



# *Teaching for a Sequencing Problem*

Sandra Shavlik

Reading Recovery® Teacher Leader

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# *Goals of this session:*

- To explore the dimensions of sequencing
- To provide examples from fall entry and midyear to explicate what to look for at assessment and during lessons
- To examine teaching considerations





To young children reading is movement and language as they learn to direct their attention to the directional conventions of the print, and get the sequence of visual attention working without having to pay attention to it. When the reader becomes more expert most of the movement is automatic and eventually even the language becomes an in-the-head activity.

# *Assembling Working Systems*



High progress children interweave perceptual, cognitive, and motor learning into a coherent functioning whole within a year.

# *A child learning to read and write*

has:

- To discover what information exists in print
- To learn how to search for that information
- To handle multiple sources of information and make decisions
- To work sequentially with sets of information (to decide, for example, which of two possible pronunciations of the word ‘object’ to

» *Becoming Literate*, page 260

# *Three Challenges to the Code*

Spoken language is written down in two dimensional space according to a set of conventions.

What Did I Write? p.23



# Challenges...



- Information in print is organized in a hierarchy of levels—discourse or text, sentence, phrase, word letter cluster, letter and sub-letter levels—and the reader has to know which level to attend to at any one moment to be effective.

– *Becoming Literate*, p. 113

The third problem combines the other two—during acquisition children have to learn how to attend to print in serial order while at the same time deciding which level of language hierarchy to attend to.

Becoming Literate, p. 113

## *Challenges...*



## *Caution on teaching ...*

“The revised procedures recommend close attention **early** to establishing a systematic left-to-right approach to lines of print and letters in a word.”



# Developmental Sequence

## Early Reading Acquisition

Kindergarten

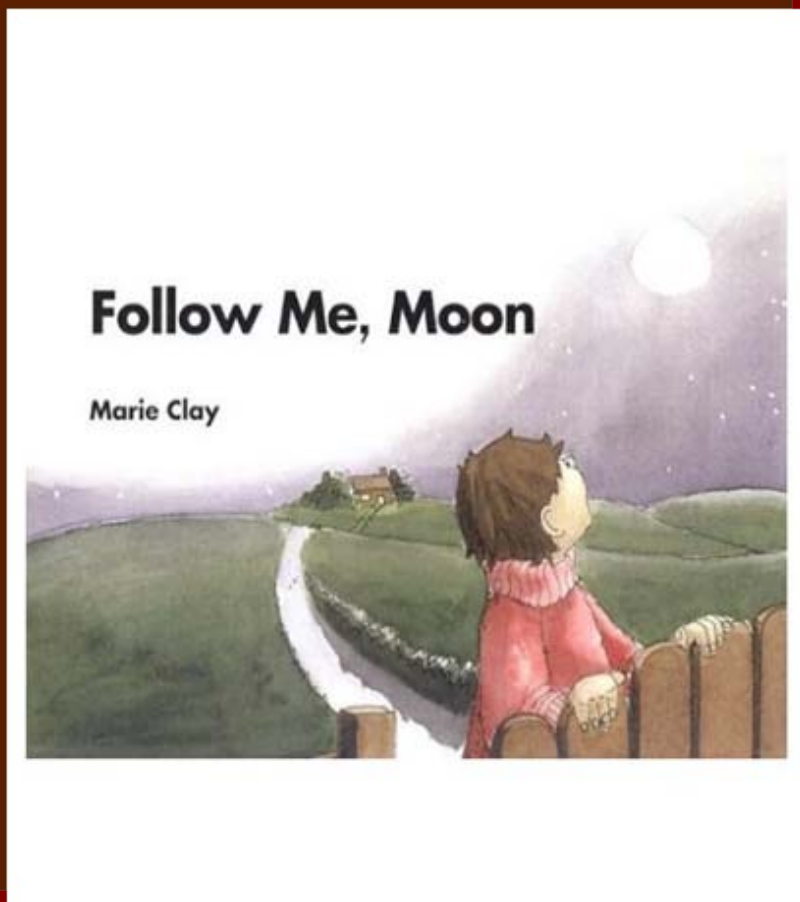
1. Alphabet knowledge
2. Beginning consonant awareness
3. Concept of word in text
4. Spelling with beginning and ending consonants
5. Phoneme segmentation



First Grade

6. Word recognition
7. Contextual reading ability

# *Learning About Direction*



Complex movement patterns must be learned. The movement patterns used by the eyes and brain in reading, and the hands, eyes and brain in writing, must become almost automatic, requiring only momentary attention.

-Literacy Lessons p. 7

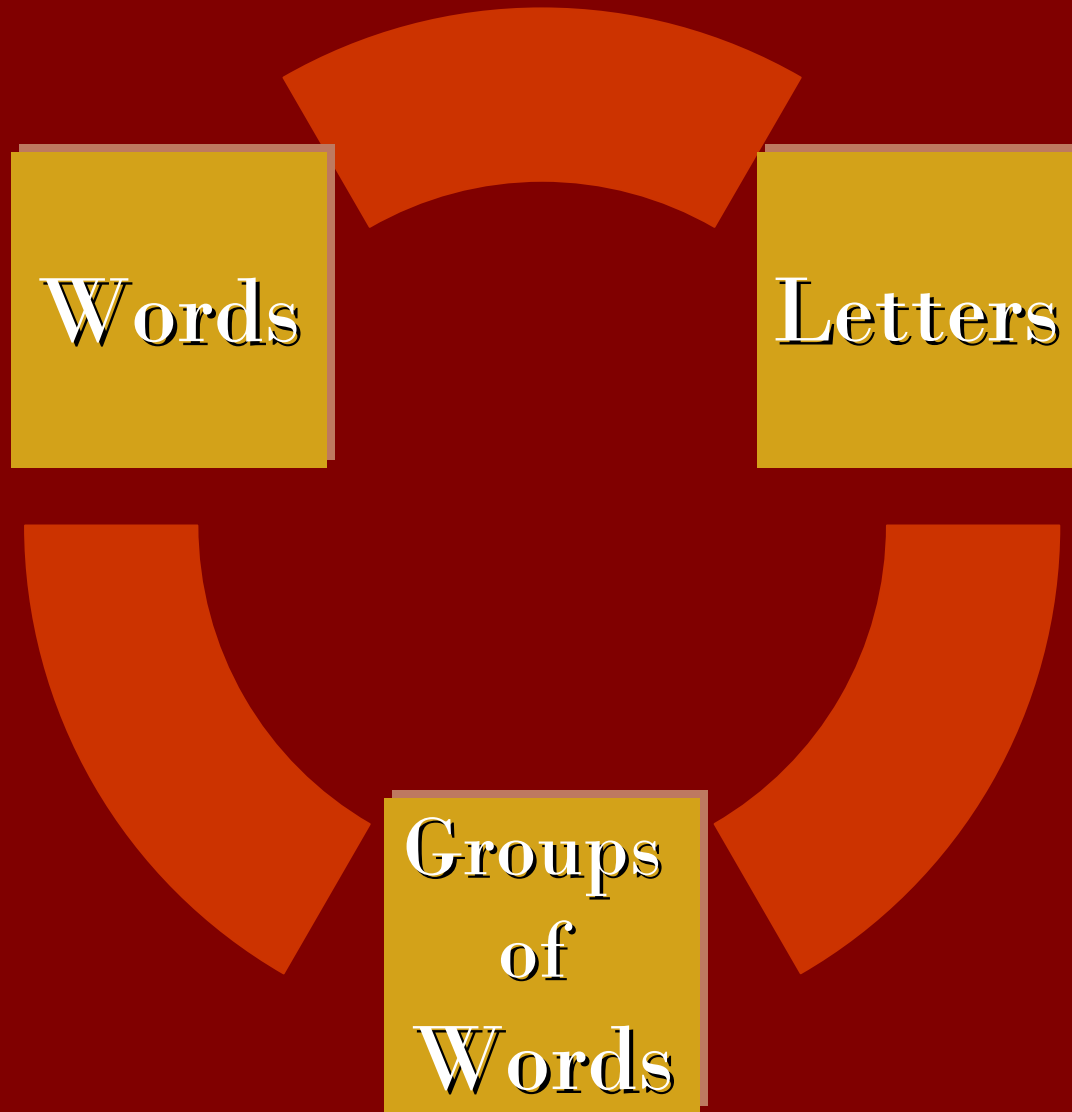
# *Anything goes...*



If a child behaves flexibly on these inflexible directional rules of written language, the relearning problem may prove troublesome.

Becoming Literate, p. 118

# *Learning across combined fronts*



# *What did I Write?*

I know some words. (Copying principle)

I can try to write new ones. (Flexibility Principle)

I can repeat them. (Recurring Principle)

They go one after another across a line (**Directional Principle**), separated by spaces (**the Space Concept**), to make new messages, (Generating Principle).

# *Marked individual differences*

- There are marked individual differences in the time it takes children
  - To gain control over these responses,
  - To use them consistently, and,
  - To reach a stage where they not longer have to give them any further conscious attention.



# *Visual Perception*



- Visual perception is the decision individuals make with the information they pick up with the eyes. The eyes look at the words on the page and the brain decides what they are.
- The brain's structure is determined by how it perceives and interprets information.
- Assembly of neurons are constantly making new connections and strengthening existing networks through revisiting and repeating those experiences.

-Teaching Struggling Readers, page 18

The technique of asking a child to ‘read it with your finger will only reveal the directional orientation to the gross schema of line scanning. Beyond this there must be some very important visual perception learning relating to the attentional scanning of letters and clusters of letters.

-Observing Young Readers, p. 82



# *Sequences*

Changes in the letter order or orientation within individual words persist long after a directional pattern for lines has been established.

-What Did I Write? p.26



## *At a letter level*

About 11 letter are perceived by children as similar in upper and lower case (c, k, o, p, s, u, v, w, x, y, z)

Reversed orientation (b, d, p, q, g)

Inverted orientation (b, d, f, g, h, k, m, n, p, q, r, t, u, v, w)

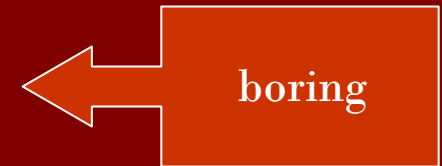
The flexibility principle is sometimes applied by the child to an aspect of written language which is not flexible.



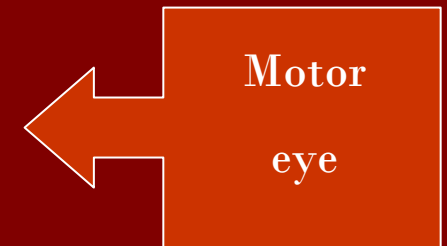
Cognition and emotions are two sides of the same coin. Impulsiveness may lead to his attention flitting from one thing to another without paying close attention to detail.



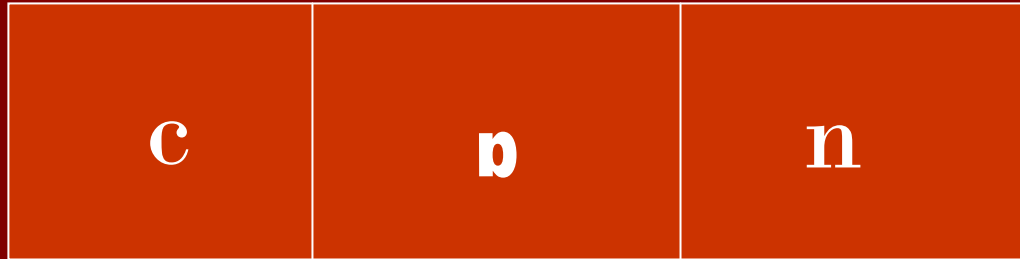
Some children who might control sequence find restraint in a directional schema uninteresting and prefer a more varied approach.



The whole directional schema depends upon knowing where one's body is in space. Both scanning visually, and distinguishing the difference between two letters because of their orientation depends on motor skill.



# *Pancake Effect*



Bryant found that young children could be using the background (the framing of the paper shape) to guide their responding.

Becoming Literate, pages 129-130

The visual perception of printed language is a special task which involves several sources of sensory input and many stimulus interactions at one time. Perceiving printed language is improved with practice but it is an effortful process when stimuli are novel.

Becoming Literate, page 260



### Location Points for Phoneme-Grapheme Correspondence

	Beginning	Ending	Both	Medial	Reversed Word	First-Last Letter
Letter	<u>paint</u> Picture	<u>said</u> and	<u>head</u> hand		<u>let</u> tell	<u>paint</u> help
Cluster	<u>Ann</u> And	<u>How</u> Now		<u>skipped</u> hopping		
Syllable	<u>Today</u> Tomorrow	<u>painting</u> hosing	<u>remembered</u> Recited			

Above table from, Observing Young Readers, page 32.

Text	Word	Letter
<b>The Farm Concert</b>	<u>down</u> Yelled	Final letter first
<b>Billy is Hiding</b>	<u>Me</u> We	<u>M</u> inverted orientation <u>W</u>
	<u>and down</u> said	Lapse in left to right sequence
	<u>doing</u> Hiding	Attending to ending cluster while first initial letter and clusters ignored
<b>Baby Panda</b>	<u>said</u> And	Lapse in letter sequence
	<u>are</u> Runs	Lapse in letter sequence
<b>Lizard Loses His Tail</b>	<u>at</u> Tail	Lapse in letter sequence
	<u>Home</u> Where	Not predicting from 1 <sup>st</sup> letter
<b>The Picnic</b>	<u>Me_sc</u> We	Inverted orientation, corrected most likely from meaning
<b>Jackets</b>	<u>red</u> Brown	Lapse in letter sequence
<b>Jack's Birthday</b>	<u>red</u> car	Final letter out of sequence

# Reading Resources

- Clay, Marie. (1975) *What Did I Write? Beginning Writing Behavior*. Portsmouth, NH. Heinemann.
- Clay, Marie. (1982) *Observing Young Readers, Selected Papers*. Portsmouth, NH. Heinemann.
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- Clay, Marie. (2001) *Change Over Time in Children's Literacy Development*. Portsmouth, NH. Heinemann.
- Lyons, Carol. (2003). *Teaching Struggling Readings: How to use brain-based research to maximize learning*. Portsmouth, NH. Heinemann.
- Clay, Marie. (2005). *Literacy Lessons Designed for Individuals Part One and Two*. Portsmouth, NH. Heinemann.