



Effective Processing

Examining teaching moves

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Today's Journey

- Begin with the end
- The brain & neural development
- Perception
- The child as a constructive learner
- The first journey—detail & sequence
- The second journey—speed
- Designing teaching moves
- Quotation from Marie & Contact Information



Resources for this presentation

Clay, M.M. (2005). *Literacy Lessons: Designed for Individuals, Part One and Part Two*. Portsmouth, NH: Heinemann.


Clay, M.M. (2001). *Change over time: In children's literacy development*. Portsmouth, NH: Heinemann.

Lyons, C. (2003). *Teaching struggling readers: How to use brain-based research to maximize learning*. Portsmouth, NH: Heinemann.



Begin with the end in mind

- It was obvious that to change deviant patterns of development, we needed detailed accounts of optimum development.
- Clay, M.M. “Simply by sailing a new direction you could enlarge the world”. in *Journal of Reading Recovery*. Fall, 2007. P. 9.



The Brain is a Natural Pattern Seeker and Synthesizer

It actively searches for patterns to

- Categorize
- Organize
- Synthesize information
- Code Information into Memory
- Retrieve Information

Greenspan in Lyons, C. (2003). *Teaching struggling readers: How to use brain-based research to maximize learning*. Portsmouth, NH: Heinemann.



The brain is excited to see something it recognizes

- Wandering eyes indicate the search for information on a page of print



The Brain

Occipital Lobes

- *Sensory information from the eyes*
- *Shape, color, movement*

Temporal Lobes

- *Auditory Interpretation*
- *Hearing, listening, language, memory storage*

Parietal Lobes

- *General Sensory Areas*
- *Temperature & Touch*

Frontal Lobes

- *Purposeful acts*
- *Regulating activity*
- *Organizing Info*



Neural Networks & The Limbic System

- Neural Networks—dendrites, axons, synaptic cleft, build-up of myelin
- Limbic system—memory, emotion, cognition
- Reticular Activating System—attention
- Amygdala--Emotion



Perception

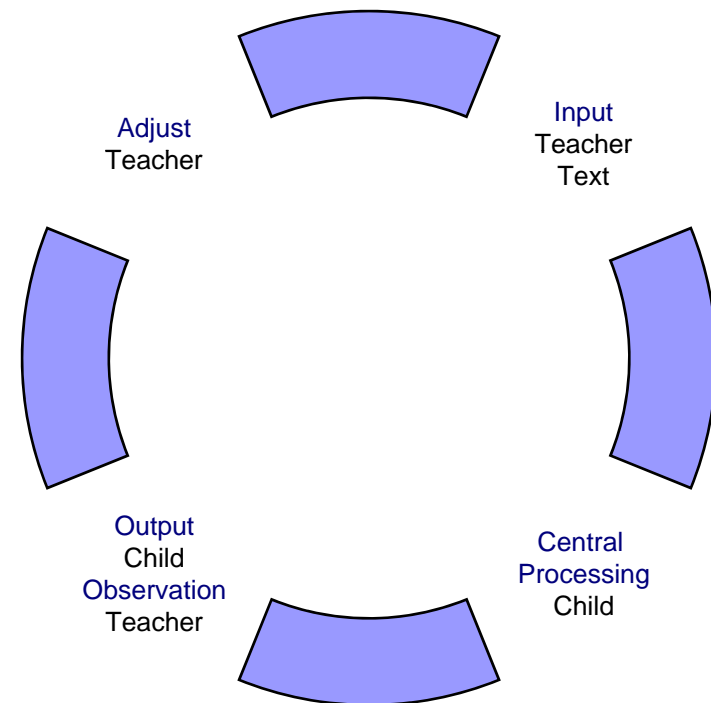
- There is an expectancy
- Which leads to directing attention or orienting towards something
- Which leads to looking, searching, comparing, and discriminating
- Several alternative possibilities seem to be lurking around and the brain seems to test them out...
- One or two highly probable responses are trialed or checked
- A decision is made and checked.



Input, Central Processing, Output

The act of perception

- Teachers can affect the input with prompting
- Central Processing child's in-the-head activity
- Output is observable behavior of the child





Work with something she knows

- Interrupt error behavior



By different paths

- When thinking about perception, we cannot ignore the fact that children come to us by different paths. Their experiences color their perceptions.



The child is constructive

- As the child reads, his brain links the sounds of speech and the squiggles on a page of print and computes the probability of information.
- Children construct their personal rules about written language from the print you expose them to.



Two journeys

in the visual perception of print

- Becomes more detailed, more differentiated, and then more richly patterned (chunked or clustered or unitized), and we may be conscious or not conscious of the patterning,
- And it becomes faster as we have more encounters with print.



The first journey

- For a very thorough understanding of perception in the first journey, see Chapter 6 of *Becoming Literate: The construction of inner control* (Clay, 1991)
- P. 125 “...What has to be learned is how to personally control one’s attending according to the serial order requirements of print.”



Eye Scan in Roaming

- Video clip—child's eyes wander randomly across the page of print
- Remember that visual perception is faster than our talk. This is why we demonstrate without teacher talk.



The Fast Perceptual Scan

- Efficient
- Sequenced
- Left to right
- Without anything getting in the way
- Because they want to work with us
- And because they can attend

Lyons, C. (2008). Illinois Teacher Leader Professional Development. Schaumburg, Illinois.



Think about

- Sequence
- What does it mean to know a letter?
- What does it mean to know a word?



The second journey

- Speedy access to visual information in print is of the greatest importance in literacy learning.

Clay, M.M. (2005). Literacy Lessons Designed for Individuals, Part Two. Heinemann. p. 31.



Build for fast recognition

- Video



Provide input

Acceleration depends upon how well the teacher selects the clearest, easiest, most memorable examples with which to establish a new response, skill, principle or procedure.



How can teachers assist children to construct efficient processing systems?

- Keep the end in mind from the start.
- Look at where they are.
- Turn to the procedures to find a path for each individual child.
- Chart your path by creating the first Predictions of Progress, update these regularly. This is where you begin to design your teaching moves.
- Observe output and adjust input.
- Enjoy the first journey as preparation for the second journey.



Education is not about putting in the outcomes;
it is about knowing what *inputs*,
in what *contexts*,
give rise to the desired achievement outcomes.

Clay, M.M. "Child Development". In *Journal of Reading Recovery*. Fall. 2007. p. 74.



Handouts

Handouts will be available on-line at the Reading Recovery Council of North America's website

<http://www.readingrecovery.org>

At the Illinois Reading Recovery Center website

<http://www.illinoisreadingrecovery.org>

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