HOW PRESERVICE TEACHERS USE LEARNER KNOWLEDGE FOR PLANNING AND IN-THE-MOMENT TEACHING DECISIONS DURING GUIDED READING

by

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ABSTRACT

In this qualitative case study, the authors examined how university preservice teachers enrolled in a reading methods course planned and taught guided reading lessons to Kindergarteners attending a local school. Using knowledge of the learner as their guide for pedagogical decisions, participants reveal what the authors believe is an indication of how developmentally appropriate decision making skills develop among early career teachers. Participants display decisions, both in-the-moment and in planning, that showcase focused efforts to notice and utilize information about their learners to drive instruction. Researchers examined what types of decisions preservice teachers made in addition to what element of the learner each decision pertained to. PSTs drew upon these various facets of the learner to plan and teach their guided reading lessons.

Keywords: preservice teachers, decision making, guided reading, learner knowledge, adaptive teaching

How Preservice Teachers Use Learner Knowledge for Planning and In-the-Moment Teaching Decisions During Guided Reading

Introduction

"I think one of the most important factors that affect our decisions as teachers is using the student's knowledge as the foundation to all of our pedagogical and content decisions." -Preservice teacher [PST #1]

The National Association for the Education of Young Children's position statement on developmentally appropriate practices espouses "expert decision making" as a key to exemplary teaching (Copple & Bredekamp, 2009, p. 5). Indeed, early childhood teacher educators have a professional responsibility to prepare early childhood teachers to make informed, developmentally appropriate instructional decisions. The preservice teacher's (PST) statement above echoes a key tenet of early childhood education that has been consistently discussed in the literature: teacher knowledge is foundational to effective instructional decision making (Authors, 2015; Barbour, 1986; Goldstein, 2007; NAEYC 1991).

Teacher knowledge has been studied by scholars in multiple subject areas, including mathematics (e.g., Ball, Thames, & Phelps, 2008; Wood, 2003), social studies (e.g., Gudmundsdottir & Shulman, 1987; Sung & Yang, 2013), science (e.g., Henze, van Driel, & Verloop, 2008; Juttner, Williams, & Park, 2013; Loughran, Mulhall, & Berry, 2008)), and secondary English (e.g., Grossman, 1990). Importantly, what a teacher knows about teaching and learning must be translated into practice. This requires, among other forms of knowledge, "intimate knowledge of the children...achieved by direct involvement with them" (Schwab, 1973, p. 502). Research that affords PSTs with opportunities to work one-on-one with young children

to make planning and in-the-moment (ITM) teaching decisions can inform teacher educators about how knowledge of learners can inform teaching decisions.

The purpose of this study was to investigate the planning and ITM teaching decisions for guided reading lessons made by PSTs enrolled in a reading methods course as part of their early childhood teacher preparation program. In particular, we wanted to learn how PSTs use knowledge of the learner to guide their teaching decisions.

Literature Review

Teacher Knowledge and Exemplary Teachers

In 2000, the International Literacy Association, (ILA, then the International Reading Association) drew upon the existing body of research related to teacher effectiveness to craft the position statement on excellent reading teachers. ILA declared that effective reading teachers: 1) understand the reading process; 2) use informal and ongoing formative assessment to monitor children's individual literacy progress; 3) use the results of informal assessment to plan for and implement future instruction; 4) know a variety of ways to teach reading with an array of diverse materials; and 5) provide support strategically. Findings from studies of exemplary teachers reveal that responsive, adaptive teaching is a hallmark of effective teaching (Hoffman & Pearson, 2000; Pressley, Allington, Warton-McDonald, Block, & Morrow, 2001). Therefore, we ground this study in the work of scholars who study adaptive teaching (Hoffman & Pearson, 2000; Morrow, Tracey, Woo, & Pressley, 1999; Parsons et al., 2011), responsive teaching (Gambrell, Malloy, & Mazzoni, 2007; Pressley et al., 2001; Vaughn & Parsons, 2013), and effective teachers of reading (Duke & Pearson, 2002; McGee, Kim, Nelson, & Fried, 2015). Teachers who are responsive adapt instruction and make in-the-moment teaching decisions based upon verbal and nonverbal feedback from students.

Teacher knowledge sits at the center of effective teaching decisions, with teachers drawing upon their teacher knowledge to make informed and effective instructional decisions (Authors, 2015). Therefore, we also align our work with the vast body of scholarship on teacher knowledge (Borko & Putnam, 1996; Graham, Borup, & Smith, 2012; Grossman, 1990; Nilsson, 2008; Wilson, Shulman, & Richert, 1987). Specifically, our work is guided by knowledge of the learner.

Teacher knowledge includes knowledge of the learner. Speaking in the most general of terms about the learner captures ideas about their motivations, preferences, personalities, and backgrounds but it does not delve deep into the intimate understandings of each individual's strengths and needs as readers. It is this in-depth knowledge that allows teachers to make teaching decisions. This knowledge of the learner reaches far beyond the learning styles and personalities of the individual to include the precise knowledge of the learner's strengths and needs. This knowledge comes from informal assessments, formal assessments, and watchful observations. It is the knowledge that allows for individualized instruction. Scholarship by Clay (1982), Owoki, and Goodman (2002), and summarized by the Committee on the Prevention of Reading Difficulties in Young Children (1999) maintain that by observing children's reading behaviors teachers can understand the strengths and development of individuals' reading processes. Clay claimed "every teacher must be qualified as a decision-maker to answer instructional questions and to make decisions between equally effective and attractive practical alternatives, taking into account the present characteristics of the particular children she is trying to teach" (1982, p. xii). It is this principle of knowledge of the learner upon which this study is based.

Teacher Decision Making

Characteristic of effective teaching, responsive teaching might also be described as teacher decision-making. Shavelson (1973) argued that teaching *is* decision making. He claimed that "any teaching act is a result of a decision, whether conscious or unconscious" (p. 18). Given the demands of classroom dynamics, robust curricular obligations, and the ongoing need to assess student learning, teachers make hundreds if not thousands of decisions each day. Many of these decisions occur as intuitive and subtle with little conscious attention given to them, while others decisions present as more overt and deliberate (Authors, 2015). Additionally, teaching decisions may occur during the planning process (Author, 2014) as well as in-the-moment of teaching (Authors, 2015).

Building on scholars who studied teacher decision making in the 1980's (Parker, & Gehrke, 1986; Shavelson & Stern, 1981), others are resurrecting this important construct as they seek to understand how scripted instructional programs and increased accountability (Author, 2008) and mandated curricula (Author, 2011; 2013; Corno, 2008; Duffy et al., 2008; Vaughn & Parsons, 2013) affect teaching decisions. Furthermore, professional organizations for teacher educators are taking note of the importance of teacher decision making as well. In 2009, the ILA called for professional development to focus on teacher as decision-maker. In an effort to empower and encourage responsive teaching characterized by in-the-moment and planned teaching decisions, Authors (2016) engage teachers in a process called *metacognitive decision making* wherein teachers are asked to notice, reflect on, and evaluate their planned and in-the-moment teaching decisions. Findings from this study reveal that the process of talking about teaching decisions reinforces the attention to which teachers pay to the process.

Guided Reading

A widely accepted and commonly used instructional context for reading instruction in the early childhood grades, guided reading "is a small group instructional context in which a teacher supports each reader's development of systems of strategic actions for processing new texts at increasingly challenging levels of difficulty" (Fountas & Pinnell, 2017, p. 12). Guided reading is not a time to teach skills in isolation; rather is a time for readers to engage in the dynamic process of solving words on-the-run while attending to fluency and expression, while also building meaning page by page. Because the instruction is tailored to the strengths and needs of the individual students within the guided reading group, it is a fertile ground for teaching decisions.

In 2009, Hiebert summarized the then developing body scholarship related to the characteristics of texts for beginning and struggling readers. She challenged the potential "(mis)match between texts and students who depend on schools to become literate" (p. 1). Text selection plays a critical role in reading instruction, particularly guided reading. In order to meet the range of students' needs, teachers select texts that are true representations of text level while not losing sight of a crucial, overarching goal: selecting texts that thoughtfully "engage readers' thinking" (Fountas & Pinnell, 2017, p. 386). Fountas and Pinnell (2017) maintain that text selection is far from simple. They recommend attending to a number of factors during the selection of guided reading books. Teachers need to seek out diverse, high-quality guided reading books that can be read in one setting. These texts should provide a "reasonable challenge," be consistent in structure across pages, and provide students with opportunities to build a repertoire of "strategic actions they can apply to reading other texts" (p. 108).

Methods

We utilized qualitative case study methodology to answer the following research questions: 1. How do PSTs use knowledge of the learner to make *planning* decisions? 2. How do PSTs use knowledge of the learner to make *in-the-moment* (ITM) teaching decisions?

Participants and Context

Twelve participants were purposively selected (Creswell, 2009) from among 61 university PSTs seeking early childhood/elementary teacher certification at a private university in the southwest. These students were enrolled in the second author's required reading methods course in Spring 2016. In addition to the 30 hours of fieldwork completed for the teacher education program, participants also taught guided reading lessons for four weeks at a local elementary school. We called this the Guided Reading Project. The second author also supervised this additional field experience which occurred during the regularly scheduled class time.

All four visits to the elementary school lasted 120 minutes: 30 minutes devoted to lesson briefings and preparing for the arrival of the students, 30 minutes for guided reading instruction (15-20 minutes for guided reading lesson, 5-10 minutes for word study, and 5-10 minutes for writing), and 60 minutes debriefing with the second author and planning for the next week's lesson as well as learning new course content. Each PST was assigned to work with one or two Kindergarten students. Baseline reading levels were provided by the classroom teachers and served as a starting point for instruction. Table 1 shows tasks completed for the Guided Reading Project during each of the four visits. During the initial lesson, the PST administered an interest inventory to learn about the students' interests and background experience. Additionally, PSTs asked the Kindergarten students to read aloud from a leveled text. In this task of "kidwatching" (Owoki & Goodman, 2002, p. 2) the PSTs took notes on observable reading behaviors (e.g.,

tracking print with eyes, return sweeps, cross-checking, self-correcting, one-to-one matching, and reading with fluency) as students read aloud.

[Insert Table 1.]

Because we were interested in exploring how PSTs were learning to utilize teacher knowledge to inform planning and ITM decisions, we reviewed pre- and post-assessments to determine which PSTs made notable growth in their use of the language of a knowledgeable reading teacher. For the pre- and post-tests, all 61 preservice teachers responded to a video of a child's reading behaviors during a guided reading lesson. Responses were coded based on the precision of language related to reading behaviors. We identified 18 of 61 PSTs who had provided informed consent for their coursework to be used for research as having consistently strong, descriptive reflections of reading behaviors (i.e., using phrases such as "child uses one-to-one matching" rather than "child points to words with his finger"). Our research team then pulled these 18 students' completed Guided Reading Projects for further examination. Of the 18 initially identified, we removed those who were not present on all four teaching days, those who did not work with the same student each day, and those who worked with more than one student for their assignments. Data for the remaining 12 PSTs became study participants, and each PST was considered a case. The first author masked all of the data from participants' Guided Reading Projects, removing all identifying information for analysis. In reporting our findings, all names are pseudonyms.

Data Collection

Data came from what we call the Guided Reading Project, comprised of the four assignments that were part of the second author's assignment described above. Seeking to capture PSTs' planning and ITM decisions regarding knowledge of the learner, our research

team selected specific portions of the Guided Reading Project to analyze. Altogether, there were 12-13 written artifacts analyzed for each case (See Appendix A for a list of assignment prompts).

Example prompts to elicit planning and ITM teaching decisions are as follows:

1. Planning: *What level is this text, and why did you select this particular book? Carefully consider the characteristics that make this text easy/hard and explain how these characteristics match the strengths/needs of the readers in this student.*
2. In-the-Moment: *You began the lesson with a detailed and thoughtful plan, but teaching does not always go according to plan. Teachers make hundreds of "in-the-moment" teaching decisions every day. What "in-the-moment" teaching decisions did you make? Why did you make them? What sources of teacher knowledge were you drawing upon to make those decisions? Were they effective and how do you know?*

Data Analysis

Data were analyzed using constant comparative methods (Corbin & Strauss, 2008). First, the authors read through and discussed three cases (25% of the total number of cases). Using analytic memos, conclusions were drawn about participants' decision-making, as well as which components of participants' assignments to code in light of the research questions. The authors developed and refined a coding framework (described below) using an iterative process as the first three cases were analyzed. The first author coded the other nine cases independently, taking careful memos and reporting findings back to the other authors during peer debriefing.

For data analysis, we defined text selection as the careful consideration of the supports and challenges presented in a leveled text for guided reading. For instance, a text may be considered supportive because of the amount of picture support that would not only add to the overall meaning of the text, but would also assist with solving unknown words. Text selection

considerations might also include the relatability of the text to the students' lives. A text with a plot centered around a lost dog might be considered more supportive than one set in the 1800's. Text selection criteria not only relates to the complexity of the words and the ideas, but also requires a careful matching of the demands of the text with the current strengths and control of decoding and comprehension strategies of the readers encountering those texts.

We defined word solving as the strategies a reader uses or a teacher prompts for when decoding unknown words. Throughout the course, the professor taught the PSTs that "sounding out" words letter by letter was only one way to solve words, and in most cases not the most efficient word solving strategy. Instead, PSTs were encouraged to build upon Clay's (1991) work related word solving strategies. Word solving strategies included: 1. Using meaning to solve words (including the use of picture supports); 2. Rereading the sentence and thinking about what word would make sense and look right; 3. Using parts of words to solve unknown words (eg. *ay* in *stay)*; 4. Solving words in cumulative letter-by-letter analysis.

Further, we defined comprehension decisions as those related to meaning-making. These decisions included examples of students making personal connections to texts, relating one text to another, discussing the literal and inferential details, thinking about how characters feel based upon what they say or do, and exploring lessons learned from the text and/or characters.

In order to determine participants' knowledge of the learner as it relates to reading instruction, the researchers first noted all instances where participants mentioned the learner in their Guided Reading Projects. From there, the team looked for specific evidence of the following: concepts about print; comprehension, monitoring and/or self-correcting and cross-checking; word-solving, fluency and expression. Additionally when participants named the type

of reader they were working with (e.g., “quiet reader;” “struggling reader”), these comments were coded as knowledge of the learner.

Next, a three-step coding process was used to answer the research questions (See Figure 1). For step 1, PSTs’ teaching episodes were coded as either “planning” or “in-the-moment” (ITM) and were then copied onto two documents: one for planning decisions and one for in-the-moment decisions.

In step 2, planning and ITM decisions were coded for *which aspect of knowledge of the learner preservice teachers used to make a decision.* The following codes were used for planning decisions: student interests, student personality, student reading level, student needs, student strengths, and student reading goals. The following codes were used for ITM decisions: student personality, student needs, student strengths, student reading goals, student behaviors (pertaining to classroom management), student reading behaviors displayed (derived from watching students read), and student comprehension levels displayed.

Within each of these new categories, Step 3 of the analysis involved examining *what element of the guided reading lesson each decision was related to*. For planning decisions, decisions were coded according to: text selection, pacing/sequencing of lesson, book introduction, teaching points, word solving, and student involvement. ITM decisions were coded according to pacing/sequencing of lesson, book introduction, teaching points, word solving, student involvement, comprehension building, comprehension assessing, and reinforcement/praising. This coding process enabled the researchers to identify patterns and themes across cases. Trustworthiness of the findings are substantiated with multiple data sources for triangulation, peer debriefing, searches for disconfirming evidence, and the use of analytic

memos for recording preliminary conclusions and conjectures about the data (Bratlinger, Jimenez, Klingner, Pugach, & Richardson, 2005; Corbin & Strauss, 2008).

Findings

Each Kindergartner brought unique personalities, interests, strengths, needs, and reading abilities to the lessons; PSTs drew upon these various facets of the learner to plan and teach their guided reading lessons. The data revealed that participants made numerous planning and ITM decisions based on their knowledge of the learners, described below (see Table 2). Out of the 206 coded decisions directly related to knowledge of the learner, 71% were planning decisions, while 29% were ITM decisions made while teaching guided reading to Kindergarteners.

[Insert Table 2.]

Using Knowledge of the Learner for Planning Decisions

For this study, we only analyzed the planning decisions PSTs made while preparing for the guided reading portion of the Guided Reading Project; we did not analyze or report decisions related to the writing and word study portions of the project. Of the 147 planning decisions, approximately 65% pertained to text selection. In other words, over half of the planning decisions PSTs made dealt with thinking about a given text's level of compatibility with a learner. In comparison, about 20% of planning decisions were related to supporting word solving strategies. The remaining planning decisions--much less evident in the data--pertained to pacing/sequencing the guided reading lessons, eliciting student involvement, and introducing the book to students.

Text selection. While preparing guided reading lessons, the majority of PSTs' planning decisions, 65%, had to do with text selection for the guided reading lessons. PSTs demonstrated an understanding that every detail involved with text selection is directly linked with helping

students become better lifelong readers. This parallels Fountas and Pinnell's (2017) notion that teachers are "teaching the readers- not the texts." Fountas and Pinnell stress that "the goal [for students] is not simply to learn how to read this book but to learn how to read" across all contexts (p. 108). PSTs used their knowledge of students' reading level, instructional needs, interests, personality, and their own goals for student learning when deciding which texts to introduce while keeping in mind that the goals for reading extended well beyond this particular lesson.

Reading levels. Often, text decisions were based on the student's reading level and the accuracy rates at those levels. For example, PST #11 noted, "I am going to choose an easy level B book instead of an A book for the guided reading lesson for next time because Paul has read both level A books with at least 95% accuracy and I feel that he would benefit from a little bit of a challenge." Similarly, PST #2 relayed that her decision was based on her student's scored running record and previous guided reading experiences. This PST purposefully selected a Level F guided reading text to build on the child's success with Level E.

Individual needs. PSTs were also able to select appropriate texts for the sequential guided reading lessons by drawing upon their knowledge of students' individual learning needs that they noticed during previous reading sessions. For example, PST #10 noticed that her student needed to practice connecting dialogue to the book's plot. This PST was keenly aware that the student had trouble differentiating between the three character's perspectives. Based on this child's specific needs, the PST chose a text that made easier for the child to explain his understanding of the characters' conversations.

Also drawing on knowledge of student needs, PST #4 and #8 chose books that offered fewer supports in order to challenge their students. PST #4 noticed that her student seemed

"...prepared to take on this text [with less supports] that is not as repetitive as the ones in the past," and recognizing the need of her student to attend more to the print, while PST #8 "purposefully chose a book that might not support the pictures to words as much" because she knew the student was "dependent on the pictures in books." Similarly, PST #2 selected her book "...because of the significant amount of expression that was present in the text features (large bolded and scribbled print to match the characters' feelings) and the illustrations (explicitly depicted emotions of the characters)." With this decision, she hoped "to continue to model for Jessica the aspect of expression when reading a story."

Learners' interests and personalities. The participants were also frequently mindful of their students' interest in animals and other specific topics. For example, PST #4 noticed how much her student loved animals and selected a text to build on this interest. PST #11 noted her student's specific interest in go-karts and school, thus serving as her motivation for text selection for subsequent guided reading lessons. Books were also selected based on knowledge of students being "shy" or "determined." For example, PSTs explained that they sometime chose challenging books because they believed the student would embrace the challenge versus others who chose books they considered slightly easier so as to boost a reluctant reader's confidence.

Goals for student learning. On occasion, the PSTs drew upon their own goals for student learning to select appropriate guided reading texts. For example, PST #2 claimed, "I used my pedagogical content knowledge [to select a book] by recognizing the features of the text that would best fit my goal to model reading prosody." Additionally, PST #10 indicated, "I want to move past [asking], 'Where is the dog in the picture?' and have him practice giving more elaborate answers. For this reason, I decided to sacrifice reading level for strategy practice; we could move one level down so that Elijah could practice a skill that was a little bit harder for

him." In these examples, participants steered their lessons toward the learning goals they had in mind for the students with whom they were working. Shifts in thinking like the ones noted in this section are significant because they demonstrate PSTs' use of pedagogical content knowledge to make informed teaching decisions related to text selection. In our work with in-service teachers with years of experience teaching guided reading, we have noticed that many of them do not yet make instructional decisions at this sophisticated level.

Supporting word solving strategies. Twenty percent of all planning decisions were related to world solving. The data show that PSTs relied heavily on their knowledge of a student's current word solving strategies when selecting texts and activities for guided reading lessons.

Current word solving strategies under development. Often when selecting a text, PSTs sought to support students' current word solving strategies that were not yet mastered but were under development. These were word solving strategies that the student could use when supported by the teacher. To illustrate, PST #6 explained that she selected a particular book because it had "wonderful supporting illustrations that will really help my student if he gets stuck on a word." In this case, the PST recognized that the student used illustrations as a means to solve unknown words. Other participants described their concern for students' decoding and phonics skills, letter recognition, high frequency word recognition, and decoding and phonics skills. For PST #11, knowledge of her student's decoding skills informed her decision to select a book with repetitive text. This PST specifically cited that the repetition in the book worked well to support, "a core of sight words that would propel him forward in texts." Expanding on this child's repertoire of growing high-frequency words demonstrates the PST's awareness of the learner's abilities both in the present and in the future.

Current word solving strengths coupled with needs. As they considered word solving abilities while planning lessons, PSTs also attended to children's strengths and needs related to word solving strategies. For example, PST #5 selected a book based on observations that her particular early reader struggled with solving words, thus selecting a text that provided opportunities solving words by cross-checking the picture with the first letter of the unknown word. Additionally, PST #1 believed that the text she chose would address both a strength and a weakness for word solving. She reasoned, "This book matches John's strengths because it supports… one to two syllable-words and high frequency words. At the same time, this book supports his needs because it provides opportunities to study more complex words, and to recognize [other high frequency] words." In both of these examples, PTSs demonstrated that when selecting texts for guided reading, they attended to students' current word solving strengths as well as their needs.

The structure of the assignment required heavy attention to planning decisions, however PSTs also identified numerous ITM teaching decisions. Those related to knowledge of the learner are described in the next section.

Using Knowledge of Learner for In-the-Moment Teaching Decisions

PSTs' ITM decisions reflected unexpected student reading behaviors and/or responses. As PST #11 summarized, ITM decisions helped PSTs become "...prepared for the unexpected… meeting [the] immediate needs [of the child] then and there." We chose to focus only on instructional decisions related to reading; we did not analyze or describe decisions related to behavior management or student engagement. The ITM decisions related to knowledge of the learner were the result of keen observations of students (Owocki & Goodman, 2002). All of the ITM decisions we focused on were based upon what PSTs noticed that the readers were doing.

Participants demonstrated that they were using knowledge of the learner to make ITM decisions primarily in three ways: 1. by promoting word solving strategies; 2. by assessing and extending comprehension; and 3. by reinforcing the reader's actions with praising and/or prompting.

Of the ITM decisions--actions that happened unexpectedly during guided reading instruction--approximately 46% were related to helping a learner with word solving and decoding unknown text. Equal in measure was the percentage of ITM decisions related to assessing or extending comprehension, accounting for 46% of ITM decisions. Finally, a small but notable 8% of ITM decisions pertained to reinforcing readers' actions.

Promoting for word solving strategies. Participants most frequently used their knowledge of students' actual reading behaviors during the lesson to support word solving strategies. Roughly 46% of ITM decisions were identified as having a connection to supporting student word solving. For example, in an effort to encourage a reader to use parts of words to solve unknown words, PST #6 noted, "[The student] also got stuck on the word 'going.' I broke the word up into two parts, first asking about 'go' then 'ing.'" Similarly, PST #8 commented, "[I made the] decision to let my student use her skills to try and solve the words before I jumped straight to giving her the word she needed help on." This preservice teacher used her knowledge of the learner to purposefully pause and provide wait time to support the student's learning, thereby teaching for independence.

Comprehension. An equally prominent category of ITM decisions, roughly 46% of ITM decisions, involved PSTs assessing and extending children's comprehension of text. Of the combined comprehension-based decisions, accounting for 46% of all ITM decisions, nearly 37% were made to extend comprehension, whereas 63% were made with the intent to assess a student's current level of comprehension.

Assessing comprehension. First, participants used strategies to check for understanding while students were reading texts aloud. PSTs usually assessed comprehension during reading by having children summarize what they read or by asking questions about the pictures and/or the text. For example, PST #2 reported making an ITM decision to, "...[ask] Jessica what had happened in the story to make sure she understood what was happening. [Because otherwise], she might have been confused while reading," thus indicating that the student was not building meaning page-by-page. Likewise, PST #10 recalled, "I noticed that Carl was reading each page very quickly, and didn't seem to fully comprehend the sentences. He might have already memorized the story, I think. At that point, I decided to stop him and discuss the text further by asking questions like, 'Which dog in the picture is Dusty?'" By asking questions about the text, participants were informally assessing their students' comprehension.

Extending comprehension. Second, some PSTs went beyond assessing children's understanding of the text and used knowledge of the learners to build on their existing comprehension. Participants reported making these decisions as they watched the children read and listened to their answers to comprehension assessment questions. For example, PST #6 reflected, "My student was continually answering [the comprehension questions I had prepared in advance] with no prompting. Instead of [using] my original prompts, I fed off of his information in an attempt to scaffold his thinking even more." Similarly, PST #1 wrote, "Instead of praising [the child] as soon as he mentioned his prediction, I prompted him to pay attention to what Dan was trying to do with the animals, and to pay attention to what his problem was." As these examples illustrate, participants scaffolded the development of reading comprehension by attending to what the children already knew and helping them to comprehend text at a deeper level.

Teaching for independence through reinforcement of reading strategies. PSTs also demonstrated an ability to make ITM decisions that reinforced their student's reading abilities. Approximately 8% of all ITM decisions included remarks pertaining to specific strategy reinforcement. For example, PST #6 gave her student "verbal praise and a high-five for hard work" after reading a few pages, while PST #3 and #6 both recorded instances of using verbal praise to reaffirm and encourage their readers. PST #6 expanded, noting "I even told him that I loved that he used both the text and pictures to prove his thoughts." This action reinforced the child's independent strategy to cross-check text with pictures to solve unknown parts of text, while simultaneously bolstering his confidence as a reader.

Discussion

We examined two kinds of decisions PSTs made based on knowledge of their learners: planning and ITM. Most decisions mentioned by participants related to planning, which was expected given the structure of the assignment. Planning decisions primarily involved text selection and word solving strategies, whereas ITM decisions pertained to world solving, comprehension, and reinforcing readers' actions. In contrast to enacting what Lortie (1975) called the "apprenticeship of observation," during the Guided Reading Project, these PSTs were not merely imitating what they have seen teachers do. Rather, they were thinking, knowing, and acting like teachers (Feiman-Nemser, 2008) as they made intentional teaching decisions based on their knowledge of learners.

Knowing the Learner: The Basis of all Decisions

Effective readers develop meaningful, self-extending systems by developing a system or network of learning strategies that are generative and ever-expanding, allowing the reader to learn more about reading with every encounter with text (Clay, 1991). Within these self-

extending systems of learning are processes of self-initiating, self-regulating, and independent systems - all processes that help readers "continue to learn through the act of reading" (Fountas & Pinnell, 2017, p. 18).

The organization of instruction can facilitate or restrain the development of these self-extending systems (Boocock, McNaughton, & Parr, 1998). Fullerton & DeFord (2000) call for an attention to the reciprocal exchange between the teacher and the reader in which the teacher's instructional moves are informed by the observations of the student's reading behaviors. In this study, formative assessments (e.g., running record) and purposeful "kidwatching" helped PSTs truly get to know their learners (Owocki & Goodman, 2002). These PSTs came to know their learners by being aware of what to notice; this was achieved by physically observing student reading behaviors and building an overall repertoire of content knowledge concerning guided reading. Furthermore, participants did not simply follow their lesson plans and expect the learners to fit in nicely; rather, they focused first on each learner's reading and adapted their lessons accordingly. We contend that teaching guided reading without thinking about the learners is akin to teaching reading in the dark.

Purposeful Text Selection

PSTs showcased an ability to select guided reading texts tailored to their learners. A majority of PSTs commented on text selection, providing insight into their motives for selecting specific guided reading texts. Participants unfamiliar with the guided reading process and/or their learners would have likely selected texts simply because they were next in a leveled sequence (e.g., DRA, Lexile, Fountas and Pinnell leveling). However, data from this study revealed that PSTs selected texts based on information about their learners. These findings are significant

because text selection for guided reading goes beyond simply choosing texts at a student's instructional level to include consideration of the supports and challenges present in each text.

Participants were keenly aware of the complexities of guided reading instruction and consequently selected texts for a variety of purposeful reasons *besides* text level. PSTs paid attention to text features to examine what made them easy or hard and ultimately selected the best fit for their students. Participants also noticed opportunities for word solving, cross-checking the features of the word with illustrations, and other features their learners needed to practice. These skills align with practices recommended by key guided reading scholars (Fountas & Pinnell, 2017; Richardson, 2017). Interestingly, thoughtful and deliberate text selection presents challenges for in-service teachers as well. When coaching for teacher growth, Lyons and Pinnell (2001) recommend attention to text selection to help teachers adapt instruction to meet the range of learning needs in the guided reading group. In this study, PSTs demonstrated the ability to think critically about aspects of text selection that align with the recommendations for best practices in guided reading instruction, demonstrating that they are learning to think and act like a teacher (Feiman-Nemser, 2008).

The participants also referenced student reading needs and goals to select guided reading texts. This is encouraging since as Gibson and Moss (2016) explain, teachers must consider moderately challenging goals for students and how they align with Instructional-Level texts in each guided reading lesson experience. Mirroring the Backward Design principles outlined by Wiggins & McTighe, 2001), PSTs began planning with goals in mind and purposely selected texts to foster student growth. PSTs selected texts by actively thinking about what their students should "know, understand, and be able to do" in each particular guided reading lesson (Wiggins & McTighe, 1998, p. 8). Thanks to their "systematic observation of children's literacy

behaviors" on the initial visit to the local elementary schools, PSTs were able to determine goals for each child's reading abilities (Gibson & Moss, 2016, p. 26). Having a clear idea of each student's reading behaviors allowed PSTs to better select texts in the planning stage and act with "purposeful action toward the intended results" (Wiggins & McTighe, 2001, p. 13).

Supporting Word Solving

Participants used knowledge of learners' decoding skills to plan for thoughtful word solving practice within each guided reading text. In this study, PSTs paid attention to specific word solving strategies their learners did or did not utilize and purposefully found instances in guided reading texts to support the development of these skills. Participants purposefully selected texts that offered a wide range of world solving opportunities, attune with Fountas and Pinnell's (2017) claim that guided reading does indeed provide "the most intensive and effective opportunity to teacher powerful word-solving actions that are essential for processing texts at a particular level" (p. 409).

Responsive Teaching

"Teaching must be responsive to the learner" (Fountas & Pinnell, 2017, p. 367). ITM decisions reveal that PSTs were aware of this powerful notion and were capable of adapting to each learner during guided reading instruction. These ITM teaching decisions are the most difficult part of guided reading because they require teachers to notice, assess, and act on what is happening in a matter of seconds. Despite this challenge, by drawing upon knowledge of the learners, the PSTs in this study were able to make many ITM teaching decisions. We did not examine the effectiveness of these decisions in this study; however, all of the decisions PSTs made were ones an experienced literacy expert would want to see (e.g., word solving strategies and comprehension supports). The fact that participants identified 59 ITM teaching decisions

indicates that they are beginning to engage in responsive teaching, that is, "adapting their instruction to provide appropriate support for the students they teach" (Parsons, 2012, p. 164). Guided by their knowledge of the learner, PSTs made teaching decisions driven by this desire to adapt instruction to meet a student at their current moment of need, a hallmark of responsive teaching. These responsive decisions were apparent with ITM decisions pertaining to word solving; participants had to use their present knowledge of the learner, by watching and analyzing their reading behaviors, to make tailored ITM decisions. The PSTs' actions indicate that novice teachers can indeed assess reading behaviors during planning as well as in-the-moment, when time is not a luxury. PSTs did not simply teach a lesson; they taught *students*. We anticipate that with additional practice they will continue to refine those responsive teaching skills.

Appreciation of Reading as a Process: Scaffolding

PSTs supported ongoing literacy growth by scaffolding their learners, particularly with guided reading text selection. Scaffolding, a developmentally appropriate practice supported by the National Association for the Education of Young Children, helps students "tackle appropriately challenging tasks successfully" (Gibson & Moss, 2016, p. 48). Scaffolding provides the least amount of support learners need for a task that they cannot yet do on entirely independently (Copple & Bredekamp, 2009). In this study, PSTs navigated the continuum of text difficulty by adjusting the level of scaffolding as evidenced by their text selection and prompts for word solving strategies. Participants built on learners' pre-existing knowledge, but also motivated the Kindergarteners "to stretch a reasonable amount toward a new level of achievement" (Copple & Bredekamp, 2009, p. 38), a hallmark of developmentally appropriate scaffolding. This confirms the idea that early childhood PSTs "are well versed in the importance

of building on the prior knowledge of students, ...understating the importance of supporting each of the domains of the whole child, … [and] identifying] classroom practices as developmentally appropriate" (Mogharreban, McIntyre, and Raisor, 2010, p. 244).

PST Reflection

Reflection is important for PSTs, especially when debriefing and evaluating field experiences with real students. However, Clark and Byrnes (2015) discovered that "using reflection to become a more effective teacher" is not a high area of concern for most millennial PSTs (p. 387). Knowing this, we believe that PST preparation programs must continue to infuse reflection into all aspects of learning to foster a reflective mindset. Some, but not all, portions of the Guided Reading Project required PSTs to think about the "whys" behind their actions. Interestingly enough, although "whys" were not always asked of them, PSTs selected for our study did describe deeper reasonings for their teaching decisions. In this case, reflection allowed PSTs to reflect on how they gathered knowledge of learners, how they continued to learn about the students, and how that knowledge informed teaching decisions. Teaching is about reflecting, both in action and on action (Schön, 1987).

Comprehension: The Purpose of Reading

PSTs in our study used learner knowledge to propel their students towards greater comprehension of texts. During the guided reading lessons, a majority of ITM decisions related to the assessment of comprehension, but there were still many instances of comprehension-extending efforts. The PSTs' actions to build and assess comprehension indicate their awareness of reading as a meaning-making process. Comprehension is the goal of all reading. It is, as Clay (1991) believes, "the source of anticipation, the guide to being on track, and the outcome and reward of the effort" (pp.1-2). PSTs displayed a crucial understanding of Clay's notion, in

addition to understanding that comprehension is not a one-time effort to check student answers, but rather "a dynamic, ongoing process" that takes place before, during, and after reading (Fountas & Pinnell, 2017, p. 470). PSTs moved beyond assisting with accurate reading, but instead worked to provide ITM teaching decisions that built on the overall messages of text. From these findings, we conclude that ITM decisions about comprehension are much stronger and more specific when PSTs have specific knowledge about the learner reading in front of them.

Limitations and Implications for Future Research

Our research is not without limitations. First, because the Guided Reading Project spanned four weeks and only involved teaching Kindergarten students at a single school, we do not have a clear understanding of how PSTs would make planning and ITM decisions in other contexts or what their decisions would look like over time. Additionally, this study relied on self-reported teaching decisions in a reflective way rather than in real-time. Because of this limitation, the inclusiveness, accuracy, and nuanced aspects of the teaching decisions may not have been fully captured in these data.

Despite these limitations, this study points to opportunities for future research related to PSTs' professional knowledge and teaching decisions. For example, the effectiveness of PSTs' decisions, along with student outcomes of those decisions, are worth considering. Additionally, PSTs' decisions could be examined in more diverse contexts and grade levels, in order to inform teacher educators about how decision-making skills develop in different situations.

Conclusion

PSTs are capable of making developmentally appropriate teaching decisions in guided reading when armed with powerful knowledge of their learners. These decisions, stemming

directly from the PSTs' assigned work with Kindergarteners, shed light on the range of decisions required in the context of guided reading instruction, both ITM and during lesson planning. Educators, novice and seasoned, can benefit from knowledge of their learners to deliver effective instruction.

In regards to decisions that occur prior to instruction, findings from this study reveal the importance of teacher preparation programs instructing PSTs to recognize students strengths and needs, and to plan instruction accordingly. Additionally, findings indicate that instruction is more likely to be effective when PSTs are able to use knowledge of learner in tandem with an understanding of text selection components. For ITM decisions, our findings underscore the importance of using knowledge of the learner--including reading and comprehension levels--to make effective teaching decisions. Collectively, this study's findings suggest that teacher preparation programs should provide PST with foundational knowledge and authentic opportunities to observe, teach, and reflect on children's reading behaviors.

In this study, knowledge of the learner enabled PSTs to make developmentally appropriate guided reading decisions with Kindergarteners. Given that decision-making skills are imperative for effective teaching, we were encouraged to see early career teachers beginning to cultivate these skills using the power of learner knowledge. Early decision-making skills were evident in comments from participants such as PST #3, who reflected, "It was important for me to think about where the student was in his learning, what should be the next step in the student's learning, and how to best approach those steps."

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Table 1

Tasks completed with Kindergarten students.

	Interest Inventory	Observing Reading Behaviors as student read aloud	Selected texts & planned guided reading lesson for the following week	Reading response prompt about the read aloud	Running Record
Week 1	x	x	x		
Week 2		x	x	x	
Week 3		x	x	x	x
Week 4		x		x	x

Table 2

Planning and In-the-moment decisions across cases.

PST Decisions *Total: 206 coded decisions*					
Planning			**In-the-Moment (ITM)**		
71% *147 decisions*			**29%** *59 decisions*		
Text Selection	**Word Solving**	**Other**	**Word Solving**	**Comprehension**	**Reinforcing reader's actions**
65%	20%	15%	46%	46%	8%

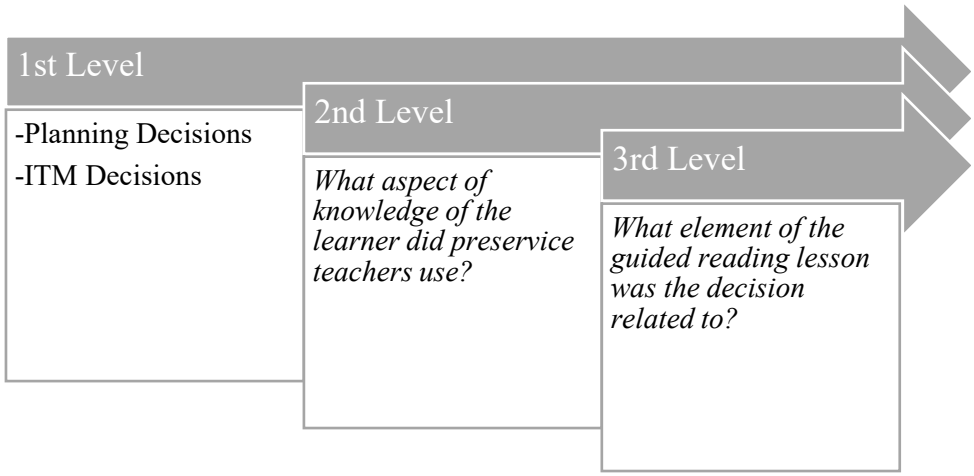

Figure 1. Coding sequence.