrolled as a junior. All three were seeking Early Childhood – 6th Grade reading generalist certification. Their three tutees assented to participate as well. All three were female, seven years old, and in second grade at the same school, and two identified as Hispanic and one as Black.

Data Collection Procedures

The instructor for the course, joined six virtual tutorial sessions (two sessions for each of the three tutors) over Zoom using her laptop computer and communicated with the tutors via phone. They used a provided Bluetooth earpiece. The BIE coaching occurred during the latter lessons (fourth, fifth, or sixth sessions out of a series of seven) only during the guided reading portion of the lesson, where the tutor provided a brief book introduction of a leveled text, invited the child to read the text orally, discussed the book with the child, and delivered a teaching point. This part of the lesson lasted an average of 17.8 minutes over the six coaching sessions. During the child's oral reading of the text, the course instructor provided prompts for the tutor to try when the child encountered a point of difficulty and suggested teaching points to follow the

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child's reading of the text. The tutors recorded their lessons using the recording device built into Zoom and, the instructor recorded her coaching prompts on an iPad.

For the purpose of this study, guided reading is defined as "...a context within which students engage with a rich variety of texts and are taught how to build an effective and efficient reading processing system" (Fountas & Pinnell, 2017, p. 10). After the teacher provides a scaffolded introduction to the text, the children read the text on their own, out loud if they are emergent or early readers. As the children are reading, the teacher listens in, takes notes on reading behaviors, and reinforces, prompts, and teaches reading strategies as the need arises. A brief discussion about the text follows the children's reading, as well as a brief teaching point that is decided upon in the moment while the teacher is listening to the children read.

Other forms of collected data included instructor field notes and a transcript from a focus group interview with the three tutors. The two graduate assistants conducted the semi-structured focus group interview (see Appendix for interview protocol), which lasted 30 minutes 13 seconds and was later transcribed.

Data Analysis

To analyze the focus group interview transcript, the researchers used line-by-line coding for the purpose of capturing specific phrases the tutors used to describe their experiences with the coaching sessions. These codes were then grouped into categories: overall experience, learning how to prompt and teach, feelings throughout the coaching process, technology use, working with a coach, and tutor suggestions for the next semester. See Table 2 for categories and examples of each category. The research team used the categories determined from the coaching session transcripts and focus group interview to code the instructor's field notes.

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Table 2
Categories and Examples from Focus Group Interview

Category	Example of Category
The overall experience	<i>It [the coaching] really helped me even for my other lessons where she wasn't even in.</i>
Learning how to prompt and teach	<i>I found myself saying prompts I probably wouldn't have said if someone wasn't in [her] ear saying "try this."</i>
Feelings throughout the coaching process	<i>Confident Natural Good for us</i>
Technology use	<i>There's everything happening at once.</i>
Working with a coach	<i>We're always talking about using scaffolds for children's learning but it's good to also have that support to fall back on.</i>
Suggestions for next semester	<i>I would like another session with coaching during the entire lesson.</i>

To analyze the six coaching session transcripts, the research team determined the codes a priori, separating the prompts that were fed to tutors by the sources of information (meaning, structure, visual) the instructor was prompting for as well as other reading strategies. The instructor chose to use the prompts based on each child's reading of their text. The codes were then grouped into categories: source of information, cross-checking of information, scaling a prompt up or down, letting an error go, encouraging the child to check on themselves to confirm a response, and teaching a strategy as a teaching point following the child's reading. See Table 3 for categories and examples of each category. In order to present the findings seamlessly, themes from each data source were woven together under the following sections: tutors' reactions regarding the BIE coaching experience and coaching content.

Table 3
Categories and Examples from Coaching Sessions

Category	Example of Category
Source of information	<i>Tell her to cover up that part that says ice.</i>
Cross-checking of information	<i>Ask her what kind of car it might be that starts like /r/.</i>
Scaling a prompt up or down	<i>Could the word be coins or medals?</i>

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Letting an error go	Child read <i>Hedgehogs are pointed</i> for <i>Hedgehogs are pointy</i> . As the child was an emergent reader, I encouraged the teacher that was close enough for now.
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Trustworthiness and Ethical Considerations

After securing IRB approval and recruiting the three tutors, the research team then had to make sure that they had “trio” approval for each participant; in that consent was required from the tutor and the parent and assent from the child. Participation in the study was voluntary, and participation or non-participation did not impact the tutors’ performance in the course. In order to avoid undue pressure on the tutor participants, the two graduate assistants for the course led the focus group interview.

In order to establish trustworthiness of the collected data and data analysis, the research team implemented several measures. First, they collected three types of data –transcripts from the recorded lessons and associated coaching sessions, the instructor’s field notes, and the transcript from the focus group interview with the three tutors. Second, the graduate assistants led the focus group interview to prevent any feelings of pressure that may have occurred had the instructor led the interview. Third, the tutors were provided the opportunity to review the focus group interview transcript as a form of member checking. Finally, the graduate assistants reviewed the instructor’s coding of the coaching session transcripts as a form of peer review.

Findings

The findings will be presented under two main categories, based on the coaching session transcripts, the focus group interview transcript, and the instructor’s field notes: the tutors’ reactions regarding the BIE coaching experience and coaching session content. Each of these is

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further elaborated upon to provide a description of what occurred during the lessons and the tutors' own experiences during the virtual coaching sessions.

Tutors' Reactions Regarding the BIE Coaching Experience

The tutors shared how working with a literacy coach (also their course instructor) helped them to shift from experiencing feelings of nervousness and uncertainty to confidence in their abilities to support young readers. They also shared what it was like working with the technology and how future BIE coaching might be enhanced.

From Uncertainty to Confidence

The PST tutors discussed at length how this particular coaching experience helped them to prepare for their futures in teaching young readers. Emily and Addison shared that they are “hands-on” learners. As Emily explained, “I cannot just read something and know how to do it. I have to mimic, see, watch, and then do it.” Addison added, “Reading about it and going over it in class is one thing. During lecture, we’re taught you should say this or that, but actually like being in the lesson saying, ‘right here is where you can use that prompting technique’.” Most students take the reading assessment and intervention course the year prior to their formal field-based experience, so the tutors discussed how tutoring with immediate feedback helped them prepare for their future extended time in classrooms.

When participants were asked to describe how they felt about BIE coaching, their responses were positive. They used the words “seamless,” “easy,” “amazing,” and “smooth.” Enjoyment was evident especially in Kyla’s statement, “I felt like it was just relaxed. I was thankful she chose us. I was like ME?! There was just someone who was uplifting me and said ‘good job, try this.’” These descriptions from the PST tutors align with field notes recorded after

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each coaching session. The instructor wrote that the first session (Emily 1, 11/1) went “extremely well,” setting a positive tone for subsequent sessions.

Prior to the coaching sessions, the tutors were unsure about the BIE process. Emily expressed she “didn’t know how it was going to work” and thought, “What have I gotten myself into?!” She explained during the first of the two coaching sessions, she found herself “waiting for her [the instructor] to tell her something” but the second session “felt more natural.” A lack of confidence emerged at times when the tutors were not sure of how to respond to their tutees’ reading miscues or pauses and that this was stressful at times. However, all three tutors shared that the feedback was helpful, so much so that Kyla said “If I didn’t hear something [a fed line], I would think of what she [the instructor] would have me do.”

During the interview, following a discussion of some of the feelings of nervousness the tutors experienced, they naturally shifted toward sharing how they overcame the uncertainty of the BIE coaching process. Emily and Addison talked about how, once they figured out the process during the first coaching session, the second session “went amazing[ly]” (Addison) and felt “natural” (Emily). They said that they began to feel “confident” and that the experience taught them that they “can do this” (Addison). Kyla added that the experience was “good for us” and that it “pushes you to get out of your boundaries and try something new,” thus taking a risk to improve and enhance their teaching.

Working with a Coach to Learn How to Teach, Prompt, and Reinforce Strategic Reading

All three tutors mentioned the gradual release of responsibility they received through the BIE coaching. Addison likened this to what she was learning in her courses when she stated, “We’re always talking about using scaffolds for children’s learning but it’s good for us, too. To also have that support to fall back on.” Kyla spoke about emulating the professor during lessons

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when she said, “I found that where she backed off more I kinda said what she would have me say. So I found myself being more like Dr. [blinded] in the sixth session than in the fifth.” Two tutors also added that the personality of the instructor (coach) matters as well when they shared, “Dr. [blinded] is very helpful and patient” (Kyla) and “You (i.e., a coach) have to know the audience you’re working with since some people are strong-willed” (Emily).

The tutors reported there were times during the coaching when the prompts just “clicked,” as Emily indicated when she shared, “She [the instructor] would say, ‘I think that could be a good teaching point,’ and I was like, ‘Oh! That makes sense!’” The positive confirmations helped Emily to persist in her study of prompts. Rather than being told things to “fix,” she was provided with support that could help her build on what she had already learned to do while listening to a child read. Addison added to this idea, saying, “It [the coaching] really helped me even for my other lessons where she wasn’t even in. It was just like using what I already know in a different way and knowing exactly when to do it.” The following entry in the instructor’s field notes exemplified the positive interactions: “The prompts I used tonight with [the tutor’s] student were right on point! That felt good. [The tutor] did a wonderful job with the book introduction. She repeated the prompts exactly as I fed them to her” (11/10).

During the interview, the tutors explained the ways in which the BIE coaching not only gave them something to say to their student at points of difficulty, but also helped them take on new prompts and teaching points. Kyla said she “found [her]self saying prompts [she] probably wouldn’t have said if someone wasn’t in [her] ear saying ‘try this’.” This same tutor also relayed an experience where the instructor “jumped in” and directed her to pull out a dry-erase board, write the word with which the student was having difficulty, and cover the unknown part. The tutor shared how excited she was when she said “It worked!” and the child was able to use this

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strategy again in subsequent lessons. Emily expressed that hearing prompts made her think, “This isn’t as hard as I was making it out to be,” indicating that her confidence in delivering prompts and teaching points was increasing.

Tutors’ Recommendations for Future BIE Coaching

When the tutors were asked for suggestions regarding ways to improve and enhance the BIE coaching experience, they provided ideas for subsequent semesters. They discussed that more coaching opportunities during the course would be helpful and that perhaps these should be distributed throughout the tutoring experience, having one during the text reading level assessment administration, one during the second lesson, and one or two closer to the end of the tutoring sessions. Another suggestion was that the instructor provide coaching throughout the entirety of the lesson, rather than solely during the guided reading portion of the lesson, thus providing help with letter identification, phonemic awareness, and phonics instruction. The tutors also wanted to receive the transcription of the session (i.e., Emily – What did she tell me again?”) so that they could review this along with the lesson video and study the prompts and teaching points that the coach fed to them.

Coaching Session Content

After reading and coding all six coaching transcripts, five patterns emerged in how the instructor fed lines to the tutors. These are: using semantic, grammatical, and graphophonemic sources of information to problem-solve at a point of difficulty; cross-checking sources of information; moving up and down a scale of help (scaffolding prompts); and monitoring and confirming responses while reading. Coaching sessions 1 and 2 for each tutor are delineated by their name followed by CS (coaching session) 1 or 2.

Using Semantic, Grammatical, and Visual Information to Problem-Solve

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There were four instances where coaching was provided for the tutor to give the child a prompt related to using semantic information to figure out a difficult word. The decision to provide a prompt related to meaning was made because of the nature of the point of difficulty and the type of word. Kyla's student came to the word *white* while reading about a snowman. The instructor told the tutor to ask the student "what would make sense?" As this did not assist the student, she delivered a more specific prompt for the student to "look at the color of the snowman," to which the student provided the accurate response (coaching session [CS] 2). In another instance with the same tutor and child, the instructor suggested that the tutor direct the child toward the illustration. This also helped the child produce the correct word.

During Addison's lesson (CS2), the child read "They wait closer" for "They went closer." This was a good opportunity to teach the tutor about prompting for grammatical cues. The instructor used the prompt, "Tell her what she read and ask her if that sounds right." The tutor did just that and the student responded with "No. They went closer." This prompt was effective in that the student did not just respond with *yes* or *no*; she also made another attempt. The instructor then made sure that the tutor supported this behavior with "Good checking."

The majority of the cues provided for tutors during their students' guided reading lessons targeted the use of graphophonemic information. Using analogy is a helpful tool when figuring out an unknown word. For example, Emily's student (CS1), stopped at the word *tame* while reading. During an earlier portion of the lesson where the child practiced a few high frequency words, the tutor invited the child to write the word *came*. The instructor said to the tutor, "This looks like a word she made today. It looks like the word *came*." The tutor prompted the child by saying "This looks like a word you made earlier today. Remember the word *came*?" The child then spelled the word on her own and responded with *tame*.

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Another strategy for figuring out words that involves using visual cues is finding known parts of words. When Emily's (CS1) student came to the word *iceberg* in her book, she was unsure what to do. The instructor fed this prompt to the tutor: "Tell her to cover up the part that says *ice*." Her tutor repeated the prompt, adding, "Cover up the part that says 'ice' and let's look at that. What is that first letter you see?" After the child responded with this part of the word, the tutor helped her to sound the parts of the remainder of the word.

Cross-Checking One Source of Information Against Another

In order to help the PST tutors understand the importance of teaching children to cross-check one source of information against another, the instructor modeled prompts that exemplified this strategy. During Kyla's (CS2) lesson, her child stopped at the word *race*, occurring just before the word *car*. The instructor wanted the child to use two sources of information, so she fed the following prompt to the tutor: "Ask her what kind of car it might be [meaning] that starts like /r/ [visual]." This resulted in an accurate reading by the child. In another instance, Emily's (CS1) reader read the sentence *A monkey is noisy but a rabbit is quiet* (for *quiet*). The tutor provided a prompt that guided the reader toward using meaning – "What would be the opposite of noisy?" – a helpful prompt since the tutor had discussed during the book introduction that the text was about opposites. The instructor wanted the child to consider more than one source of information, so she added "*And that sounds like /kw/.*"

Scaling the Help Up or Down

Teachers need to know when to move up or down the scale of difficulty when prompting. Sometimes, a prompt is too general and does not direct the child exactly where to look or what information to use. Other times, a prompt might be too specific, thus not allowing the child the space to problem-solve. One example occurred with Kyla (CS1). The child came across the word

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medals; however, the word *medals* resembles the word *coins*, which is how the child identified them. The instructor suggested that the tutor try the following prompt: “That is a good try. Could the word be *coins* or *medals*?” After noticing the first letter of the word, the child responded with the correct word. Another example is when Emily’s (CS1) child read “[skipped word] is soft, but plums are...” and then asked “what’s that word?” The tutor told the child to look at the first two letters. Because the child did not respond to this prompt, the instructor scaffolded the prompt further and said, “Tell her to say the sounds that the first two letters make.” This resulted in an accurate response from the child.

Teaching the Child to Monitor and Confirm

Because the children with whom the tutors were working were not yet confident readers, teaching them to check on themselves in order to build a self-extending system (Clay, 2005a) was imperative. The instructor wanted the tutors to not only provide prompts and move on, but also invite their tutees to determine for themselves how they were making shifts in their strategy usage. During Kyla’s (CS2) lesson, for example, there was an exchange focused on using meaning as a source of information between the tutor and tutee that resulted in accurate reading. After the child responded with the accurate word, the tutor was instructed to say, “Start at the beginning of the sentence again and check your reading.” The child obliged and was able to confirm her response for herself.

Discussion

We proposed to meet several goals by engaging PSTs in BIE coaching. The first goal of the BIE coaching project was to help children work strategically on text by closely working with their tutors. The tutors heard language that promotes proficient reading and effective reading instruction. By feeding prompts and teaching points to the tutors to deliver to their tutees, they

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learned what effective feedback sounds like. Teachers need to have a repertoire of prompts under control in order to make quick decisions to support readers (Parsons, 2012). The children directly benefitted from this project because they received prompts and teaching points by expert teachers via their novice tutors.

During the focus group interview, the tutors' comments that were related to the BIE coaching experience served as evidence that they shifted from uncertainty to confidence (e.g., "I got better with practice"). The real-time, authentic feedback was intended to help them take these skills on board quickly and meaningfully (Hattie & Temperly, 2007; Scheeler et al, 2006). The reading clinic setting presented a perfect venue for this type of coaching. Even though students have taken reading courses, prior to taking the reading assessment and intervention course, where they hear about, study, and write about assessment and instruction involving children's reading of continuous text, authentic experiences with teaching and coaching help novice teachers practice in-the-moment decision-making (Griffith et al., 2016).

The tutors involved in this study stated they were given the chance to receive coaching in a risk-free and safe environment where they could witness how prompting and teaching come together to encourage shifts in a child's strategic activity on text. We selected the guided reading portion of the lesson for coaching because of the first author's past experiences with working with PSTs in the reading clinic and inservice teachers in schools where, quite often, teachers are unsure how to prompt readers at a point of difficulty and what to teach after the students read the text. Davis et al. (2019) and Hoffman et al. (1984) found that preservice and inservice teachers predominately rely on prompts related to helping children decode print using only visual sources of information. While young children, especially, need to learn to examine the visual features of letters and words in order to produce accurate reading, there are also other sources of information

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(semantic and syntactic) that they need to account for. While the instructor (coach) in the current study fed the tutors prompts that were intended to help the child use visual information, she was also sure to present prompts that directed the children toward thinking about the other sources of information and how to integrate all sources.

The second goal of the BIE coaching project was to use technology in innovative ways. Rather than a coach physically sitting next to the tutor and child, thus potentially distracting them, the coach was only “in the ear” of the tutor (Scheeler et al., 2010, 2012). This enabled the coach to view lessons and provide coaching from any location. There were challenges mentioned by tutors, such as the amount of many things “happening at once (Addison).” The instructor also experienced the difficulties of managing several devices, as noted in her field notes. These set-up challenges have been documented in the literature (Coolge et al., 2016; O’Handley et al., 2021). The tutors suggested, in the future, it would be helpful to give everyone time to practice with the technology prior to the actual coaching session. At the conclusion of the study, however, the tutors stated that they enjoyed the BIE process and found it helpful and easier to manage with practice. Similar findings were reported in Coogler et al.’s (2016) study.

The last goal was to implement the delivery of feedback and coaching in the context of an early field-based experience to help prepare PST tutors for their future classrooms (Wetzel, 2017). Evidence from the focus group interviews indicates this goal was accomplished, as the tutors commented several times regarding how “positive” the experience was (Cohen et al., 2020). This was a unique opportunity for them to receive feedback in that it was immediate, supportive, and constructive. Through coaching, they not only learned what to say to their tutees; they also learned skills they could use with future students (Peterson et al., 2009).

Implications for Practice and Research

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Implications for future BIE coaching projects emerged in the form of lessons learned, as there are adjustments that can be made to ensure smoother implementation of this type of coaching in the future. For instance, instructor preparation is paramount. The coach needs to review the child's assessment data, particularly the running records taken to determine the child's reading level, prior to coaching so that they know something about the child as a reader. The instructor and coach should also meet to review the child's assessment data prior to the coaching session. These actions will help the instructor study prompts and take note of which ones might be tried during the lesson. This practice will also serve as a model to the tutors, as the instructor frequently reminds them to build a repertoire of prompts. Timing also presented as another issue. The coach who will be feeding the prompts needs to instruct the tutors to provide their tutees with wait time when they encounter a point of difficulty while reading. This wait time will also give the coach some a moment to think about which prompt or reinforcement might be the most effective to use. In addition, the instructor needs to be cognizant of their tone during BIE sessions. A gentle, encouraging, and neutral tone works best for this kind of coaching, as there is already pressure on the tutor to perform during the lesson.

This project has implications for work in our University's educator preparation program. We anticipate using this technology for coaching in other courses, especially field-based courses where our preservice teachers are working with children. Faculty can also implement this type of coaching with practicing teachers who are enrolled in graduate programs. Regarding content, bug-in-ear coaching is not limited to reading and language arts teaching; faculty can collaborate to implement the technique while working with field-based and clinical teachers in math, science, social studies, arts, and physical education settings, among others.

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Literacy study graduate students are often involved in the reading clinic to observe lessons and provide feedback. They can practice their observation and coaching skills by engaging in BIE coaching under the supervision of the course instructor. Although it may be somewhat complicated, there may also be opportunities for the instructor to coach the graduate student as they are coaching the tutor.

While this pilot study was in progress, questions arose that might be answered through future research. Because we are hoping for transfer of what the tutors learned during the coaching sessions, it might be fruitful to conduct two BIE coaching sessions with tutors and record the tutors' lessons without coaching. Researchers could review the lesson transcripts for how the tutor provided prompts and teaching points on their own after participating in coaching. A study using an experimental design could also be conducted, comparing strategic work on text of children whose tutors engaged in BIE coaching versus those who did not.

Limitations

Because the study was a pilot, we implemented coaching sessions with three tutors in one course. We also realize that these tutors may have participated because they were strong University students who always seek more opportunities to learn. We only had access to the second-grade children we had recruited for the virtual reading clinic, which actually was ideal because these children did have difficulties reading print. Even though the virtual instruction worked in our benefit, making it easier to provide BIE coaching sessions, the technology did take some time and practice to set up and use.

Final Thoughts

Cyrano de Bergerac fed lines to his friend, Christian, to help him when he did not know what to say during a situation he found to be stressful. During this study, the instructor of a

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virtual reading clinic implemented a similar process, however with a very important distinction. Our goal was not only to give tutors a prompt or teaching point to repeat to their students; we also wanted them to learn from the experience, to use these prompts again during future lessons, and to think about other facilitative language they might use when their readers get “stuck.” BIE coaching helped us accomplish exactly this with our three tutors, and we are confident that they will carry forward into future teaching experiences what they learned.

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Appendix

Focus Group Interview Protocol

1. Have you ever done anything similar to this before (bug-in-ear; coaching)?
2. Talk about your experiences being coached during your tutorial lessons.
3. Talk about your experiences being coached during your tutorial lessons using the bug-in-ear technology.
4. What were some helpful coaching moments?
5. What were some unhelpful coaching moments?
6. How can you see this technology and process being used in other preservice teacher education courses?
7. How can you see this technology and process being used with practicing teachers?
8. What suggestions do you have for future coaching with the bug-in-ear technology?

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