

**Powerful Teaching Decisions: Acceleration Through Reciprocity**  
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**RECIPROCAL LEARNING: MARIE CLAY'S THEORY**

“Clay identified two key hypotheses that informed her intervention plan.

1. The first is that the child’s instruction should be based on the teacher’s continuous, detailed observations of literacy behaviors...
2. The second hypothesis is that the reciprocal relationship between reading and writing creates powerful opportunities for the learner’s competencies in one area to support learning in the second.” (Doyle, 2013, p. 651)

**RECIPROCALITY: DEVELOPING STRATEGIC PROCESSING IN READING AND WRITING**

**The Writing Process**

“Learning to compose and write messages the child learns to bring together the

- ideas
- message (which must be his own) [Composition]
- searching for ways to record it
- monitoring the message production, and
- reading of what he has recorded” (Clay, 2016, p. 78)

**The Reading Process**

- Directional movement
- One-to-one matching
- Locating and using known words and letters
- Self-monitoring
- Cross-checking on information
- Searching for and using information of all kinds (Clay, 2016, p. 127-142)

**Decision-Taking**

Expectancy – Attending – Sensory input – Trial/Check – Decision

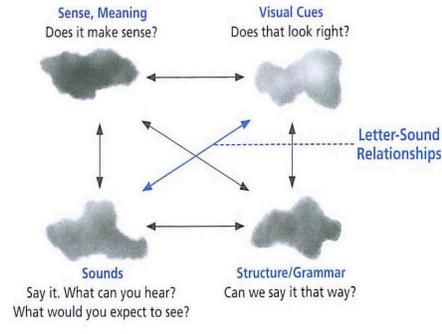
(Solley and Murphy, 1960, p. 320, in Clay, 2015, p. 157)

**Putting it All Together**

“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.*” (Clay, 2015, p. 224)

## RECIPROCITY IS MORE THAN READING AND WRITING: LINKING INFORMATION OF DIFFERENT KINDS

### Linking Information of Different Kinds



(Clay, 2005, p. 112)

“Our visual experience is a mixture of information coming in from the eyes and prior associations. This is how we interpret what we see and give the world significance.” (Greenfield, 2000, p. 74, in Clay, 2016, p. 127)

“For each connection that carries information from the eyes (to the brain) there are at least 10 connections coming in the opposite direction from the brain to the eyes.” (Clay, 2005, p. 100)

“Information comes into the brain through the senses, and the brain rapidly activates what it believes is relevant knowledge stored from prior experiences.” (Clay, 2016, p. 127)

“...when children learn to write and read concurrently these activities help them to attend quite analytically to the oral language they already use. We can observe young children making links between speaking, reading, and writing as they try to write their earliest messages.” (Clay, 2016, p. 15)

“A broad-band theory of literacy learning views it as complex rather than simple and acknowledges that writers have to know how to do certain things with language which overlap with things that readers have to know or do.” (Clay, 2016, p. 12)

Helen Robinson concluded that “*It is probable that proficient readers were already building powerful strategies for using different information sources in some integrated way for problem-solving,*” in the first 12-18 months of literacy learning. (Clay, 2015, p. 67)

## RECIPROCITY IS MORE THAN READING AND WRITING: DEVELOPING NEURAL NETWORKS

### Developing Neural Networks: Known to New Learning

“The single most important factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly.” (Ausubel, in Zull, 2002, p. 91)

“The single most important factor in learning is the existing networks of neurons in the learner’s brain.” (Zull, 2002, p. 91)

“Prior knowledge is the beginning of new knowledge. It is always where all learners start. They have no choice.” (Zull, 2002, p. 93)

“There is a neuronal network in our brain for everything we know.” (Zull, 2002, p. 98)

“Processing activities may involve only one network or many networks ‘talking’ to each other!” (Clay, 2016, p. 5)

“The more complex the task, the more parts of the brain that are needed, and the larger the neuronal network that comes into play. It is not a stretch to say that *any* neuronal network might potentially become connected with *any* other network, if that connection is a useful one.” (Zull, 2002, p. 100)

“Humans are born with the ability to learn spoken language with ease. Children don’t need explicit instruction in vocabulary or syntax; exposure to a community of speakers is enough.” (Willingham, 2017, p. 19)

“Particular attention should be paid to the child’s control of oral language structures or syntax. Syntactical knowledge enables the child to construct sentences and to anticipate which way the sentence might go.” (Clay, 2016, p. 114)

“...from time to time, write down the longest utterance you hear the child construct as he talks with you... This provides a tough indicator of this child’s control over the vocabulary and structure (grammar) of his oral language and what complexity you can reasonably expect of him in writing [and in reading too].” (Clay, 2016, p. 79)

“...incorporate what he knows in a deliberate way.” (Clay, 2016, p. 32)

“So on the first day of school, before any reading instruction has begun, every child in the class has bicameral mental representations of words: they know the sound of a word (which scientists call *phonology*), and its meaning (which scientists call *semantics*).” (Willingham, 2017, p. 19)

“Words gather information around them. Like tiny drops of mercury coming together to form larger drops, or raindrops running down the windowpane, words gather up information. A particular word accumulates:

- oral language knowledge
- writing knowledge
- reading knowledge
- quantitative knowledge about approximate frequency.” (Clay, 2015, pp. 23-24)

## RECIPROCITY IS MORE THAN READING AND WRITING: DEVELOPING SPEEDED PROCESSING

### Developing Speeded Processing

“Every letter (or letter cluster, word part or word) takes 2 journeys as the reader learns.

The first journey:

- from being new,
- to only just known,
- to working to get a solution,
- to easily produced but easily thrown,
- to a well-known old response in most contexts and later,
- known in any variant form.

The second journey:

- moving from very slow,
- to very fast production or very fast recognition measured in thousandths of a second (or milliseconds).” (Clay, 2015, pp. 20-21)

### Developing Neural Networks and *Speeded* Processing

1. Neural pathways can only develop from neurons that already exist or, in other words, a person can only learn through developing upon what they already know.
2. In order to develop speed of processing, the neural network needs to be used repeatedly and often.

## RECIPROCAL GAINS OF READING AND WRITING

“While the child has only limited control in writing and in reading he can be encouraged to search for information in either reading or writing, establishing reciprocity between these aspects of learning about literacy.” (Clay, 2015a, p. 326)

### Foundational learning:

- Learning about direction and sequential scanning
- Locating what to attend to in print
- Spatial layout (Clay, 2016, pp. 49-58)

### Foundational Learning: *Learning About Direction*

“Complex movement patterns to be learned include

- Attending to a left page before a right page
- Moving from the top of the page downwards
- Moving left to right across a line of print
- Returning to the left of the next line
- Using the spaces to control attention to words
- Attending left to right across a word
- Knowing how and where to find what the teacher calls *first letter* or *last letter*, and (ultimately)
- Scanning every letter rapidly in sequence from first to last without lapses.” (Clay, 2016, pp. 49-58)

**Foundational Learning: *Locating What to Attend to in Print***

“The child who knows very few letters and words learns to move across the page of print matching spoken words with written words... The few words that the child knows will stand out as a pattern that recurs...” (Clay, 2016, p. 55)

**Foundational Learning: *Spatial Layout***

“It is important to remember that when the child is learning about the ways in which print is laid out on a page he needs to use this learning when he is reading *and* when he is writing. I think of this as *seeing print from two vantage points*.” (Clay, 2016, p. 58)

“If a teacher notices confusions in writing or the cut-up-story this should alert her to observe very carefully what the child is attending to when reading from a page of print. She may notice that the relationships of letters to words are somewhat confused.” (Clay, 2016, p. 58)

**Other Learning: *Visual perception of letters***

“As in beginning reading, the young writer has to attend to the particular features that help all of us to distinguish letters, one from another.” (Clay, 2015, p. 20)

- **Other Learning: *Linking Sound Sequences to Letter Sequences (Phonemic & Phonological Awareness)***

The Reading Recovery lesson is designed

- to work with what the eyes recognize in visual forms (letters) and in visual patterns of letters (clusters and words), and
- to work with what the ears can isolate in speech patterns (hearing words within utterances and phonemes within words, and clusters of phonemes in words).” (Clay, 2016, p. 119)

**Other Learning:**

- Expanding the knowledge of words
- Linking knowledge from different sources
- Developing self-regulation and orchestration
- Orthographic awareness

## TEACHING FOR RECIPROCITY

“A better understanding about *reciprocity* could lead to more effective teaching interactions in both activities, and the idea has the pleasant ring of a small ‘two for one’ bargain allowing the busy teacher some economy in teaching time.” (Clay, 2015, p. 11)

“While the child has only limited control in writing and in reading he can be encouraged to search for information in his memories of oral language, reading, and writing, establishing reciprocity between all these aspects of learning about printed language.” (Clay, 2016, p. 23)

“Children can be made aware that reading and writing *contribute reciprocally* to early progress when teachers prompt for such reciprocity.

- Yes, you can read that word. Think of how you wrote it in your story yesterday.
- Yes, you can write that word. Do you remember we read it in [name of the book]?” (Clay, 2015, p. 19)

“Writing can contribute to building almost every kind of inner control of literacy learning that is needed by the successful reader and yet there may be no predictable sequence in which the shifts in control occur!” (Clay, 2015, p. 12)

“Children construct their personal rules about written language from the print they are exposed to and from opportunities to construct their own messages in writing.” (Clay, 2015, p. 127)

“Every interaction in the daily writing segment is a teaching move—not a memory task, nor a practice attempt, nor an analysis of sounds, but carefully determined and astutely delivered teaching with a target that involves learning how to do something, do it better, do it faster, link it up to something, and prepare it for future independent use.” (Clay, 2015, p. 12)

“When children compose their messages for the day they venture to write a wide range of words which give the learner a sense of the regularities and exceptions of English spellings. This learning about how words work in writing makes a great contribution to reading similar words in text.” (Clay, 2015, p. 23)

“Later on, children need many opportunities to analyze longer and more complex words. The work page should be ‘bursting with examples’. The task for the child is to learn more about both hearing and recording sounds. It is not necessary to get the whole word. The teacher helps with the hard-to-hear vowels and complex orthographic elements.” (Clay, 2016, p. 102)

### **IN CONCLUSION**

“Processes common to both reading and writing:

- Controlling serial order
- Problem-solving with more than one kind of information
- Drawing on stored information and acting on it
- Using visual information
- Using phonological information
- Using the meaning of what was composed
- Using the vocabulary and structure of what was composed
- Searching, checking, correcting
- Categorizing, using rules, and estimating probabilities of occurrence” (Clay, 2015, p. 32)

“The reader and writer who problem-solves independently has continual access to new learning. As things become routine the brain takes over most of the checking and rapidly locates familiar things. Attention is freed for other things so that, independently of the teacher, the child can extend his own learning.” (Clay, 2016, p. 43)

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## Other Resources

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