As literacy educators, we draw inspiration from the examples of our most-esteemed and accomplished colleagues. Dr. Marie Clay, considered by many to be the most-influential literacy theorist, researcher, and scholar across more than 3 decades (Gambrell, 2001), has inspired us to rethink what is possible in our work with struggling beginning readers. Above all, Dr. Clay was a learner who held a tentative and evolving theory of literacy learning and instruction. She understood that literacy “processes are complex and will not be easy to observe and explain. Literacy educators, therefore, need to be tentative and flexible because we could be wrong in our explanations from time to time or from this pupil to that pupil” (Clay, 2005a, p. 2). A scientist or teacher that declares his theory to be true need only wait to be proven a fool by history!

Clay, a skilled qualitative researcher and developmental psychologist, anchored her theory in systematic observations. She closely observed the literacy learning of 100 entry-level students over their first year of school (Clay, 1982), and developed reliable and valid observation tools that allow other researchers and teachers to observe early literacy. Her running record procedures and Concepts About Print tasks have served teachers and researchers for over a quarter of a century as they monitor gradual changes in children’s literacy behavior (Clay, 1979, 2002). While these tools helped Clay and others to investigate early literacy learning, Reading Recovery enabled her to study early literacy instruction. From her first pilot work with New Zealand teachers in 1976, Clay utilized Reading Recovery to develop and refine methods for supporting the learning of children who struggle with early literacy (Clay, 1979, 2005b). Over the past 25 years, thousands of Reading Recovery teachers working with millions of at-risk students have provided an international laboratory in which to explore relationships between teaching and learning. Clay traveled the world for a quarter century to observe teachers who support children’s learning and discuss their insights, concerns, struggles, and successes. She, more than anyone else, was the omnipotent observer of Reading Recovery, and the person best suited to learn its lessons.

Fortunately for all of us in the literacy profession, Clay shared her insights from this work in numerous books throughout her career (Clay, 1979, 1982, 1991, 1993a, 1993b, 1998, 2001, 2005a, 2005b). In all her writings she describes the complexity of literacy learning and instruction and never simplifies the child’s or the teacher’s tasks to a set of rules, procedures or sequential steps.

Clay understood if literacy teaching brings a simple theory to a set of complex activities, then the learner has to bridge the gaps created by the theoretical simplification. The lowest literacy achievers will have extreme difficulty bridging any gaps in the teaching programme and linking together things that have been taught separately. They require a watchful teacher who shares the complex task and knows when to withdraw his or her help, bit by bit as the low achievers construct necessary literacy processes. The teachers create the supporting structure within which the low achievers can be appropriately constructive. (Clay, 2001, p. 105)

Like Clay, all of us who teach young children continue to refine and develop our understandings of the complex tasks involved in literacy learning and instruction. We often return to her writings with a new perspective and with questions generated from our work with children. How will we as a profession continue to build on Clay’s legacy? To address this, we explore implications of complexity, flexibility, and tentativeness that Clay passionately espoused and demonstrated in her professional life.
Complexity Within Literacy Learning and Instruction

Spiro (Spiro, Coulson, Feltovich, & Anderson, 1994; Spiro, Feltovich, Jacobson, & Coulson, 2006) provides a theory of constructivist learning in complex and ill-structured domains. Clay (2001) includes references to this work in relation to children’s literacy learning, suggesting that this theory is worth considering by teachers/researchers as they refine their theories of literacy learning and instruction. Spiro et al. (2006) define an ill-structured domain as having two critical features: case complexity and across case irregularity. They offer medicine, history, and literary interpretation as examples of ill-structured domains. To illustrate the features of this type of domain, they suggest that understanding a clinical case of cardiovascular pathology will require appreciating a complex interaction among several central concepts of basic biomedical science; and that case is likely to involve differences in clinical features and conceptual involvements from other cases assigned the same name (e.g., other cases of ‘congestive heart failure’). (2006, p. 4)

Teaching beginning readers (and writers) who struggle fits these criteria. A major premise of Reading Recovery instruction is that “low achievers, collectively, are a group encountering different sources of difficulty” (Clay, 2001, p. 220). They also bring different sets of strengths that form the basis for initial instruction (Clay, 1998, 2001). This fits the one criterion of a complex and ill-structured domain — cross-case irregularity.

The second criterion Spiro identifies, case complexity, is also clearly present in changes over time in all aspects of literacy learning. According to Clay, these changes are interactive and follow no simple sequential pattern:

Teachers observe that readers extract increasingly more information on texts of gradually increasing difficulty. Such a reader can become aware of new items of knowledge, of new ways of checking on himself or herself, and of new strategic behaviors. In a complex model of interacting competencies in reading and writing the reader can potentially draw from all his or her current understanding, and all his or her language competencies, and visual information, and phonological information, and knowledge of printing conventions, in ways which extend both the searching and linking processes as well as the item knowledge repertoires. (2001, p. 224)

Concepts like fluency, searching, monitoring, and learning to look at print are each complex aspects of a child’s processing system that interact and change over a child’s intervention program.

Spiro et al. (2006) see failure to attain advanced knowledge acquisition in ill-structured domains as common. When learning difficulties are detected in complex domains they often take the form of some type of oversimplification. Characterizing literacy learning and instruction as a complex and ill-structured domain alerts us to look for patterns of oversimplification. Let’s consider oversimplification errors in literacy learning and instruction from the perspective of a child, a teacher, and the literacy profession.

Oversimplification of literacy learning

For a child struggling with initial literacy learning, the opportunities for oversimplification abound. Many sources of information that an experienced reader can process quickly and with little or no attention require considerable new learning. Clay (2001) sees the child as beginning with simple working systems borrowed at first from different kinds of learning prior to school which have been adapted for these novel activities. Over three to four years, they construct a vast range of complex processing activities, finely tuned to the requirements of literacy learning. (p. 96)

However we think about these processing systems, “they must be infinitely flexible and temporarily tentative during the acquisition of literacy” (Clay, 2001, p. 103). Oversimplification occurs when the struggling student latches on to one of these temporary and tentative steps toward a more-effective system and perhaps habituates an inappropriate way of responding.

Think of a child in the early stages of building a working system for fluent reading. The child may also be just learning how to look at and gain information from print. Figure 1 shows some of the aspects a child must coordinate in a working system for fluency.

Early in a child’s Reading Recovery program teachers would work on fluency during the rereading of familiar books (Clay, 2005b). This
reduces the attention required for word recognition since the child has read the book at least twice. Repeated readings also help establish the meaning of the story, making this available to guide attempts at fluency. Both the expectation of what fluent reading should sound like and the visual scanning process can be sources of oversimplification. We observe that some children adopt a robot type of word-by-word intonation pattern. They may intentionally maintain this pattern to indicate that they are reading the words and not just making up a story from the pictures or repeating a memorized plot.

Earlier in his program the child probably was required to point at the words as he read, an important step in establishing directionality and monitoring by one-to-one correspondence of words in oral language to words in print. Even when this is no longer necessary and his teacher actively discourages finger pointing, the child may maintain the habit of looking at each word as he is saying it. Procedures in Clay (2005b) related to phrasing in fast and fluent reading include sliding a card over or under the text as the child reads to encourage the child “to let his eyes work ahead of his voice” (p. 153).

Careful observation and a complex processing theory are required for a teacher to infer possible cause for an observed lack of fluency and plan instruction that helps the child overcome these tempting simplifications. This is just one example. Children can oversimplify their approach to either reading and writing in many ways, and the teacher needs to remain tentative and flexible in figuring out what the child might be doing or thinking that is limiting progress.

**Oversimplification of teaching**

Teachers working with a complex theory may also be tempted to abandon a tentative and flexible form of instruction in favor of simpler and sometimes more-familiar approaches. We see this in teachers’ attempts to teach for self-monitoring (Gallant & Schwartz, in press; Schwartz, 1997, 2005). Self-monitoring, a central component in Clay’s (2001, 2005a, 2005b) theory of early literacy learning and instruction, refers to a set of strategic activities that children use to check on their ongoing reading of text and to decide whether a problem occurs that might require additional processing. For beginning readers, many of these problems relate to word recognition.

When children read aloud, they often substitute a different word for a word that appears in the text. Analysis of these substitutions, recorded in running records (Clay, 2002), or miscue analysis (Goodman, 1969) allows teachers to infer the type of information sources the child uses to make word recognition decisions. Clay (2005b) refers to this aspect of word recognition as **strategic activity for searching information sources.** As the child refines his working systems for reading and word recognition over time, his strategic activity and use of information sources change. Teachers are often very familiar with instructional routines related to searching strategies, since much of the professional debate around literacy instruction centers on which of these instructional routines is most effective for beginning instruction. Phonics, decoding by analogy, and guessing words from context are all routines that appear in teachers’ guides and reading methods texts for early literacy instruction.

Monitoring strategies are not usually a part of this debate. When a child’s searching strategies lead to a substitution, the child has an opportunity to notice whether his attempt is correct. Attempts where the child hesitates, rereads, or makes multiples tries suggest some type of monitoring. Analysis of these attempts versus unnoticed errors allows the teacher to infer the child’s strategic activity and use of information sources for self-monitoring (Clay, 2001, 2005b; Schwartz, 1997, 2005).

Because this is a less-familiar aspect of literacy learning and instruction, oversimplification can occur. We have heard Reading Recovery teachers describe a child’s strategic behavior with a general statement that the student self-monitors (Gallant &

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**Figure 1. Working System for Fluency**

<table>
<thead>
<tr>
<th>Meaning Focus</th>
<th>Visual Scanning</th>
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</thead>
<tbody>
<tr>
<td>Fluency</td>
<td></td>
</tr>
<tr>
<td>Word Recognition</td>
<td>Expectation of What Fluent Reading Sounds Like</td>
</tr>
<tr>
<td>Sight Words</td>
<td>Problem Solving</td>
</tr>
</tbody>
</table>
Clay’s theory provides an excellent starting point for the transformation to a more-complex view of early literacy learning and instruction. Differences based on sound-to-letter expectations (Schwartz & Gallant, in press).

A related, and perhaps more critical oversimplification is noted by Smith (1999). She found, in examining videos of teachers working with struggling readers, that teachers only focused on prompting for self-monitoring after 2% of a child’s unrecognized errors. While it is certainly appropriate to ignore some of these errors, many of them provide opportunities to extend the child’s monitoring strategies. Instead of prompting for self-monitoring, teachers often pointed out the error and moved directly to teaching for searching strategies. This oversimplification negates the central role of self-monitoring activity as a mechanism to promote development of working systems that integrate monitoring and searching behaviors through the child’s processing activity reflected in self-correction behaviors during reading (Clay, 1982, 2001, Schwartz, 2005; see Palincsar, 2007 for a discussion of oversimplification related to comprehension instruction).

Transforming the Debate
Teachers’ overattention to searching strategies is understandable given the continuing oversimplification present in the professional literature about early literacy instruction. As a profession, we continue to debate phonic versus more meaning-based approaches to teaching word recognition (Chall, 1967; Moats, 2007; Pearson, 2004, Schwartz & Gallant, in press). Even Pressley (2002), one of the leading literacy researchers of our day, presents an oversimplified view of Clay’s theory. He recognizes monitoring as a unique aspect of Clay’s theory, but limits this monitoring to checking “whether the word as decoded makes sense” (p. 208). This is a primary form of self-monitoring for proficient readers, but ignores the role of monitoring by various types of visual information as the novice or struggling reader learns to look at print and coordinate this looking with knowledge of sound and letters (Clay, 2001).

Like literacy education, developmental psychology floundered for years with useless debate over nature versus nurture. They have moved beyond this debate with more-complex theories that negate the either/or dichotomy (Damon & Lerner, 2006). Literacy educators need to make a similar transformation in our professional literature to a more complex view of early literacy learning and instruction. Clay’s theory provides an excellent starting point for this transformation. Grounded in detailed observation of changes over time, Clay (1982, 2001, 2005a) provides a view of waves of strategic activity (Schwartz, 1997, 2005; Schwartz & Gallant, in press; Siegler, 2006) that illustrate the interaction of monitoring, searching, phonological processes, and changes over time in the child’s ability to look at and monitor information from print.

Clay would be the last one to claim that this theory is complete or even correct. But it provides a way forward, a way of moving beyond unproductive debates of the last century and the reading wars that drain resources and limit student learning opportunities to single-factor instructional models (Clay, 2001). Based on a lifetime in research and instruction, Clay chose to sail in a different direction. She embraced complexity, realizing that our current understanding is tentative and the way forward still uncertain. As a profession we would be wise to follow her lead, remembering that, as Dr. Marie Clay always believed, the “search for solutions has no end” (Clay, 2005b, p. 208).

References
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