Changing Lives Forever: Looking Backward and Forward

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Editor's note: Content of the following article was originally presented by Carol Lyons as the opening keynote speaker at the 2010 National Reading Recovery & K–6 Classroom Literacy Conference. We are delighted to share it with our readers.

I am very pleased and honored to be with you for the 25th anniversary celebration of Reading Recovery in North America. Tens of thousands of Reading Recovery teachers, teacher leaders, and university trainers who have been trained in the last 25 years embody excellence in literacy instruction for their schools, universities, and communities.

Over the past 25 years, Reading Recovery has had a significant impact on reducing the number of struggling readers in the U.S.

- Nearly 2 million of the lowest-achieving learners in reading and writing from a variety of ethnic, language, and ability groups have received Reading Recovery's one-to-one lessons.
- The International Data and Evaluation Center has accumulated over 24 years of data on every child entering Reading Recovery—even those who have only a few lessons—and has provided the most-accountable and extensive evaluation of any early intervention for struggling readers.
- After a full series of Reading Recovery lessons (just 12 to 20 weeks), 75% of children reach grade-level standards. These are remarkable results for students formerly in the lowest 20% of their first-grade class.
- Evaluation studies tracking the progress of Reading Recovery students through second, third, fourth, and fifth grades on standardized measures and high-stakes state assessments show that Reading Recovery students who have successfully completed a 12 to 20-week intervention perform at average levels when compared to random sample of the general population in their respective schools (Schwartz, 2009).

Further evidence of how effective Reading Recovery is comes from the U.S. Department of Education's What Works Clearinghouse (WWC), established in 2002 to provide educators, policymakers, researchers, and the public a central and trusted source of scientific evidence of what works in education. The committee looked for evidence of program effects on four domains of measures related to beginning reading: alphabetics (phonemic awareness, phonological awareness, letter identification, print awareness and phonics); fluency; comprehension; and general reading achievement. Reading Recovery was the only intervention reviewed that received positive or potentially positive ratings in each of the four outcome domains (WWC, 2008).

Reading Recovery has had a major impact on my teaching, research, and writing since I was trained in 1985. The reasons why I am so committed to Reading Recovery began 15 years before I took the training. During the 60s and 70s I was a first-, third-, fourth-, and fifth-grade classroom teacher; primary learning disability teacher; and a remedial reading teacher. I taught in Boardman, Ohio; on an army base at Fort Lewis, Washington, during the Vietnam War; and in the inner city in New Britain, Connecticut. I always worried about the children who were in my lowest reading groups and the special education and remedial reading students in my classes. They had difficulty attending in class and rarely kept up with the rest of their classmates. Some children withdrew from classroom activities altogether while others acted out and became discipline problems. Many of these children had difficulty getting along with others, poor self-images, and failing grades. I saw them become frustrated trying to learn how to read, and I became frustrated not being able to help them make substantial progress. Frankly speaking, I did not know enough about how to teach struggling students to read and write.

When I entered graduate school at The Ohio State University in the late

70s, I knew I needed to learn more about learning and literacy. So, I took master's and Ph.D. coursework in literacy, neuropsychology, learning, and reading disability.

In 1985, I was fortunate enough to be asked by Charlotte Huck, Martha King, and Gay Su Pinnell to become a Reading Recovery trainer. I had been teaching graduate courses in developmental and corrective reading and was very familiar with Marie Clay's books and Reading Recovery. But it wasn't until taking the yearlong Reading Recovery coursework and teaching Reading Recovery students that I understood how to use the theory and procedures in Clay's books.

For the next 20 years, I continued to teach Reading Recovery students further classified as learning disabled and conduct research on effective teacher and student interactions. The more I taught Reading Recovery children, the more I began to understand individual differences on two levels—emotional and cognitive. Every one of the 44 Reading Recovery children I worked with taught me something new about observing and analyzing processing behaviors and teaching struggling students how to read and write.

Marie Clay has left us a daunting legacy and a challenging task to search for revolutionary research to better understand literacy learning and how best to teach struggling learners to read and write. In this paper, I will attempt to address this challenge by looking at the past, present, and future.

Past: Three Foundational Principles of Literacy Learning

Principle #1: Children construct their own understandings.

Young children independently construct an internal representation of their world early on in life. They begin to understand day-to-day experiences, such as waving bye bye, and construct meaning through social interactions. The constructive infant engages in many different kinds of self-initiated and self-directed activities. You have all seen infants smiling in church and you return their smile. Oftentimes you will hear an infant babbling and talk back to them.

Studies of children's thinking (Piaget, 1977; Duckworth, 1996) and language acquisition (Halliday, 1977) reveal that children construct and act on their own theories of how things work and change their theories slowly if their experiences contradict that existing theory. My favorite example of the constructive process is a conversation between Mr. Sullivan, our local pharmacist, and my son, Kenny.

Mr. Sullivan made a big fuss over Kenny every time we came into the store. Ken's first word was Dada, not Mama as I had hoped, and he called every man he saw Dada. One day, after Ken called Mr. Sullivan Dada, he replied "I'm not your daddy." Then, he asked, "What does your daddy look like Kenny?" Kenny looked puzzled and after about 30 seconds pointed to Mr. Sullivan's head and said, "Dada haerr" (hair). The customers thought this was very funny since Mr. Sullivan was bald. Ken repeated "Dada haerr" several times because his response got so much laughter. Mr. Sullivan's question required Kenny to remember what his daddy looked like, call up the information, and compare and contrast how Mr. Sullivan looked with how daddy looked to answer the question. Kenny was using powerful mental activities to respond to the question. He was able to self-organize and independently generalize the learned concept of Dada to another context. He never called Mr. Sullivan or any other man (except his daddy) Dada again.

Implications for educators and parents

Young children who spend considerable amounts of time in front of a TV set or playing computer games are not having opportunities to shift into a constructive mode of thinking because they are not interacting with a human being. Yes, young children love video games and computers that may be interactive, but these may be the downside of learning. For one thing, digital immersion may cause children to lose the social connections that provide verbal feedback in response to their actions, and in the process interfere with social, emotional, and cognitive development. Furthermore, video games and computer programs may overstimulate the developing brain, which needs time to attend and process sensory input. Computer programs may improve eye-hand coordination, but they also suppress the frontal lobes of the brain, hindering language development, constructive thinking, memory, attention, and problem solving.

The best thing parents, caregivers, and teachers can do to help children construct meaning is to provide experiences which engage children in conversation and respond to their early attempts to speak, draw, read,

and write (Heath, 1983; Clay, 2001). It is only within the constructive process that children build foundational neural networks to use language to understand and be understood by others as they learn how to speak, read, and write.

Principle #2: Children come to literacy with varying knowledge.
Learning to read and write are ways of constructing and conveying meaning with written language that build on ways young children learn to construct and convey meaning through talk. Whether and how preschool children make connections between talking, reading, and writing depends on

- what is available and valued in their homes and culture;
- how people in their environment use reading and writing in their own lives; and,
- how these people initiate, support, and respond to children's early attempts to read and write. (Heath, 1983)

Kenny's preschool experiences were supported and extended by conversations with adults and children when he was read to and when he attempted to write messages. I believe that his early writing experiences helped him discover concepts about print and ways to express himself that helped him learn how to read. One writing experience is memorable.

I made a grocery list before going to the grocery store every week. After putting Ken in the grocery cart I gave him the list, which I referred to often as we went up and down the aisles. One day, Ken said he didn't want to hold my list — he wanted to make a list of his own. So, the next time we went shopping, he brought his list. When I looked at it, I noticed two squiggles with spaces between each squiggle on one line and then three squiggles written on the next line down the left hand side of the paper. His list looked just like mine with fewer items. When I asked what was on his list, he said that two squiggles meant Fruit Loops and three squiggles meant Bud Light beer. His brain had linked the sounds of speech and the squiggles on print. Ken's grocery list showed he had acquired a concept of word, left-to-right directionality,

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and return sweep. And, Daddy was already a big influence.

About the third time we went shopping, Ken complained that I didn't buy anything on his list. The next time we went shopping, much to my surprise, I found squiggles at the bottom of my list: two squiggles for Fruit Loops and three squiggles for Bud Light Beer. From that day on, we wrote the grocery list together. He paid close attention to how we formed the letters and, over time, he was writing a few letters by himself. By the time he was 5, I was relying on him to write the grocery list.

Of course, I told him the items we needed, but he also continued to write items he wanted. Fruit Loops and Bud Light beer were on our list many times.

Ken continued adding items to my grocery list throughout grade school, high school, college, and medical school. He and his wife, Heidi, visited us this past Christmas. I went grocery shopping and at the bottom of my list Ken had added Fruit Loops and Bud Light beer. I had to chuckle because life has not changed that much in 37 years, except the Bud Light beer is for Ken and not his father who, unfortunately, is now allergic to beer.

There are children, however—such as the 13 innercity boys, ages 10–12 whom I taught in New Britain, Connecticut—who did not have such home or preschool literacy experiences. Several had repeated a grade and all couldn't wait until they were 16 to drop out. Due to their poor academic records, a transitional second grade was created for them. I was hired to teach them 6 days after school started. The first two teachers hired for this position quit.

After a few days in school, I learned that the boys had not heard nursery rhymes or childhood classics like *The Three Little Pigs* or *Cinderella*. Some could not write more than a few sentences. One boy only wrote his initials because he was told his name was too long and took too much time to write. I made home visits to most of the boys in my class. I found no books or writing paper in the home. I doubt that anyone showed them how to read or write or offered encouragement if they attempted to read or write. Several moms said that their sons skipped school because they could not do the work.

Unlike Kenny, these boys never had the literacy experiences necessary to establish a framework for literacy that they would need to be successful in school. They resisted my attempts to use basal materials on their reading level. I soon realized that if the boys and I were going to survive and thrive together, I had to do something different.

I knew they loved to hear and tell stories, so I shared some of my experiences teaching third and fourth grades on the Army base during the Vietnam War. They were very attentive and interested in these stories. We chose several Vietnam stories to write as a shared writing experience and publish so that each child had his own copy of the stories. The Vietnam stories were our first reading materials.

Over time, the boys each shared a story from their life with the class. The stories became part of our shared writing time and were later published and placed in our classroom library. After several months, the boys felt comfortable enough to individually write their stories. I was surprised how well the boys could put their thoughts and experiences into words.

With my help, these constructive writers used the language they already spoke to link to the letters they could make. I began to realize the learning potential in every child. Individual differences in each student's writing and reading strengths emerged as they wrote and read their stories. Each boy's writing provided a starting point to build on, a place to go back to and teach something new. I believe that the boys from New Britain learned to read in much the same way Kenny did — through writing. They achieved so much in 1 year that I asked to have them again the following year. The second year the boys and I spent together was very rewarding. Wilmer Rocker, a boy from whom I learned the most, told me the last day of school, "I finally feel adequate because I can read and write as well as anyone."

Implication for educators

Since we know that children come to literacy with varying knowledge and achievement—which are a product of learning in the cultural contexts of their homes, communities, and prior school experiences—then make-up opportunities for children with little literacy knowledge should begin immediately; start where each child is in his/her exploration of literacy; and provide appropriate experiences for building that existing knowledge as quickly as possible (Clay, 2001). Otherwise, the children will fall further and further behind their classmates and never succeed or feel adequate.

It is the teacher's job to build on the child's existing knowledge and strengths to teach him something new to help him construct a self-extending neural processing system to read and write increasing more-difficult texts. When this happens, children and their teachers are successful.

Principle #3: Learning to read involves a process of reading and writing continuous texts.

When you read a book or write a letter, it appears in print as continuous text, so the focal task of the learner is to problem-solve the message(s) of continuous text (Clay, 2005). When reading continuous text, the learner is supported by his/her oral language, knowledge of the world, and knowledge of how stories are structured to anticipate how the text will continue. Clay's theory of emergent literacy suggests that learners work across continuous text to construct meaning. When children read continuous text, rather than bits and pieces of information, it is easier to learn because they are using the established power of their oral language to gain meaning. When children write continuous text they use syntactic structures of their oral language, building relationships between letters and words while making sense.

When I was a first-grade teacher in the 60s, I used a basal series which included a fixed series of activities and a mapped sequence through which beginning readers must successfully progress. The precursors for success included knowing all the letter names and letter-sound relationships before beginning to read. Nothing in the basal series materials suggested that learning to read involves a process of reading and writing continuous text. The teacher's role was more administrative in that I gave students the prescribed dittos and graded them when they were done. The majority of children in my class learned how to read using the basal materials, but the lowest readers struggled. Reading instruction for my lowest group included a heavy dose of letter work, phonics, drill and memorization of high-frequency words, and reading a few sentences of controlled vocabulary texts. Most children in my low group made meager gains while continuing to fall further and further behind their classmates.

Implication for educators

The most-efficient and effective way to teach struggling readers to construct a literacy processing system to read and write is to have them compose and write a simple message

and read a simple continuous text. As a Reading Recovery teacher for more than 20 years, I know this implication is true. But, I also know the power of writing and reading continuous text from the boys in New Britain who I taught for 2 years before I ever heard about Reading Recovery. They learned to read by writing continuous text and then reading what they wrote. Using children's language to write a simple story involves linking many neural processes like visual perception; auditory or phonological analysis; movement of the hand, arm, head, and eyes; speaking and articulating words; and knowledge of language use while writing and reading continuous text (Clay, 2001).

Today, it is common for school districts to invest in preplanned, prescriptive primary reading programs to address the literacy needs of all children and trust that the program will solve their school's literacy issues. Children generally start the reading program with a sequenced set of materials that gives attention to letters, phonics, phonemic awareness, word recognition, and fluency work. Every child in the class is expected to start and finish the program with the same body of knowledge and skills. One program fits all. Typically, these reading programs require a great deal of commitment from the school, both in terms of time and money. Average and above-average students generally make progress, but the lowest readers struggle.

Today, there are also published programs for struggling readers. The underlying assumption made by the publishers of these programs is that struggling students need to learn 26 letters or 25 high-frequency words in isolation before they read continuous text or write a sentence. Contrived texts with controlled vocabulary that emphasize specific sounds and words are difficult for struggling students to read because the text does not have a sufficient large sample of oral language structures that make sense for the child to work with (Clay, 1998). The role of the teacher is reduced to reading scripted directions. The single-most important variable for effectively teaching the lowest children to read and write is teacher knowledge of how to teach struggling learners and teacher skills to accelerate their progress.

So, why do educators persist in purchasing a preplanned reading program for struggling readers focusing on isolated letters and sounds, contrived texts in which the language is strictly controlled, and scripted directions for the teacher to follow? Some would argue that it is our overdependence on commercial preplanned reading programs that are preventing us from cultivating more-knowledgeable and effective teachers. The right answer is the hard answer — there are no quick fixes. Struggling readers are the most vulnerable to instruction and the most in need of good teacher judgment and individualized instruction to succeed.

Present: Cutting-edge Neuroscience Explains Why Reading Recovery Works

Three advances in neuroscience have helped researchers gain insights into how the brain processes information. The first insight is the critical importance of integrating and coordinating the visual, auditory, and motor systems of the brain to focus and sustain attention.

Neuroscience insight #1: Integrate and coordinate the visual, auditory, and motor regions of the brain to focus and sustain the learner's attention.

Clay's theory of emergent literacy, which developed in the 60s while observing, recording, and comparing behaviors of average- and low-progress Grade 1 children, revealed the importance of integrating and coordinating the visual, auditory, and motor regions of the brain. She reported her findings in the 1972 book, *Reading: The Patterning of Complex Behavior*, and the 1975 book, *What Did I Write?* Marie's 2005 books, *Literacy Lessons Designed for Individuals Part One* and *Part Two*, integrate what has been learned from her fieldwork with research in neuroscience to make accelerated progress possible for struggling children with a wider range of learning and literacy problems.

Having taken courses in neuropsychology in the 80s, I was well aware of A.R. Luria's book, *The Working Brain: An Introduction to Neuropsychology* (1973), in which he describes the functional organization of the brain, and Clay's use of Luria's theories in developing Reading Recovery. But, I also realized the critical importance of integration and coordination of the visual, auditory, and motor regions of the brain in 1985 while working at the brain-behavior lab at The Ohio State University. Technology used to investigate the brain's processing during reading and writing tasks includes measuring the brain's electrical activating while an individual is reading or writing. I administered *The Early Detection of Reading Difficulties* (Clay, 1979), which was later published in 1985 as *An Observation Survey of Early Literacy Achievement*, to high-, average-,

and low-progress children who were in the same kindergarten class at the end of the school year. The high- and average-progress students had no difficulty with the six assessments and were reading as well as most of the children who were entering first grade in the fall. Ryan, the lowest child in the class, was identified as learning disabled with attention deficit disorder. He had difficulty with all six tasks and was reading at Level 2. The electrodes that registered the response pattern of Ryan's brain revealed that he did not integrate and coordinate the temporal (auditory), occipital (visual), and parietal (motor) regions of the brain while processing print as the high- and average-progress readers had done. Additionally, Ryan's attention system, which is part of the reticular activating system, revealed sporadic neural activity suggesting he did not sustain attention while reading and writing text. Further analysis of the brain maps revealed that Ryan's amygdala, which is the emotional center of the brain, became over stimulated or activated at the first sign of difficulty.

Ryan had the lowest scores in his first-grade class on *Early Detection of Reading Difficulties* (Clay, 1979) when he entered Reading Recovery. He was discontinued from Reading Recovery reading at Level 14, which was within the average performance band in his first-grade class before Christmas. Over the Christmas vacation, we returned to the brain behavior lab and I re-administered *Early Detection of Reading Difficulties* (Clay). This time, Ryan was attentive throughout the administration of the six assessments, experienced little difficulty, and easily read Level 14. His brain's electrical activity mapping revealed coordinated and integrated neural activity in temporal, occipital, and parietal regions of the brain. Ryan continued to make progress reading in the middle reading group until the end of the school year.

Literacy activities that engage the auditory, visual, and motor regions of the brain—such as those required to write letters while giving a verbal description of the movement—lead to higher levels of attention than activities that require only one or two source of input.

Ryan's case provides insights into what may be occurring during Reading Recovery instruction. First, the skill of reading requires the integration of information from multiple sources of input including visual information related to graphemes (letters), auditory information related to phonemes (sounds mapped on to graphemes), and motor information related to direction (left to right for English). Coordinating and integrating three different sources of input while reading and writing text help children construct a neural network required to focus and sustain their attention (Lyons, 2003).

Implication for teaching struggling students

Activities that engage three parts of the brain (auditory, visual, and motor regions) to process sensory input simultaneously will lead to the development of neurons involved in activating the attentional mechanisms critical to learning. Literacy activities requiring three sources of input, such as those required to write letters while giving a verbal description of the movement, lead to higher levels of attention than activities that require only one or two sources of input. For example, one source of input would be hearing the teacher's verbal directions (auditory) or watching the teacher write a letter on the board (visual). In both cases, attention is reduced because the child is engaging one input source. So when you are working with struggling students, do not talk too much or provide verbal

directions of what you want the child to do. Instead, think about how you can involve the child using three input sources (the auditory, verbal, and motor regions of the brain).

Neuroscience insight #2: Amygdala, the emotional center of learning

The second discovery in neuroscience that explains why Reading Recovery works has to do with the emotional center of the brain — the amygdala. This almond-shaped structure, which is part of the limbic system, catalogues, files, and stores emotional information to determine if it is important for the long-term storage required for learning. During a traumatic learning situation (which might occur early on when a child experiences reading difficulty), unconscious memories associated with fear of failing are processed in the amygdala. When the brain is triggered in fear, the automatic system bypasses the frontal lobes, the part of the brain responsible for thinking and cognition or reasoning (LeDoux, 1996).

Fear is a universal emotion that includes everything from the decision to fight or flee to the insidious mounting of stress. I believe that many of our struggling readers know they do not read as well as their classmates and experience much anxiety related to fear of failure. The fear stimulus and the programmed response to it are indelibly etched into the amygdala (Ratey, 2001). And, when stimuli that were present during the initial trauma associated with failure are later encountered, retrieval results in expression of bodily responses, such as palms sweating or an increase in pulse and heart rate (LeDoux, 1996). The fear response is learned and will continue to occur until the struggling learner experiences success.

When I was sitting next to Ryan administering *Early Detection of Reading Difficulties* at the end of kindergarten, I saw his body tense up, stiffen, shake, and sweat. Ryan showed anxiety as soon as I started asking him to identify the letters of the alphabet. When my colleague, who was collecting electrical brain waves, and I examined Ryan's brain map, his amygdala, the emotional center of the brain, was overactivated—very red—as soon as he experienced difficulty and remained that way until I stopped the assessments.

Emotional responses are formed from emotional events without any cognitive participation at all and impede the memory required for retrieval using stored information. The amygdala's emotional tagging occurs in consultation with our memories of similar situations. It allows us to instantly judge and then react to the situation we are in. If we have a bias, an expectation that the same thing will happen that happened the last time, it will impact how we react.

Implication for educators

The amygdala's response to a situation can dramatically affect how well an individual is able to process, retrieve, and use information to learn how to learn. If a task is too difficult, the amygdala will become activated and the child will shut down. Reading Recovery teachers help the child succeed by using what the child knows (strengths) to start a task and sharing the task with the child so that he is successful. They do not let the child feel anxious or fail. Fear and anxiety exist on a continuum. When the child is anxious, the root of the problem is fear — most often fear of not performing as parents/teachers/others expect of him. Fear of failure is our greatest fear no matter what age.

Neuroscience insight #3: Neuroplasticity

The third and most-recent insight from research in neuroscience that helps to explain the success of Reading Recovery has to do with neuroplasticity, the ability of the brain to change in response to teaching. Neuroplasticity is a power we have until old age. For centuries, neuroscientists have held to the doctrine of the unchanging brain. It led neurologists to assume that rehabilitation for adults who suffered brain damage from a stroke was a waste of time. It suggested that trying to alter a brain with a diagnosed learning disability was pointless. And, it implied that an individual's brain would remain pretty much fixed throughout life. Once diagnosed with a learning disability, reading disability, or dyslexia, you would have this disability for life.

But the dogma is wrong. In the last several years, neuroscientists have shown that our brain retains much of the plasticity of the developing brain, including the power to repair damaged neurons and regions of the brain; to grow new neurons; to rezone regions that performed one task and have them assume a new task; and to change the circuitry that wires neurons into networks that enable us to read, write, think, and remember (Begley, 2009).

Yes, the brain of a child is remarkably malleable. Recent research in neuroscience shows that the brain can change its physical structure and its wiring long into adulthood through teaching and experience. Isn't that wonderful news — especially as we reach our senior years?

Implication for teaching struggling students

The very structure of our brain to generate new neurons and strengthen connections between one neuron and another, or one area and another, reflects instruction and experience. I believe that the one-to-one instruction in Reading Recovery provides the needed experiences to help the child develop new neurons and, in essence, rewire his brain. As the Reading Recovery teacher works with the child's strengths, the child forges stronger neural connections in regions of the brain that promote effective and efficient literacy processing and weaken the connections in inefficient processing.

There is much hope for stroke patients to regain their impaired functions when intervention is started as soon as possible and the intervention focuses on positive, strong emotional experiences in the stroke patient's life. There is also much hope for individuals diagnosed with a learning or reading disability and their teachers and parents if interventions start early and build on individual strengths, not limitations.

Future: Five Powerful Lessons Learned From Effective Reading Recovery Teachers

Reading Recovery is a short-term intervention that was planned for, researched, and designed with a subset of struggling readers found in first-grade classrooms. It was never designed for older children or the classroom. I have spent 20 years studying effective Reading Recovery teachers and believe there are five important lessons we can learn from them to help anyone working one-to-one with a range of children who are struggling to learn to read and write.

Lesson #1. Reading and writing are complex processes that can be taught.

Many things critical for successful achievement in reading and writing, such as oral language (coordinating oral utterances with the language printed in a book), visual perception (attending to the details of letter formation), auditory perception (hearing sounds in words), and motor behaviors (hand movements to support left-to-right directional scanning of the eyes) are learned. Children with more or less learning in each of these areas can be helped to round out their foundational learning at the same time that they begin to read and write. It is pointless to waste valuable time waiting for children who have not learned these foundational skills to mature or become ready to learn (Clay, 2001) or to support a single variable definition of literacy that many researchers are postulating today.

Whatever their origin, reading and writing difficulties have a large learned component. If low-progress children's learning difficulties are not discovered or left untreated, they will fall behind their classmates and possibly experience a lifetime of failure. That is why early intervention as a preventative of subsequent difficulties is necessary.

Lesson #2. Systematic observation informs teaching.

Teaching is an intellectual activity that requires the teacher to closely and systematically observe the child while reading and writing, interpret the learner's responses, and relate them to new learning needs that have become apparent (Clay, 2005).

Teaching is an immediate result of some prior behavior the teacher has observed. The observant teacher selects texts for particular children to read that require them to use their current working systems and problem-solving strategies. Then, they take children up a gradient of text difficulty, asking them to lift their level of functioning to attempt to read and write more-complex texts.

Systematic observation is critical to determining if the task must be altered to make it more or less difficult. Teachers do not simplify the complexity if that complexity is the target of new learning. They share the task with the child and demonstrate the problem-solving process. Teachers of struggling students must support "the development of literacy processing by astute selection of tasks, judicious sharing of tasks, and by varying the time, difficulty, content, interest and method of instruction, and type and amount of conversation within the shared lesson activities" (Clay, 2001, p. 225).

Lesson #3: Building on children's strengths promotes attention, motivation, and makes it easy for them to learn.

Effective teachers make maximum use of children's strengths and existing response repertoire. Building on what the child already knows makes it easier for him to stay attentive and motivated. It is an essential feature of early intervention, which aims to accelerate learning, that the teacher uses what the child knows (strengths), notices when it is possible to teach something new, and acts immediately when the child begins to struggle. The longer children struggle, the more difficult it is for them to attend, stay motivated, and regroup (Lyons, 2003).

Changes in attention and motivation are dependent on the interactions between teacher and student, particularly the type of feedback the teacher provides. Positive feedback, focusing on the learner's strengths, supports and maintains the child's attention; negative feedback, focusing on errors or the child's inability to remember, interferes with attention. Children view effort and ability similarly, so positive feedback can enhance perceptions of their competence and motivate them to persevere. Teachers who praise children for little successes are more likely to keep the child motivated and attending, which will make it easier for the child to learn and support further learning.

Lesson #4: Attend to the emotional dimension of learning.

Positive social-emotional interactions are essential for struggling students to learn. Aspects of cognition that are recruited most heavily in education—including learning, attention, memory, decision making, motivation, and social functioning—are profoundly affected by emotion (Damasio, 1994). Effective teachers establish a collaborative partnership with children, engage them in productive positive conversation, and encourage them to participate in reading and writing activities in which they can succeed. When the child shows resistance or emotional distress, effective teachers immediately change the learning context so that the child is successful.

To support students' learning, effective teachers provide and maintain consistent expectations, support, and encouragement. They provide students a framework within which to work and set firm, but reasonable, rules and expectations for mature behavior that they know the child can reach. Their spirit and desire to find out how to reach individual children emotionally are important. Helping struggling learners become self-regulated readers and writers is ongoing and time-consuming, but effective teachers do not quit. They have a tremendous commitment to the children they teach.

Lesson #5: High expectations and positive attitudes promote student learning.

Effective teachers approach teaching with the attitude that they cannot control the circumstances that the child brings to the class or their prior learning history, but they can control how they react and respond to those circumstances. They have a positive mindset and believe that with time, patience, and efforts to reach and teach a child—every child, even those who struggle the most—can be taught to read and write.

Effective teachers do not assume that the child has a brain deficit or learning disability. These feelings support a negative mindset that is expressed by many low-achieving students and are often revealed by their teachers in words and interactions with others. Instead, effective teachers discuss each child positively in terms of strengths, not limitations. The words learning disabled, developmentally delayed, developmentally handicapped, language delayed, having attention deficit disorder, and with or without hyperactivity are not used to discuss the student.

High expectations for student's achievement are related to teachers' attitudes and beliefs about themselves and their ability to effectively teach struggling learners. Effective teachers show they care about children's welfare and self-esteem and they believe that they can learn to read and write. They do not give up on the children or themselves.

Conclusion

Marie Clay's *Literacy Lessons Designed for Individuals* (2005) books focus on a theory of complex learning, individual differences, different starting points for every child, looking for a fast track to success—and taking different and idiosyncratic paths if the first, second, or third path does not work—to help struggling learners to construct a literacy processing system for reading and writing continuous text. Clay has made it quite clear that small-group instruction or preconceived, scripted instructional programs, written by authors with a certain "norm" in mind, cannot provide what the hardest-to-teach learners need on a moment-to-moment basis to untangle the myriad of unique confusions they may have to accelerate their learning. If the lowest-achieving children learn to read and write, they will have a lifetime of satisfaction and achievement instead of frustration and failure. They deserve the best school districts can offer — Reading Recovery.

In the final analysis, to achieve success for the lowest-achieving children, we need to invest in Reading Recovery teachers' knowledge and further develop their competence and skills so that they can independently think and act. Reading Recovery requires school districts to make a serious investment in the initial teacher training and individualized instruction to help the lowest-achieving first graders learn to read and write. If school districts prevent long-term costs for remediation, retention, and special education, Reading Recovery is well worth the initial investment.

The second thing school districts need to do is protect their initial investment by making sure that Reading Recovery teachers continue to work one-to-one with the hardest-to-teach children and are not pulled away from teaching children to do other jobs. The more low-progress children teachers work with, the more opportunities they will have to see a variety of learning difficulties, try different techniques to resolve individual issues, and, in the process, build knowledge, skill, and expertise. With every low-progress child they teach, the teacher accumulates more knowledge, skill, and expertise, which impacts effectiveness. Most importantly, the lowest-progress students reach average levels of performance.

If you need surgery to replace the valve in your heart, you want to have the best cardiac surgeon available. That surgeon is the one who has successfully performed hundreds of valve replacements, not one or two. The more knowledge, skill, and expertise the surgeon has acquired, the better able she is to deal with problems when something unexpected occurs. The same principle applies to teaching the lowest-achieving first graders or children who struggle the most learning to read and write.

Will administrators and school boards make the initial investment and continued professional development to train teachers and expand their knowledge and skills by having the opportunity to teach the lowest-progress students one-to-one? I hope so, because, the lowest-progress students will become readers and their teachers will be a critical voice in the advancement of literacy in the future.

I have tremendous respect for teachers and administrators working at all levels in our schools today, and I would like to thank you for all you do on behalf of our children.

They need you. Just remember one thing: You cannot change what's over, but only where you go.

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About the Author

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