

# The Role of Reflection in Developing Expertise: Fusing Skill and Will in Scaffolded Instruction

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*Editor's note:*

*All names are pseudonyms.*

Best practices in literacy instruction are heavily debated, but almost everyone agrees that teaching children to read is a complex endeavor (Allington, 2005; Pressley, Allington, Wharton-McDonald, Block, & Morrow, 2001) and that highly capable teachers are critical. Teacher decision making and reflection are important aspects of this complex process. In fact, Berliner (1988) posited that teacher competency is achieved more through reflection than experience. Much research has focused on preservice teachers' knowledge and development of reflection, but we know far less about expert or advanced knowledge acquisition (see Gallant & Schwartz, 2010) and the role that reflection plays. In one-to-one instruction, expertise is even more critical in order to reduce the numbers of students who fail to learn reading and writing (Allington & Walmsley, 1995).

Reading Recovery<sup>®</sup> is an example of a one-to-one intervention that has documented strong results; its effectiveness is attributed not simply to a single factor but to the interrelated factors that characterize the teaching provided to first graders. For example, the extensive training and development of theoretical knowledge has been cited by Strickland (2001), and the attention to phonological awareness and letter-sound relationships described by Adams (1990). Wasik & Slavin (1993) attributed Reading Recovery's success to its highly qualified teachers and noted that the design of the lessons includes a range of components related to the reading process, what Bryk (2009) referred to as "a common set of pedagogical practices and materials that are conceptually integrated around a working theory of how students learn to read" (p. 18). Recently, Reading Recovery has been characterized as an "epistemic community" in which teachers, teacher leaders, and trainers, through a three-tiered approach, "collaborate to produce, use, and refine the practical knowledge need-

ed to support and sustain success among large numbers of struggling readers" (Peurach & Glazer, 2016, p. 1). Slavin (2016) also emphasizes community, stating it is "intentionally built" and members "are engaged in a process of learning and contributing intellectually to a whole that is bigger than themselves" (p. 62).

Teacher professional development, communities of practice, explicit teaching of essential components of literacy processes, and one-to-one tutoring are certainly important, but still fail to take into account an additional factor in the Reading Recovery design — the interactions and critical decision making that characterizes each lesson for each child. While all teaching requires on-the-spot decision making, one-to-one teaching requires quick decisions in response to each child's idiosyncratic moves. Progress in literacy occurs as the teacher observes and gleans critical factors in the development of this particular strategic learner. In other words, teachers construct knowledge of the child as well as knowledge of effective teaching as they simultaneously work with children (Shulman, 1986), clearly not a simple task. Grossman & Shulman (1994) suggest that much like researchers working in the field of knowledge acquisition, those who work in fields such as education and medicine work in ill-structured domains (Spiro, Coulson, Feltovich, & Anderson, 2013). Reading Recovery teaching may certainly fall into this category, given that teachers must apply what they learn in professional development to novel and unique contexts. Furthermore, when working with at-risk learners in one-to-one settings, the tailoring of instruction is even more challenging; the teacher must flexibly adjust expert decisions and scaffolding to the needs of diverse learners by drawing upon and integrating knowledge in multiple areas or domains under conditions of uncertainty and novelty. "Classroom events rarely unfold the same way twice" (Grossman & Shulman, p. 14). That is, interactions, responses, and understandings are likely to be incon-

stant, variable, and sometimes unpredictable. With the most-difficult-to-teach children, what does it take? Much depends upon the skill and will of the teacher, but what must happen to enable the teacher's understandings to move forward so that skill and will grow, so that in turn, the child's learning develops? How do expert teachers analyze, problem solve, and learn from their teaching? What is the role of reflection, and how does reflecting influence subsequent teaching? These are compelling questions for educators who provide professional development and for teachers of children at risk of literacy failure. This interpretive investigation explored these questions.

### Theoretical Foundations

Knowledge develops through interaction with others (Vygotsky, 1978, 1986), and subsequently, such knowledge is reflected upon and expanded. The ability to reflect is a critical aspect of teaching effectiveness (Dewey, 1933) and is elemental to effective teacher decision making and growth (Roskos, Vukelich, & Risko, 2001). Reflection is defined as "deliberate thinking about action with a view to its improvement" (Hatton & Smith, 1995, p. 4). Through reflection on decisions, language, and interactions, teachers develop stronger understanding of theories of learning and teaching. In other words, there is a socio-cultural view toward learning that is linked to Schön's (1983, 1991) reflective practitioner theory. Schön suggested that teachers must learn how to reflect in action (while teaching) and on action, (reflecting upon teaching). The motivation and ability to do both bring about learning that is continuous and essential to effective decision making and professional practice.

This study describes a Reading Recovery teacher leader (primarily referred to as a teacher here), characterized by peers and university educators as having exemplary levels of performance or expertise in supporting teachers and in her own teaching of children. On the other hand, it describes a teacher who perceived herself as faltering, of not demonstrating her typical competence in the context of teaching one particular learner. In contrast to her perception, her request for assistance represented her ability to make expert decisions based on her awareness that the context was not like others she had experienced, and as a result, she acknowledged that she needed another pair of eyes and dialogue with a colleague. I became that colleague; taking on that role provided the impetus for this investigation of two struggling students that she taught during two different, back-to-back periods of instruction.

Most studies of experts have primarily focused on successes; however, others have suggested that studies of "lost sheep" (Calfee, Norman, Trainin, & Wilson, 2001) may help inform our work in Reading Recovery (see Trainin & Easley, 2003). Clearly, the reality of everyday teaching and learning suggests that the nature of instruction, particularly with those who are at risk, is not always straightforward and may result in misleading or mended scaffolds rather than continuous or expert scaffolds (see Rodgers, 1998, 2000). Likewise, one-to-one instruction in contexts such as Reading Recovery can be complex, challenging, and even perplexing (see Fullerton, 2001). Such instruction involves moment-by-moment decisions that, by their very nature, are imperfect; therefore, we need to study "interactions that do and do not result in rich teaching-learning episodes, moving both instruction and learning to higher levels" (Meyer, 1993, p. 52). Sorting through the complexity to provide detailed analyses of teaching-learning interactions and reflections may be especially informative for teaching at-risk children who seem to display more-idiosyncratic behaviors during literacy acquisition (Clay, 1998). The ability to teach several first graders individually while maintaining recall of their unique literacy processing characteristics requires cognitive flexibility. In other words, Reading Recovery teachers must be able to represent and connect understandings from "different conceptual and case perspectives." Later, when using this knowledge, they must acquire "the ability to construct from those different conceptual and case representations a knowledge ensemble tailored to the needs of the ... problem-solving situation at hand" (Spiro, Feltovich, Jacobson, & Coulson, 1992, p. 58).

In relation to both teacher and child, this study also draws upon self-efficacy constructs (Bandura, 1997). With a view towards problem solving and improvement, teachers and learners must perceive themselves as efficacious. Thus, self-efficacy intersects with reflection as a "continual process of being and becoming — a process no one can create for us regardless of how we frame practice but one we must create for ourselves through self-critical questioning, self-conscious awareness, and continual (re) evaluation" (Brunner, 1994, p. 43). Together, self-efficacy and reflection support a "fusion of skill and will" (Garcia, 1995, p. 29) as teachers increase their expertise.

This study responds to the need for detailed analyses of processes of learning and teacher-student interactions (Bransford, Brown, & Cocking, 2000) while also providing insights into the ways that reflectivity, teacher



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knowledge, cognitive flexibility, and self-efficacy intersect. The specific questions that guided the study are: (a) What is the nature of teacher-child interactions during writing? (b) How is teacher scaffolding and talk used to support the learners' developing abilities? (c) How do teacher-child interactions change in relation to each child's literacy development? and (d) How do the reflections, reasoning, and new understandings influence subsequent skill, decision making, and interactions?

## Methods

This article focuses on particular aspects of an instrumental multicase study (Stake, 2006) that describes teacher-child interactions and decision-making during the writing portion of Reading Recovery lessons as well as subsequent teacher reflections on teaching and learning. Writing was the focus because the teacher leader determined that it was most often at this point in the lesson that things became

difficult. Both comparative (Strauss & Corbin, 1998) and interpretive (Erickson, 1986) forms of analysis were used to describe the interactions that occurred between the teacher and each child and to provide conceptualizations of the teacher's reflections in relation to her own decision making and each child's progress. Such connections, as a result of case comparisons and reflections, involve analogical reasoning. Fundamental to cognition, we perceive and use similarities or relationships between two contexts (Gentner & Smith, 2012). In teaching and coaching, reflections and analyses may potentially invoke learning exemplars or cases that can be used in new or similar teaching situations (Dunbar, 1995). Moreover, these exemplars must be viewed and analyzed flexibly and reliably in the context of multiple analogies or exemplars (Spiro et al., 2013) that are sifted and sorted to provide several possible avenues for problem solving and teaching. Analyses of such exemplars provide the foundation for this multicase study.

### *Participants and context*

A Reading Recovery teacher leader and two first-grade boys, both Caucasian, participated in the study. Lisa, the teacher leader, was defined as an expert Reading Recovery teacher based on recommendations and observations by the researcher, university colleagues, and district personnel. At the time of the investigation, Lisa had more than 20 years of experience as an early literacy educator, with 10 of those in Reading Recovery. Each year, as a teacher leader, she provided professional development and coaching to Reading Recovery teachers while also teaching Reading Recovery students.

Lisa suggested Ian for the study based on her initial observations and work with him. While qualifying for Reading Recovery at the beginning of the year, there were six other children who scored lower than Ian on Observation Survey assessments (Clay, 2013), so he did not receive instruction in Reading Recovery until the second half of the school year, as lowest-performing children are always served first. Thus, Ian had spent approximately half the school year as an at-risk student in his classroom. In Ian's case, this was serious cause for concern — he attended a high-performing school. At the time of this study, the average level for first graders mid-year was 14–16, closer to typical end of first grade in many schools. In contrast, Ian's text reading was Level 2 (preprimer) at the beginning of the year. By the time he came into Reading Recovery in February, he had gained only four levels and was lag-

**Table 1. Observation Survey Scores for Two Students, Ian and Lyn**

Observation Survey Task	Fall	Ian		Fall/Entry (Sep)	Lyn	
		Entry (Jan)	Exit/End of Year		Exit	End of Year
Letter Identification	51/54	53/54	54/54	49/54	54/54	54/54
Word Reading / Ohio Word Test	2/20	14/20	19/20	1/20	18/20	18/20
Concepts About Print	15/24	18/24	23/24	15/24	20/24	22/24
Writing Vocabulary	11	28	51	8	44	60
Hearing and Recording Sounds in Words	17/37	32/37	34/37	26/37	35/37	36/37
Text Reading Level	2 (preprimer)	6	18	2 (preprimer)	14	18

*NOTE: Ian is a second entry Reading Recovery student and Lyn is a first entry (fall) Reading Recovery student.*

ging far behind his peers, reading at Text Level 6, still a preprimer level. The teacher’s work with Lyn, the second student, began in the fall of the following year, and continued into January. Lyn was one of the four lowest students in first grade. Table 1 provides the entry and exit scores of both students.

**Data collection**

Data collection began for the first case, Ian, in February and continued to the end of the year. For the second case, Lyn, data was collected beginning in the fall and continued through January. Data sources were chosen for triangulation and documentation of the teacher-child interactions and to promote teacher reflections about the child, her practice, and her decision making.

**Audiotaping and videotaping.** All Reading Recovery lessons were audiotaped. Sessions were videotaped at three intervals across each child’s program with two taped sessions at each interval. These taped lessons were transcribed for 5–7 consecutive days at three points, beginning, mid-point and end of lessons. Of the 56 total lessons for Ian, 17 were transcribed (30%) and 15 of the 60 lessons (25%) were transcribed for Lyn.

**Observations and unstructured interviews.** At three intervals across each child’s series of lessons, the researcher observed lessons and took field notes. Unstructured interviews occurred at the beginning, at approximately mid-point, and at the end of lessons.

**Retrospective reflection and stimulated recall.** After each child’s Reading Recovery completion, the teacher

provided a retrospective reflection and stimulated recall (Smagorinsky, 1994; DiPardo, 1994). In the first case, the teacher was asked to reflect back on her work with Ian, then three transcribed lessons were chosen by the researcher for stimulated recall. The same procedures were followed for Lyn. Each of these different reflective conversations focused on gaining insights into Lisa’s theoretical orientation, to provide opportunities to describe each learner’s strengths, needs, and progress in relation to the teacher’s understandings, reasoning, and decision making based upon analyses and reflections.

**Document analysis.** All lesson records were collected and photocopied. Records included information about books read, notes about writing progress, and letter or word work. Daily writing and entry and exit data on the Observation Survey (Clay, 2013) were also collected.

**Data analysis**

Data analysis began with the first lesson and continued through the final transcriptions and stimulated recall. Comparing instances (Strauss & Corbin, 1998), I looked for similarities and differences within the data, across transcripts, field notes, interviews with the teacher, lesson records, the child’s daily writing in Reading Recovery, lesson records, and the transcription of the retrospective reflection and stimulated recall. Tentative patterns were noted, and data were reread and re-analyzed for confirming and disconfirming evidence, continuing throughout (Merriam, 1998). After completion of the second case analysis, cross-case analyses were conducted in the same manner. The interviews and conversations with Lisa,

along with the retrospective analysis, became particularly important in describing her decision making and the changes that appeared in interactions within and across these two cases.

## Findings and Discussion

### *The nature of teacher-child interactions during writing*

In the interactions of Lisa and Ian, there was much negotiation and at times conflict, in selecting ideas for writing. At times, early in his program Ian seemed to circumvent the process by not talking or by changing topics, interfering with Lisa's efforts to scaffold topic development. In these beginning lessons, Ian would question whether he had to write. What followed were numerous exchanges in which Lisa asked questions to elicit a response and Ian balked or expressed dissatisfaction in the direction of conversation. As a successful teacher, Lisa had not previously encountered such issues. Wells (1997) noted that, "Every situation is to some degree unique, posing challenges that in some respects require the participants jointly to construct solutions that go beyond their past experiences" (p. 55). Puzzling over the root cause of this difficulty in topic negotiation, Lisa searched for an explanation, pondering whether Ian was forgetful, "whimsical" (in terms of changing his mind), or testing to see if she would hold firm. Eventually, her reflections seem to suggest other possibilities: "The conversation is good, but still, when we get down to do the writing, he doesn't want to do it. And that's when he tries to change it. Or that's when I realize and I try to talk to him about the rule that once we get going into this ... [he has to stay with the topic established]."

Lisa's concerns echoed the cycle of interactions that occurred before writing. A cycle of interaction was designated by topic initiation and expansion focusing on a single topic or idea. If a participant rejects the topic and the conversation moves forward, another cycle has begun. (See Fullerton & DeFord, 2001.) In two of the seven lessons in the beginning phase of lessons, when Ian opened the conversation before writing with his topic of interest, Lisa accepted Ian's topic of choice, resulting in one talk cycle and fewer exchanges with totals of 14 and 33 turns respectively for the two lessons. In the other five lessons, Lisa opened the conversation with an experience of Ian's or a book read, and in four of these five interactions, Ian balked or rejected the topic, initiating a second and sometimes third cycle of talk. The number of exchanges sub-

stantially increased as well, ranging from 36 to 64 turns of talk.

This difficulty in negotiating topics set the stage for an anxious teacher and child during writing, as there were other components of the 30-minute lesson remaining. Perhaps in part because of time spent on topic development, during the subsequent interactions, numerous comments from Lisa focused on time, speed, and fluency of word writing along with attention to letter details. While Elkonin boxes (Clay, 2005) were used to hear and record sounds in words, the task seemed difficult for Ian because he had not learned to coordinate the movement with visual and auditory input; thus, the payoff for hearing and recording sounds was initially limited.

On the other hand, despite concerns for time, Lisa maintained the language of scaffolding, anticipating the child's responses and providing feed-forward prompts: "What we're going to do today is think about your spacing," demonstrating the spacing, "Put it right there" and providing feedback, "I notice that you're making capital letters ... We won't worry about that one, but we'll think about it the next time we write." Within other interactions, Lisa valued Ian's attempts. Responding to his partially correct response (Clay & Cazden, 1990) for *they*, she said, "That is nearly right ... It sounds like it should be A-Y, but it really is E-Y." Such teacher talk marks "critical features of discrepancies between what the child has produced and the ideal solution" (Wood, Bruner, & Ross, 1976). In an attempt to explain the complexity of visual and sound analysis, calling for the child to attend to the orthographic pattern, she further clarified, "Just the A was wrong ... ; it sounds right but this is the way that word looks. You just have to know it." Less common, but present in interactions with Ian, was teacher support through simplifying the task in order for the learner to manage component processes — "*fixed*, you start it and I'll finish it." As can be seen through this transcript example, effective interactions were common; regardless of concerns about time and a marked decrease in the child's engagement, the teacher was able to retain many aspects or markers of expert interactions.

### *Scaffolds are present, but what type of learning is supported?*

When we came together for observation and discussion midway through the child's selected lesson intervals, I was somewhat puzzled by Lisa's difficulties with this particular

child. As a Reading Recovery trainer of teacher leaders, my previous observations and interactions around Lisa's teaching obscured my own analysis. What the examples in the previous section hint at is an underlying attention to accuracy and detail that obfuscated the "pursuit of the goal through motivation of the child" (Wood, Bruner, & Ross, 1976). The transcription and discussion of a portion of Lesson 3 provided further elaboration of this point. Ian and Lisa discussed an experience that occurred right before Ian came to the session.

- Ian: Well, nobody wants to play Hangman.  
 Lisa: Why doesn't anyone want to play Hangman?  
 Ian: I don't know.  
 Lisa: They just don't like to play Hangmen? Do you like to?  
 Ian: *Hangman*, not *Hangmen*.  
 Lisa: Hangman. Do you like to play Hangman?  
 Ian: Okay.  
 Lisa: When nobody else does? Why don't we write about that?  
 Ian: Oh, great! (said with a negative tone)  
 Lisa: Let's write about that.  
 Ian: Everyday I come, I have a story, right?  
 Lisa: Oh, yeah. That's how we get better with our reading and our writing. And you've got such great stories to tell; it's fun to write them. What part of that shall we write?  
 Ian: I don't know. Nobody wants to play Hangman with me?  
 Lisa: That would be a great thing. Nobody wants to play Hangman with me.  
 Ian: That's what I'm going to write.

While there is some reluctance, the comment, "Everyday I come I have a story, right?" indicated that Ian understood what was required of him during this part of the lesson, and perhaps he was checking again to see if Lisa would hold firm. He began the conversation himself, and Lisa's decision to follow his lead allowed a conversation to take place around a classroom concern of Ian's. No agenda was put forward by the teacher. Ian seemed engaged until he was invited to write what he had said. At that point, he balked, and Lisa persisted with a positive stance, "Let's write about that." Ian seemed to arrive at a realization about the lesson framework and the teacher's level of persistence. "Every day I come, I have a story, right?" Lisa's move at this point seemed to clinch the deal; her upbeat

tone and praise for his good ideas and comments on the enjoyment of writing (what Lisa herself often referred to as a "feed forward") seemed to shift Ian to a more-efficacious attitude. While he started somewhat hesitantly with an "I don't know," he then repeated his sentence, seeming to question whether it was the right choice, "Nobody wants to play Hangman with me?" Picking up on his lack of assurance, Lisa affirmed his idea by telling him, "that would be a great idea." Her next move, repeating his sentence, provided support in several ways — the teacher's scaffolding move functioned as a type of placeholder, helping the child hold his idea in memory as he continued to think and talk. Such repetition can also help the child clarify an idea. In this case, the repetition of his idea seems to signal to Ian an acceptance of his composition, because his next response conveyed more assurance — "that's what I'm going to write." Such interactions and examples of talk may be overlooked as teachers grapple with larger issues in instruction, but this interaction suggests that ways teachers use talk and respond to the hesitancy or passivity of students may make a difference in affirming students' ideas and knowledge, thereby bolstering self-efficacy.

Lisa's decision not to extend the talk in order to develop a lengthier story or more-complex idea was most likely a good one, supporting Ian and making the task less daunting. Her question, "What part of that shall we write?" allowed him to take ownership and decide the topic. This transcription suggests that Ian's confidence and engagement in the task shifted, providing an example of greater receptivity from Ian than was typical in several other lessons during this phase. A possible explanation for this change in engagement was Lisa's "choice words" (Johnston, 2004) and giving over the control of the task to Ian.

During the message transcribing, Ian clearly began to take the initiative. In fact, a common pattern was that Ian increasingly made the first move beginning each word cycle (the talk and action that takes place around the writing of a word; see Fullerton & DeFord, 2001; Hobsbaum, Peters, & Sylva, 1996), demonstrating independence in rereading and figuring out what he would write next. Ian began by writing the known word *no*, reminding himself "This time upper case N," followed by Lisa praising. Next, Ian said the word slowly — "No-body" and Lisa decided to support the message progression by writing body for him. Ian took up the task again, repeating the word "Nobody," perhaps to confirm what Lisa said and

then he reread and said the next word, “Nobody wants” resulting in a praising move for spacing from Lisa. Then Ian attempts a sound analysis of *wants* by saying it slowly, suggests the W, then hypothesizing U-T next with Lisa valuing this approximation by stating, “Sounds like a U. That’s a very good guess.” Ian then suggests A, writes A-N with Lisa again praising, “It’s A-N, that’s right! You have to think about the way it looks, don’t you?” For the end of the word, Ian suggests S as the next letter, and Lisa comes in to support by saying, “I’m going to finish it for you. This is the word *want*. Nobody *wants* needs an S. There you go.”

In the example just presented, several different teacher and child moves are illustrated. Lisa used language and non-verbal actions in varied ways to support learning. There is a give and take here with Lisa valuing Ian’s work and Ian participating willingly to accomplish the goal.

In the next excerpt, Elkonin sound boxes are used to help Ian write *play* (see Clay, 2005). In this example, Lisa first provides a demonstration (which the child has seen before) and then calls for the child to take a more active role, so there is an assumption that the child is now ready to be guided through the task. Such guidance, or “proleptic instruction” (Wertsch & Stone, 1979, in Rogoff & Gardner, 1984, p. 101) is a way of helping structure the task. “By actually performing the task under expert guidance, the novice participates in creating the relevant contextual knowledge for the task and acquires some of the expert’s understanding” (p. 101). Rogoff and Gardner make an important distinction: “Proleptic teaching is different from explanation” (p. 102). It is also different from demonstration, where the teacher performs the task rather than encouraging the child to take part in the action. Proleptic instruction “integrates explanation and demonstration with an emphasis on the learner’s participation” in the activity (p. 102).

Lisa: (referring to the word, *play*) Let’s put it in the box, okay? ... .. I’m going to say the word slowly, aren’t I?

Ian: (unclear word spoken) (Child begins to attempt the task.)

Lisa: Wait a minute. All these fingers back, remember how, just one finger. And you put a sound in each box. Go ahead, you want to do it or do you want me to show you?

Ian: pl...a...y

Lisa: All right, you’ve got it. Let me do it one more time. I’m going to have to say the word slowly so I can hear all the sounds. P...l...a...y. Now you do it.

Ian: pl...pl...a...y.

Lisa: All right.

Ian: This one has, this one has an A.

Lisa: Let’s do the first one, you heard the first one, go ahead and put them in there, you’re absolutely right. What was it?

Ian: P

Lisa: Okay, put it in the box. Write it in the box first sweetie.

Ian: A-L-P-L (saying the letters that go in the boxes, corresponding to the sounds that he heard)

Lisa: Well, let’s push them in and see, I think you might be right. Push them in and see if that’s what you hear there.

Ian: pl...

Lisa: Oops, wait a minute. One hand. Let me show you again. These fingers are back, one hand. There you go.

Ian: pl...pl...a...y. L-A

Lisa: All right. Good job. Mmm hmm. Now there’s another letter with that A. It’s a Y. That A-Y together makes that /a/ sound.

Ian: It’s ... So it’s pl-ay. It’s kind, this is kind of like highlighting.

Lisa: It is highlighting, isn’t it? There you go. Put it in your sentence please.

In this example, Lisa worked toward guiding the learning of the task so that Ian might use sound boxes as a cognitive structuring tool (Rogoff, 1990) to eventually support his own learning. The child’s performing of the task was not entirely smooth, and Ian may have benefitted from more time learning to coordinate the task of hearing and recording sounds as he pushed his finger into the boxes. Lisa and I did not discuss this particular interaction, but based on analysis of prior lessons and what occurred here, it is also possible that Ian’s actions were influenced by his prior knowledge about the word, *play*, and his resistance to slowing down and using the box. He even indicates at one point that he knows the letters in the word, by spelling, A-L-P-L. Although more challenging, Lisa’s teaching decisions and their related moves were facilitative in helping Ian hear and check the letter sequence of a word he thought he knew. As a result, Lisa’s language successfully guided Ian, and he took on new levels of awareness. In the

next excerpt, Lisa again demonstrated skill in choosing appropriate procedures from a Reading Recovery theoretical foundation, using language to guide Ian.

- Lisa: Do you know *man*?
- Ian: M-E-N
- Lisa: Okay, stop for just a minute ... Do you know how to write *ran*?
- Ian: No.
- Lisa: All right, let's do *man* up here (on the practice page above the page for writing the story).
- Ian: M-A-N
- Lisa: You've got it! (5 sec.) Oops! You didn't think about your N.
- Ian: It's an M/ M-A-M
- Lisa: Try it up here and when you get to your N you'll need to think about it. (break in transcript) Write *man* up here again. (break in transcript) All right. Do *man* quickly. Oops, wait a minute. Think about your M. It's the same as the N, isn't it? Down / up /
- Ian: / up / over, over, M.
- Lisa: Tell yourself.
- Ian: Down, up, over and
- Lisa: There. Nice M and nice N. Put them in your sentence quickly.
- Ian: (unclear word spoken)
- Lisa: It doesn't do us any good to practice those Ns if we don't use them when we write words the right way. Now, your job as a writer is to reread as quickly as ... soon as you finish a word.
- Ian: Nobody wants to play Hangman with W?
- Lisa: Mmm hmm. I want to finish with - w...i...t...h.
- Ian: *me*. Nobody wants to play Hangman with *me*. Do I add a period?
- Lisa: Mmm hmm.
- Ian: Can I write the period on that?
- Lisa: I already wrote the period, so are you done?
- Ian: Yep.
- Lisa: All right. Why don't you go up there and practice a couple of N's quickly ...

The transcript was presented in parts to allow discussion of the scaffolding and interactions; however, viewing the segments in this way may not fully convey the overall task demands, both cognitive and motor, that were placed on the learner with substantial amounts of talk and problem solving within most word cycles, possibly too many task

demands from the perspective of the child. Clearly, each of the interactions (in isolation) represented a knowledgeable teacher who used language as a tool to scaffold, but in their entirety, the sheer number of interactions and teaching points diminishes the ability to control frustration and risk in problem solving (Wood et al., 1976).

Too much teaching around too many points of learning has the potential to interfere with what the child can attend to and learn. Furthermore, the teacher runs the risk of interfering with the child's sense of efficacy and motivation. It is in the best interest of the teacher to be mindful of the child's role in instruction (Meyer, 1993) and to consider possible limitations of scaffolding. The child's affective response and interpersonal relationships have been noted as a missing ingredient in Vygotskian theory and the scaffolding metaphor (see Fullerton, 2001; Lyons, 2003; Stone, 1993, 1998). During the retrospective reflection, Lisa, herself, noted this concern:

When I think back about it, even ... getting feedback and having people come in and watch ... what everyone was saying and what I kind of knew, but I just couldn't seem to get a handle on it, was how to make the writing easier for him. And I think what caused ... the block for me was that he had so many [letter] formation problems, had ... high frequency words but he didn't have a large core of them, and if he knew them, they weren't fast, but they weren't fast because formation was the trouble ... He could do a sound analysis but as I recall, it wasn't extremely strong to begin with. ... I couldn't make it easy enough. I was having him do too many things. It might have been just because he was a second round [second entry] child ... But what I kept feeling ... was the writing was hard and I should have been able to make it easy enough that it didn't seem hard to him.

As Lisa came to recognize, such intensive literacy efforts by the child, even though scaffolded, may interfere with critical factors such as attention, memory and motivation. (See also Fullerton & DeFord, 2001.) Lisa deserves much credit in terms of her teaching, but also in continuing to work toward growth in pedagogical knowledge and decision making. Through her hard work and struggles with this child, we both benefitted and developed new understandings. Lisa was a highly skilled and engaged practitioner who was dissatisfied with her interactions



with this particular learner. While there are clearly aspects of the teaching that Lisa felt needed improvement, it is important to note that Ian made strong progress and that his reading and writing skills were well within the range of average first graders when he exited from the intervention. (See exit scores in Table 1.)

### *Change over time in Ian's lessons*

The earlier discussions of interactions during writing focused on the first seven lessons. What follows is a discussion of the nature of the interactions and the changes that occurred in the middle and final lesson intervals. By mid-program, the negotiation of topics became smoother. Within each lesson at this interval, there was only one cycle of talk, with the teacher becoming more flexible in conversing with the child. At times, Lisa starts the conversation; at other times, Ian starts, and on one occasion, she asks Ian if he has an idea he would like to write. Given the time spent on topic development during the first lesson intervals, this seems a logical and appropriate response at this point. In the beginning of lessons the average number of exchanges was 39 compared to the midpoint when the average number of exchanges was 26, with the range quite varied from 6–50 exchanges. Also of note is that within the middle interval of lessons, Ian was writing much of the story independently, as much as 90% (e. g., lesson 32). His stories had also expanded in length. Perhaps, not coincidentally, as Ian was able to contribute more during the writing, he gradually came to feel more in control of the process and was willing to take risks in developing the topic himself or coming up with a topic based on parameters established by Lisa. As a result, the cycles of talk and number of exchanges decreased as the percentage of his independent message construction increased.

In the final interval of lessons, the writing product and the nature of the interactions were less straightforward. In these lessons, Lisa more often steered the conversation toward books read, and Ian seemed reluctant to write about what she suggested. While he did not balk, during four of the five transcribed lessons, he expressed interest in a different topic. Yet, often, as the conversation continued, he changed his mind and accepted the topic the teacher began. Each of the final sessions had at least two talk cycles; one had three. Because of these responses, and the independence and flexibility that were a part of the previous lessons (midpoint), at first pass, Lisa's return to more control of the conversation seems puzzling. Through her reflections, however, it became clear that the intent

was to increase the complexity of his compositions. Such scaffolded interactions in writing at high levels are likely to parallel those that keep it easy to learn at higher levels of text reading (Kelly & Neal, 2009). As a result, within this third segment of lessons, the number of words written independently decreased somewhat, and more sharing of the task by the teacher occurred (although no contributions were solely provided by Lisa). This is not necessarily surprising as the number of words within Ian's stories increased as well. Because Lisa had upped the ante in terms of complexity, it seems logical that she responded accordingly to support the solving of words and the writing of the message. The transcription excerpt that follows is from one of the final lessons. As acknowledged in reflections, Lisa scaffolded to support reading-writing connections — writing about a book read previously, calling for greater orthographic awareness as well as increased story length and sentence complexity:

- Lisa: What was the problem she was having with the wishing well?  
 Ian: It kept saying ouch.  
 Lisa: It kept saying ouch every time she what?  
 Ian: Threw pennies.  
 Lisa: Threw pennies. What'd she do?  
 Ian: She threw a pillow down.  
 Lisa: Mmm hmm. Let's write that. Let's write that in two parts. The first part was what?  
 Ian: Threw a penny down, the well said ouch.  
 Lisa: Okay, let's write that part first.  
 Ian: Then we're going to write one more?  
 Lisa: Well, that's what we're going to write first. Tell me again. Every time ...  
 Ian: she threw a penny down, the well said ouch.  
 Lisa: Okay, say it one more time.  
 Ian: Every time she threw a penny down, the well said ouch.  
 Lisa: You start *Every* and I'll help you with it.  
 Ian: Every (he says word)  
 Lisa: Okay, Ian, when you're writing the word *Every*, you say it slowly and you think about what it's going to look like.  
 Ian: (writes the first two letters)  
 Lisa: Every. I'll finish it for you. Ev-ery  
 Ian: Every ti- time (saying it slowly as he writes the first three letters, then waits)  
 Lisa: You know what time is! [how to write] You're right, there's one more letter in there. What would it be?  
 Ian: E

- Lisa: That's right. How nice! Look how nice that looks, doesn't it? You're not on top of each other and it's a nice size. All right.
- Ian: *Every* time she – she threw
- Lisa: Let's go up here (practice page).
- Ian: th-rrr-ew (saying it slowly)
- Lisa: Do not guess.
- Ian: I know.
- Lisa: Say it again and think what would be at the beginning.
- Ian: thuh (saying the first sound)
- Lisa: threw (teacher says it)
- Ian: thuh
- Lisa: That's it. You know what it is.
- Ian: T – H? (saying the letters)
- Lisa: Absolutely! So, see, you could get it. You had to just think for a moment. You had to say it, you had to listen to it. You had to think.
- Ian: Ooo, ooo
- Lisa: What did you just tell me *threw* starts with? What did you just tell me it started with, honey?
- Ian: T-H
- Lisa: Did you make T-H?
- Ian: No, I made T-T
- Lisa: All right, that's what I'm saying. You've got to be thinking and checking on yourself.
- Ian: (5 sec.) thuh – rrr - rew
- Lisa: rew What's the word?
- Ian: *threw*
- Lisa: All right
- Ian: /thuh/, /r/, /ew/, /ew/
- Lisa: The word is *threw*. (assisting him so that he is not overrenunciating the sounds)
- Ian: /threw/thuh/oo/
- Lisa: *threw*
- Ian: /oo/
- Lisa: That's an R there. I'm going to finish it for you. It looks a lot like this word that you read all the time. What is that word that you read all the time?
- Ian: *knew*
- Lisa: *knew*, yeah, see it was like *knew*. What we have to do is think about what we know in reading to help us when we write. Cause you are an absolutely wonderful reader!
- Ian: I got the R.
- Lisa: I know.
- Ian: (rereading) Every time she threw a *penny*. Is that for *penny*? (referring to letter box teacher is putting on the practice page)
- Lisa: Mmm hmm.
- Ian: peh –eh eh- nee (saying it slowly)
- Ian: an E
- Lisa: Yeah, it's an E. I knew you knew that.
- Ian: E - A
- Lisa: Just an E
- Ian: peh -nnn ... *penny* (sliding his finger under the box)
- Lisa: You're thinking of what letter you'd expect to see, aren't you? You're right. It's a *y* isn't it? Absolutely. Very good. Now this does look, this does sound a bit like *n* in there, but if you clap *penny*, it'll be pen-ny. You know sometimes how we see two letters in the middle of a word?
- Ian: two Ns? (their speech overlapped – at the same time she says word, he says two Ns)
- Lisa: Two Ns, all right.  
(There is a break in the transcript. She guides him as he writes *well* and *said*.)
- Ian: (rereading) Every time she threw a *penny* in to the well, the well said *ouch*.
- Lisa: *Ouch*, now you saw that in the book a lot. Here, let me put boxes. Run your finger under it.
- Ian: I was gonna, I .... o...w. Ouch- ch, ch (writes owch.)
- Lisa: Okay, you are nearly right.
- Ian: /ou/ (perhaps monitoring which part was not correct)
- Lisa: It could be O-W. You're absolutely right, but do you know what it is? O-U
- Ian: /ou/
- Lisa: You are thinking. That was wonderful. That is the word *ouch*. Okay, go ahead and put it in your sentence. I like the way you're doing it. Your letters aren't too close. You're really thinking about this. Say *ouch*. It helps when you say the word and you think about it as you write it. *Ouch*.
- Ian: *Ouch*. (rereading) Every time she threw a penny into the well, the well said *ouch*.
- Lisa: So what did she do? What did she do?
- Ian: She put a pillow, so she *put* a pillow in the well.
- Lisa: All right, so she *put* her pillow in the well. Great sentence!
- Ian: So/sh/ she put (writes *put* as he says it). That looks like *put* to me.
- Lisa: That looks like *put* (confirming). I'm glad you went up there and tried it. That looks like *put* to me too... Keep going.
- Ian: a *pillow* (attempts *pillow* in his sentence)

Lisa: You are so close. Let me put it in boxes and see if that helps you think about it. That is so good. You've got this part right and you've got this part right, and you've got this right. What do you think?

Ian: Maybe this could be another L.

Lisa: Oh, could be another L, couldn't it? Put it in. Because you saw that didn't you? You saw that in the book.

Ian: pill, /eh/ /eh/

Lisa: pill /ill/ /ill/

Ian: I?

Lisa: Mmm hmm. All right, does that look like *pillow*?

Ian: Mmm hmm.

Lisa: See, here's the word you read in the book, isn't it. So you did know there were two Ls and you knew there was an O-W. Good for you! You're using your mind and thinking about what you read. 'Cause you read these words so it's not going to be so hard to write them.

(He writes *into* and then *the* and *well* without assistance. There is a break in transcript as he asks to write another sentence, "And she made many wishes" and they negotiate adding it tomorrow.)

Lisa: Did it help you to think about the words like *pillow* that you saw in the book? And the word *ouch* that you read in the book? And the word *penny* that you read in the book. See you've already read those, so if you think about the way they look in the book, that helps you, doesn't it, then you have to listen to how they sound and think about the way they look. Good for you!

Ian: Can I try that W again?

Lisa: You fix that W cause it looks a little like U, doesn't it?

When reflecting on the lesson, Lisa discussed her realization during interactions that she had initially misled Ian in her scaffolding, allowing him to overrenunciate the sounds in *threw*. Ian had inserted extra sounds along with the first two letters, th- and then was adding the sounds for -ew. After his multiple attempts to say the word failed, she adjusted, or mended, the scaffolding to align with the goal of developing Ian's orthographic/spelling pattern awareness. She discussed how the word looked as she showed him the word, *knew*, on the practice page. In our retrospective conversation, we both noted that during subsequent interactions during the lesson, she was mindful of helping Ian to think about what he knew and how the word might look. Likewise, Lisa commented on Ian's

changing participation in writing tasks as he began to monitor and use what he knew in one context and apply it to novel contexts, a critical awareness for a learner near the end of Reading Recovery lessons. Additionally, at several points, she commented on changes that she saw in his writing of letters, words, and his story/sentences.

*Reflections of the past serve the present: Constructing understandings tailored to the needs of a new student*

After her teaching of Ian in the spring and our analysis that ended late spring, Lisa taught Lyn in the fall. The description and interpretation that follows focuses on Lisa's instruction of Lyn using the reflections and decision making that occurred with Ian as a point of comparison. These comparisons suggest ways that Lisa's reflections and new understandings influenced subsequent skill, decision making, and interactions with Lyn.

"All human beings—not only professional practitioners—need to become competent in taking action and simultaneously reflecting on this action to learn from it" (Argyris & Schön, 1974). This notion of reflecting *on action* to learn may be representative of the change that occurred across these two cases. The teacher's skillful articulation of theoretical and procedural knowledge became apparent within the first case. In interviews and the retrospective reflection, she seemed to have awareness of her decision making and teaching moves, but the result was a teacher who felt she had not done her best work in the teaching of Ian, leaving her with unresolved questions and concerns. This reflection and recognition became an impetus and "touchstone" for her work with Lyn in the fall. As Lisa discussed other students that she taught in the spring while working with Ian and afterwards, she often referred to her work with Ian, comparing her present actions with actions in the past:

I try hard not to do that, [allow things to be hard] but that doesn't mean I wasn't doing it with Ian, because so many things were hard for him, and I think I see that as I work with teachers because [when] things are hard, we're sucked in to doing that part [that they cannot do], which really doesn't help them... . I'm probably ... better with Lyn ... .

Similar to the patterns of interaction and talk within the other case, there were no drastic changes within the interactions or scaffolding during Lyn's lessons. This is not particularly surprising since the teacher, throughout the child's lessons, selects texts and encourages writing tasks

**Table 2. Stories/Sentences Written Across Three Points for Two Learners, Ian and Lyn**

Time Period	Ian	Lyn
Early Lessons	My kite did a flip in the air.	I have to buy a new Bionical. I have to exchange the red Bionical for a white one.
Mid Lessons	I ran into the room that the basket was in.	The next day of Indian Guides I went to look for animal bones with my friends.
Late Lessons	I caught a centipede at school and I put it in to a butter container. I put it in to my mailbox so I don't forget it.	I was wrestling with my brother and I pulled him off the couch.

that place increasing demands on the learner so the “scaffold of teacher support continues” (Clay & Cazden, 1990, p. 219).

Cross-case examination of the data suggests that Lisa’s learning as a result of teaching Ian influenced her future interactions and decision making. Another explanation, possibly working in tandem with the first, is that in working with fall entry children, Reading Recovery teachers are working on steadier ground — the repertoire of what is known seems somewhat clearer when starting with a first grader at the beginning of the year. As Lisa noted, it is more difficult to ascertain what knowledge is firm for each second-entry student, not to mention that the view toward learning and capabilities may be more negative as the child experiences classroom peers surpassing him. Examination of Ian’s and Lyn’s scores on the Observation Survey within Table 1 highlight this point. The entrance scores for Ian at mid-year are not that different than the exit scores for Lyn with two exceptions — the subtests of Writing Vocabulary and Text Reading. In each of their respective years, both boys were reading a Level 2 (Scott Foresman) text, a preprimer level. By mid-year, however, Ian had gained only four levels and was seriously behind the rest of his peers. Lyn, on the other hand, completed Reading Recovery at mid-year reading Level 14 text, a level commensurate with his classroom peers. This suggests that Ian needed to be able to read at least eight levels higher to be in the average range. It is important to note that both learners, at the end of the year, were reading Level 18 texts and Scott Foresman texts.

Reflective comments suggest Lisa was mindful of keeping learning in balance while teaching Lyn. Table 2 presents examples from three periods of each child’s lessons: early,

middle, and late. These representative samples suggest that the range of length and complexity did not differ a great deal across their series of lessons. The sentences provided within Table 2 correspond to Table 3 results where there is a breakdown of the numbers and percentages of words that were written independently, jointly shared, or written by the teacher across the same three points in each child’s program. (Each lesson chosen was the last lesson transcribed within each of the segments designated as early, mid, and late.) Figure 1 provides an example of writing for each child showing how they were analyzed to arrive at the numbers in Table 3.

These results, as well as the analysis of interactions that occurred with Lyn, suggest that while there were increased teacher expectations for story productivity and independence across each child’s lessons, Lisa seemed to be more aware of keeping the tasks manageable and the child motivated to write in the case of Lyn. Within early lessons, the sharing of the task was quite different with 67% of the work shared between Lisa and Lyn, as compared to 25% of the story jointly written through efforts of both Lisa and Ian. Keeping in mind that the timeframe and therefore the item knowledge for each child was different, the contrast is substantial but may again indicate Lisa’s desire to learn from her work with Ian by ensuring that she was not creating task demands that were too great for Lyn. As indicated in Table 3, by midpoint in his lessons, Ian wrote 90% of the message independently, so again, he wrote substantially more than Lyn. On the other hand, it is important to consider the time of year and that the numbers for Lyn at this point in lessons fall within an acceptable range. In an analysis of writing, DeFord (1994) found that higher-outcome children in Reading Recovery

**Figure 1. How a Sentence Was Written and How the Task Was Shared for Lessons with Ian and Lyn**

**Ian (Lesson 49)**

I caught a centipede at school and I put it in to a a butter container. I put it in to my mailbox so I don't forget it.

C: I c a c at school and I put it in to a  
 T: aught entipede

C: 

b	u	t	t	e	r
---	---	---	---	---	---

c	o	n	t	a	i	n	e	r
---	---	---	---	---	---	---	---	---

 . I put it in to my  
 T:

C: 

m	a	i	l
---	---	---	---

 box so I don't forget it.  
 T:

**Lyn (Lesson 58)**

I was wrestling with my brother and I pulled him off the couch.

C: I was with my Brather and I pulled him off The couch.  
 T: wrestling o

*The chart indicates what the child (C) wrote as designated by the top line and what the teacher (T) wrote is below. When the child was supported in some way by the teacher, the letter is circled. The boxes around letters indicate that Elkonin boxes were used to assist the child in hearing and recording the sounds or determining the orthographic pattern in particular words. Technique for representing adapted from Clay & Cazden (1990).*

had percentages that ranged from 50–79% of the words written, with a mean of 56–66%. Even during the early portion of their program, the students in her study wrote 51–59% of the writing text. By the end of Ian's and Lyn's lessons, the independent writing and joint problem solving were fairly comparable.

In relation to scaffolding for independent problem solving, Lisa often questioned Ian about his word knowledge, or she misled or went in an unhelpful direction — assuming that he knew how to write a word and prompted him to do so, but subsequently came in to support as he faltered. In contrast, analysis of interactions with Lyn conveyed that she suggested he start the word and then she finished it (as she began to do more frequently with Ian as lessons progressed) or in later lessons, he took action by writing what he knew and she provided just a bit of feedback on a particular word,

**Table 3. Numbers and Percentages Representing How Words in Story Were Written Across Three Points for Two Learners, Ian and Lyn**

Time Period	Child Independent	Child Assisted Child/Teacher Primarily	Teacher	Total Words Written
<b>Ian</b>				
Early Lessons: Number	5	2/0	1	8
Percentage	63%	25%	13%	—
Mid Lessons: Number	9	1/0	0	10
Percentage	90%	10%	0%	—
Late Lessons: Number	20	5/2	0	27
Percentage	74%	26%	0%	—
<b>Lyn</b>				
Early Lessons: Number	5	5/7	1	18
Percentage	28%	67%	6%	—
Mid Lessons: Number	8	1/4	1	16
Percentage	50%	44%	6%	—
Late Lessons: Number	9	2/1	1	13
Percentage	69%	23%	8%	—

by showing him the final E on a word, or assisted with some irregular patterns such as –ight as indicated below. An example from an *early* lesson follows:

Lyn: (writes the W for the word *white* in his second sentence – The story is “I have to buy a new Bionical. I have to exchange the red Bionical for a *white* one.”)

Lisa: I’m going to finish *white* for you. Listen to it. wh...i...te (saying it slowly as she wrote) Is that an I in there? White. You are so good about getting that first sound.

Lyn: O (stating then writing the first letter in the next word, *one*)

Lisa: (she finishes writing *one*) You wrote such a long sentence, or such a long story. That’s a wonderful story!

At *midpoint* in Lyn’s lessons, we see this interaction pattern continuing with Lisa providing feedforward comments before Lyn begins writing and then modeling words that do not have consistency or regular patterns in terms of hearing sounds in words.

Lyn: Last night I tricked my mom (indicating what he plans to write).

Lisa: Last night I tricked my mom. Go. And you’re in charge of your spacing.

Lyn: L...a...s...t

Lisa: You’ve written *last* quite a few times, haven’t you?

Lyn: Last (wrote *last* and then paused) night

Lisa: You start it. I’ll finish it.

Lyn: (writes N)

Lisa: I’m going to write the rest of it for you ‘cause it’s kind of a funny word. Watch. (says the word as she finishes writing) We don’t hear that G H, do we? It’s kind of like the word *fight* and the word *right* ... They all have that GH that we don’t hear in the middle. Doesn’t it?

Lyn: But remember how I used to write it? I used to write N T.

Lisa reflects on this, stating, “[fall entry] Kids don’t come in at higher levels with ... holes like Ian did. His oral language was so high, so he had a lot of strengths. He wanted to write a lot, but there were all these holes.” Lisa acknowledged that by carefully attending to Lyn’s known and unknown word knowledge, she was able to make better decisions and scaffold more effectively in her instruction with Lyn.

As a fall entry student, Lyn’s ability to write stories was not at the same level of independence as Ian’s at early and mid-intervention, nor were Lisa’s expectations as high (see Table 3). It is clear that Lisa made strong efforts to keep tasks more manageable for Lyn because of her reflections about Ian. As she points out after one of Lyn’s sessions, “It’s been easier for me to make it easy for him, take a little bit at a time, go in and do more of the writing, so, Ian’s always in the back of my mind when I work with Lyn, and that’s probably made lessons better.” Lisa’s level of reflective awareness is intriguing; it is clear from a number of her reflections that she recognized many of the patterns and resulting concerns in her interactions with Ian, but operating in the midst of complex and moment-by-moment decisions, she did not always accomplish the goals intended. “Building one’s own theory of practice includes diagnosis, testing [theories and assumptions], and accepting personal causality” (Argyris & Schön, 1974, p. 158). From our discussions, it was clear that such diagnosis, testing of theories and assumptions about teaching, as well as Ian’s learning, while taking responsibility for her decision making, were all evident in Lisa’s reflections as she thought aloud about better ways to support Ian. What the data also suggest is that this was a gradual and time-intensive process. Because she took much time to sort through these challenges, by the end of Ian’s lessons, Lisa seemed to be more aware of how to calibrate her teaching to better fit this particular child.

The same held true for Lyn. Lisa found a bit more time to look back across each week’s lessons to consider what Lyn had learned and how she had prompted for learning still in process. In the excerpt that follows, Lisa capitalized upon Lyn’s emerging knowledge and used it to quickly teach him things he needed to learn. In writing a story with several sentences, Lyn stated, “Then I created it with a scarf and a hat and carrots” and began to write. Because he wrote almost everything correctly, Lisa stated, “You’re using the words you know that you write fast. Oh my gosh, *scarf* is perfect! You got all the parts of it. A *hat* and *carrots*. Oh very good! For *carrots* to look right it has two Rs, okay? We’re going to add that.” As Lyn writes in the second R, Lisa asks, “What else did you do with your snowman?” After no response, she adds, “You told me you made his mouth.” He then adds, “And then I made the mouth using my finger.” Lisa assists him with the E on *made* and then supports his writing of the word, *mouth*:

Lisa: A box for each letter. (Lyn begins to write *mouth* in letter boxes.) Does that look quite right to you? (Lyn says yes.) You're nearly right. You've got everything except an /ow/ sound, OW. Do you know what other chunk says /ow/?

Lyn: (unclear)

Lisa: Out does, doesn't it? OU. See if that looks right? Does that look like *mouth*?

Lyn: Yeah. (rereading) *mouth* using. I think you should put that (referring to *using*) in boxes.

Lisa: I think you can do *using*.

Lyn: (pauses, then says, US-ING)

Lisa: You're right!

Unlike the earlier example with Ian (in relation to *threw*), Lisa prompted initiation of an action quickly, providing the letter box that Lyn could use to work independently, then briefly following up to assist him with what he knew, using *out* to assist with the vowel pattern in *mouth*. Guided by theory, where Lyn was in his understandings, and what he knew that could be used to support, there was no need to regroup or mend teaching decisions — her interactions provided continuous scaffolding, with each interaction moving the learning forward as the child remained confident and engaged, reflecting the same fusion of skill and will evidenced by the teacher.

What is clear is that there was not one single moment or epiphany when all these understandings came together for Lisa; rather, it was about a series of moments and reflections that merged to bring about new understandings. Such moments were catalysts for a painstaking process that included the willingness to put aside ego and comfort as well as procedures that had worked in the past in order to reformulate teaching to meet the needs of one child's idiosyncratic and sometimes challenging responses. I understood the role that these past reflections played for Lisa because I had written a retrospective account of my own teaching: "Looking back provides further opportunity for analysis and recognition of changes or important moments in time with an awareness that may not typically occur in the throes of working with a challenging, at-risk child" (Fullerton, 2001, p. 43). For Lisa, the reflective learning that followed after teaching may have been just as fruitful as the learning that occurred during instruction, and the opportunity to trial these new understandings with other learners further solidified the teacher's understandings.

## Conclusions

Echoing many professional colleagues and educators, Roskos and Vukelich (1998) ask, "How do teachers learn to get better as practitioners of pedagogy?" (p. 257). To answer this question, several important points suggested by this study connect with the work of others and provide possible suggestions for advanced teacher development:

1. Changes in literacy practices are built upon strong understanding of principles of learning and knowledge of reading processes, but must be grounded in actual experiences. In other words, "knowledge contributes to, as well as results from, the intellectual activities of teaching" (Grossman & Shulman, 1994, p. 10).
2. Change comes about slowly, and even in the case of an expert teacher, changes in the amount of talk and scaffolded tasks may take weeks rather than days.
3. Change occurs in collaboration with others. Beyond deep independent analyses, Lisa asked for and received observations and feedback from me, from fellow teacher leaders, and teachers. Through co-constructed collaborative talk about each child and her teaching, she arrived at stronger understandings that she then shared with others.
4. Future insights are built upon previous insights, and so time for reflection and deep analysis are critical.
5. Teacher knowledge is made up of a "repertoire of cases" (Grossman & Shulman, 1994, p. 15) or touchstones. Teaching many children over time offers Reading Recovery teachers rich opportunities to compare and contrast exemplars — in turn, further analyses and reflections of such cases help to integrate multiple schemas and perspectives, potentially resulting in enhanced cognitive flexibility.

For Lisa and many Reading Recovery teachers, the teaching and analyses of a variety of children at risk of literacy failure establish exemplars. We draw upon these exemplars, sifting and sorting to determine precedents for rationales, responses, and actions. The collegial visits around teaching and the discussion during a session behind a one-way glass provide the "impetus for the constant revision and renewal of what one knows and believes. Knowledge begets teaching, which in turn begets new knowledge"

(Grossman & Shulman, 1994, p. 18). Clearly, the changes in this already skilled teacher affirm this principle.

Tharp and Gallimore (1988) suggested that teachers develop stronger skills through a four-stage process. While Stage 1 begins with assistance from more-knowledgeable others, by Stage 2 the teacher moves into self-directed assistance. In Vygotskian terms, the necessary tools, including language, have been appropriated to guide behavior or practice. Hallmarks of Stage 3 are independence and automatization. Many aspects of practice have become internalized and are almost automatic. Yet, there is recursiveness and deautomatization within the model — at times, teaching contexts may influence discontinuity and create a disruption in performance. The terms discontinuity and disruption in performance seem to describe aspects of Lisa’s work with Ian. As this study suggests, flexible thinking and flexible action are then necessary. Within Stage 4, “the goal is to reprocess through assisted performance to self-regulation and to exit the zone of proximal development anew into automatization” (Tharp & Gallimore, p. 187). In my view, the reflections and the interactions with other professionals that Lisa initiated were all Stage 4 efforts to recalibrate.

As conveyed in the case of Lisa’s work with these children, teaching is not about applying a set of procedures or prompts. Rather, an “explicit theoretical framework” (Schön, 1991, p. 5) defines practice and is used to guide the observation and analysis of children and responsive, accommodating instructional interactions. When I last interacted with Lisa on a professional basis, she was still “looking back,” reflecting upon and analyzing her work with Ian, attempting to calibrate her instruction with other children, constantly sifting and sorting, comparing and contrasting cases, while considering further the patterns in Ian’s responding and her teaching. Linking these new understandings to her work with other learners remains an ongoing process.

### References

- Adams, M. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Allington, R. L. (2005). The other five “pillars” of effective reading instruction. *Reading Today*, 22(6), 3.
- Allington, R. L., & Walmsley, S. A. (1995). *No quick fix: Rethinking literacy programs in America’s elementary schools*. New York: Teachers College Press.
- Argyris, C., & Schön, D. A. (1974). *Theory into practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.
- Berliner, D. C. (1988, February). *The development of expertise in pedagogy*. Paper presented at the meeting of American Association of Colleges for Teacher Education, New Orleans.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.
- Brunner, D. D. (1994). *Inquiry and reflection: Framing narrative practice in education*. Albany, NY: State University of New York Press.
- Bryk, A. S. (2009). Reflections from a two-decade association with Reading Recovery. *The Journal of Reading Recovery*, 9(1), 17–19.
- Calfee, R. C., Norman, K. A., Trainin G., & Wilson, K. M. (2001). Conducting a design experiment for improving early literacy or what we learned in school last year. In C. Roller (Ed.), *Learning to teach reading: Setting the research agenda* (pp. 166–179). Newark, DE: International Reading Association.
- Clay, M. M. (1998). *By different paths to common outcomes*. York, ME: Stenhouse Publishers.
- Clay, M. M. (2005). *Literacy lessons designed for individuals part two: Teaching decisions*. Portsmouth, NH: Heinemann.
- Clay, M. M. (2013). *An observation survey of early literacy achievement* (3<sup>rd</sup> ed.). Portsmouth, NH: Heinemann.
- Clay, M. M., & Cazden, C. (1990). A Vygotskian interpretation of Reading Recovery. In L. Moll (Ed.), *Vygotsky and education* (pp. 206–222). New York: Cambridge University Press.
- DeFord, D. E. (1994). Early writing: Teachers and children in Reading Recovery. *Literacy Teaching and Learning: An International Journal of Early Reading and Writing* 1(1), 31–56.
- Dewey, J. (1933). *How we think*. Boston: Houghton Mifflin Co.
- DiPardo, A. (1994). Stimulated recall in research on writing: An antidote to “I don’t know, it was fine.” In P. Smagorinsky, (Ed.), *Reflections on writing: Speaking about research methodology* (pp. 163–184). Thousand Oaks, CA: Sage.
- Dunbar, K. (1995). How scientists really reason: Scientific reasoning in real-world laboratories. In R. J. Sternberg & J. E. Davidson (Eds.), *The nature of insight* (pp. 365–395). Cambridge, MA: MIT Press.
- Erickson, F. (1986). Qualitative methods in research in teaching. In M. C. Wittrock (Ed.), *Handbook of research in teaching* (pp. 119–161). New York: Longman.



- Fullerton, S. K. (2001). Achieving motivation: Guiding Edward's journey to literacy. *Literacy Teaching and Learning: An International Journal of Early Reading and Writing*, 6(1), 43–71.
- Fullerton, S. K., & DeFord, D. E. (2001). Conversations before writing during Reading Recovery lessons: Negotiation or tug of war? In J. V. Hoffman, D. L. Schallert, C. M. Fairbanks, J. Worthy, & B. Maloch (Eds.), *Fiftieth Yearbook of the National Reading Conference* (pp. 213–227). Chicago: National Reading Conference.
- Gallant, P., & Schwartz, R. (2010). Examining the nature of expertise in reading instruction. *Literacy Research and Instruction*, 49(1), 1–19.
- Garcia, T. (1995). The role of motivational strategies in self-regulated learning. In P. Pintrich (Ed.), *New directions for teaching and learning: Understanding self-regulated learning* (pp. 29–42). San Francisco: Jossey-Bass.
- Gentner, D., & Smith, L. (2012). Analogical reasoning. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (2<sup>nd</sup> ed.) (pp. 130–136). Oxford, United Kingdom: Elsevier.
- Grossman, P. L., & Shulman, L. S. (1994). Knowing, believing, and the teaching of English. In T. Shanahan (Ed.), *Teachers thinking, teachers knowing: Reflections on literacy and language Education* (pp. 3–22). Urbana, IL: National Council of Teachers of English.
- Hatton, N., & Smith, D. (1995). Reflection in teacher education: Toward definition and implementation. *Teaching and Teacher Education*, 11, 33–49.
- Hobsbaum, A., Peters, S., & Sylva, K. (1996). Scaffolding in Reading Recovery. *Oxford Review of Education*, 22, 17–35.
- Johnston, P. H. (2004). *Choice words: How our language affects children's learning*. Portland, ME: Stenhouse.
- Kelly, P. R., & Neal, J. C. (2009). Keeping it easy to learn at higher levels of text reading. *The Journal of Reading Recovery*, 8(2), 27–36.
- Lyons, C. A. (2003). *Teaching struggling readers: How to use brain-based research to maximize learning*. Portsmouth, NH: Heinemann.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Meyer, D. K. (1993). What is scaffolded instruction? Definitions, distinguishing features, and misnomers. In D. J. Leu & C. K. Kinzer (Eds.), *Examining central issues in literacy research, theory, and practice. 42<sup>nd</sup> Yearbook of the National Reading Conference* (pp. 41–53). Chicago: National Reading Conference.
- Peurach, D. J., & Glazer, J. L. (2016). Reading Recovery as an epistemic community. *Journal of Education for Students Placed at Risk*, 21(1), 1–9. DOI:10.1080/10824669.2015.108846
- Pressley, M., Allington, R., Wharton-McDonald, R., Block, C. C., & Morrow, L. M. (2001). *Learning to read: Lessons from exemplary first grades*. New York: Guilford Press.
- Rodgers, E. M. (1998). *Understanding teacher and student talk during literacy instruction in a one-to-one tutoring setting*. Unpublished doctoral dissertation, The Ohio State University, Columbus, OH.
- Rodgers, E. M. (2000). Language matters: When is a scaffold really a scaffold? *National Reading Conference Yearbook*, 49, pp. 78–90.
- Roskos, K. A., & Vukelich, C. (1998). How do practicing teachers grow and learn as professionals? In S. B. Neuman & K. A. Roskos, (Eds.), *Children achieving: Best practices in early literacy* (pp. 250–271). Newark, DE: International Reading Association.
- Roskos, K. A., & Vukelich, C., & Risko, V. (2001). Reflection and learning to teach reading: A critical review of literacy and general teacher education studies. *Journal of Literacy Research*, 33(4), 595–635.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press.
- Rogoff, B., & Gardner, W. (1984). Adult guidance of cognitive activity. In B. Rogoff & J. Lave (Eds.), *Everyday cognition: Development in social context* (pp. 95–116). Cambridge, MA: Harvard University Press.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- Schön, D. A. (1991). *The reflective turn: Case studies in and on educational practice*. New York: Teachers College Press.
- Shulman, L. S. (1986). Paradigms and research programs in the study of teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 3–36). New York: Macmillan.
- Slavin, R. E. (2016). Getting to scale: Evidence, professionalism, and community. *Journal of Education for Students Placed at Risk*, 21(1), 60–63. DOI:10.1080/10824669.2015.1110028
- Smagorinsky, P. (1994). (Ed.). *Reflections on writing: Speaking about research methodology*. Thousand Oaks, CA: Sage.
- Spiro, R. J., Coulson, R. L., Feltovich, P. J., & Anderson, D. K. (2013). Cognitive flexibility theory: Advanced knowledge acquisition in ill-structured domains. In D. E. Alvermann, N. J. Unrau, & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (6<sup>th</sup> ed.) (pp. 544–557). Newark, DE: International Reading Association.
- Spiro, R. J., Feltovich, P. J., Jacobson, M. J., Coulson, R. L. (1992). Cognitive flexibility, constructivism, and hypertext: Random access instruction for advanced knowledge acquisition in ill-structured domains. In T. M. Duffy & D. H. Jonassen (Eds.), *Constructivism and the technology of instruction: A conversation* (pp. 57–76). Hillsdale, NJ: Lawrence Erlbaum Associates.

Stake, R. E. (2006). *Multiple case study analysis*. New York: The Guilford Press.

Stone, C. A. (1993). What's missing in the metaphor of scaffolding? In E. A. Forman, N. Minick, & C. A. Stone (Eds.), *Contexts for learning: Sociocultural dynamics in children's development* (pp.169–183). New York: Oxford University Press.

Stone, C. A. (1998). The metaphor of scaffolding: Its utility for the field of learning disabilities. *Journal of Learning Disabilities, 31*, 344–364.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research*. Thousand Oaks, CA: Sage.

Strickland, D. (2001). In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 322–332). New York: Guilford Press.

Tharp, R., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge: Cambridge University Press.

Trainin, G., & Easley, M. M. (2003). Research in Reading Recovery (vol. 2) review. *Education Review* (p. 336). Retrieved from <http://www.edrev.info/reviews/rev307.htm>

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: MIT Press.

Wasik, B. A., & Slavin, R. E. (1993). Preventing early reading failure with one-to-one-tutoring: A review of five programs. *Reading Research Quarterly, 28*, 179–200.

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Wells, G. (1997). Dialogic inquiry in education: Building on the legacy of Vygotsky. In C. D. Lee & P. Smagorinsky (Eds.), *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry* (pp. 51–85). New York: Cambridge University Press.

Wertsch, J. V., & Stone, C. A. (1979, February). *A social interactional analysis of learning disabilities remediation*. Paper presented at International Conference of Association for Children with Learning Disabilities, San Francisco, CA.

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology & Psychiatry, 17*, 89–100.



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