

University of Northern Iowa
UNI ScholarWorks

Curriculum & Instruction Faculty Publications

Department of Curriculum and Instruction

Fall 2003

How Reading Recovery Teaches the Five Essential Elements of Reading Instruction and More

Mary Anne Doyle
University of Connecticut

Salli Forbes
University of Iowa

Copyright ©2003 Mary Anne Doyle and Salli Forbes. The copyright holder has granted permission for posting.

Follow this and additional works at: https://scholarworks.uni.edu/ci_facpub

 Part of the [Curriculum and Instruction Commons](#)

Let us know how access to this document benefits you

Recommended Citation

Doyle, Mary Anne and Forbes, Salli, "How Reading Recovery Teaches the Five Essential Elements of Reading Instruction and More" (2003). *Curriculum & Instruction Faculty Publications*. 30.
https://scholarworks.uni.edu/ci_facpub/30

This Article is brought to you for free and open access by the Department of Curriculum and Instruction at UNI ScholarWorks. It has been accepted for inclusion in Curriculum & Instruction Faculty Publications by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

How Reading Recovery Teaches the Five Essential Elements of Reading Instruction *and More*

National Reading Panel Recommendations—and Beyond

Mary Anne Doyle, University of Connecticut

Salli Forbes, The University of Iowa



Mary Anne Doyle

In 1997 Congress called for the director of the National Institute of Child Health and Human Development (NICHD), in consultation with the Secretary of Education, to convene a national panel to assess the status of research-based knowledge, including the effectiveness of various approaches to teaching children to read (NICHD, 2000a, p. 1). The resulting 14-member National Reading Panel (NRP or Panel) included reading researchers, representatives of colleges of education, educational administrators, a classroom teacher, a parent, and a medical doctor (Yatvin, 2002). The work completed by the NRP involved identification and meta-analyses of the experimental and quasi-experimental research literature



Salli Forbes

pertaining to selected topics of beginning reading instruction. Their goal was to glean implications for beginning reading instruction based on scientific evidence.

The NRP reported its findings in two documents published by the NICHD (2000a, 2000b). These reports, the basis for information on reading instruction currently being disseminated by the United States Department of Education, served as the theoretical foundation of the No Child Left Behind Act of 2001.

Consequently, the influence of these reports extends to schools and reading programs nationally.

The purpose of this article is to review Reading Recovery in light of recommendations for early reading instruction detailed in the reports.

Understandably, these recommendations are now held by national and state education policy makers as paramount for instructional programs offered beginning readers. In most instances the Panel's instructional recommendations must be accounted for in order to secure federal and state funds for reading programs. School administrators, classroom teachers, and parents may very well query Reading Recovery



teachers about the inclusion of the recommended elements in the assessment and instructional practices of Reading Recovery. This article addresses those concerns and details how the essential elements for beginning reading instruction are presented in Reading Recovery instruction.

Before presenting specific details of Reading Recovery instruction relative to the recommendations of the NRP, we will review how the NRP established the topics studied, the five essential elements the panel identified, and how the panel selected the research reviewed. We will also present the definition of reading they adopted for their work and detail how recommendations for classroom programs were identified.

Five Essential Elements

The NRP investigated research in three areas of reading competence that they identified as essential for reading instruction: alphabets, fluency, and comprehension. In relation to these three areas, the Panel detailed the five essential elements listed below:

- A. Alphabets
 - 1. Phonemic Awareness Instruction
 - 2. Phonics Instruction
- B. Fluency
 - 3. Fluency Instruction
- C. Comprehension
 - 4. Vocabulary Instruction
 - 5. Comprehension Instruction

The NRP explicitly recognized that these elements are not an exhaustive list of important factors in learning to read:

The Panel's silence on other topics should not be interpreted as indication that other topics

have no importance or that improvement in those areas would not lead to greater reading achievement. It was simply the sheer number of studies identified by Panel staff relevant to reading...that precluded an exhaustive analysis of the research in all areas of potential interest (NICHD, 2000a, p. 3).

One especially important area that was apparently beyond the scope of the Panel's work was the role that writing plays in children's development of literacy (Yatvin, 2002). Nevertheless, the Panel chose to examine questions relative to these five topics as "they currently reflect the central issues in reading instruction and reading achievement" (NICHD, 2000a, p. 3).

The topics and essential elements were assigned to subgroups that reviewed and analyzed carefully selected research in order to identify effective instructional approaches for classroom applications. Studies that were included in the analyses met the Panel's "rigorous research methodological standards" and "had to measure reading as an outcome" (NICHD, 2000a, p. 5). For the purpose of identifying appropriate studies, the Panel adopted a definition of reading that included "several behaviors such as the following: reading real words in isolation or in context, reading pseudo-words that can be pronounced but have no meaning, reading text aloud or silently, and comprehending text that is read silently or orally" (NICHD, 2000a, p. 5). The additional criteria for selection were that the studies had been published in refereed journals and that the studies focused on children's reading development in the age and grade range from preschool to Grade 12.

The Panel's screening process identified experimental and quasi-experimental studies. For several topics, the number of studies identified was sufficient to allow the Panel to conduct statistical meta-analyses. For those topics for which there were too few studies to meet the established criteria for a meta-analysis, the NRP conducted more subjective, qualitative analyses of the research (NICHD, 2000a).

In discussions of the findings, the NRP report emphasizes the significant benefits of instruction in the five essential elements for learners of varying abilities. Therefore, the recommendations for classroom programs are proposed by the Panel as essential, not only for regular classroom teaching, but equally for children with reading difficulties. However, the Panel did not focus specifically on early interventions for at-risk learners and did not seek to identify recommendations of alternative instructional procedures for students having difficulty learning to read.

In contrast to the approach of the Panel to generalize from research done with a wide range of learners to the needs of students having difficulty learning to read, Marie Clay designed Reading Recovery specifically for those children who struggle with initial literacy instruction. She cautions that the instructional procedures in *Reading Recovery: A Guidebook for Teachers in Training* (Clay, 1993) are not recommended for classroom programs. Rather, they have been trialed and evaluated empirically with that specific subset of the general first-grade population identified as at risk of failure in first-grade classroom programs (Clay, 1993). This article does not recommend using procedures

designed for Reading Recovery instruction in a classroom setting. Reading Recovery teachers understand that this caution derives from the research base of the Reading Recovery program and that generalizing beyond the population studied is inappropriate.

Reading Recovery was designed with a clearly articulated definition of successful reading. Clay writes that reading is “a message-getting, problem-solving activity which increases in power and flexibility the more it is practised” (1991, p. 6). Therefore, “within the directional constraints of the printer’s code, language and visual perception responses are purposefully directed by the reader in some integrated way to the problem of extracting meaning from cues in a text, in sequence, so that the reader brings a maximum of understanding to the author’s message” (Clay, 1991, p. 6). This definition is based on many research studies of successful readers (e.g., Clay, 1982, 1991, 2001; Imlach & Clay, 1982; Ng, 1979). The theory acknowledges both the complexity of the successful reader’s behaviors and the complexity of instructional programs needed for struggling readers.

The work of the NRP and the work of Marie Clay differ in the definitions of reading held, in the populations of learners studied, and in the practice of generalizing from the research to all readers and learners. These are important differences to bear in mind while considering the discussion of instructional procedures detailed below.

This article presents information about alphabets (phonemic awareness and phonics) and fluency, as they are described in the NRP *Reports of the Subgroups* (NICHD, 2000b), and details how these elements are assessed



It is in writing that the learner segments language and attends to discrete phonemes in the act of recording messages.

and taught in the Reading Recovery intervention. In the spring 2004 issue of this journal, we will address the elements of comprehension and vocabulary development. In both articles we will also describe an additional essential element identified by Clay (1991, 1993, 2001): the element of strategic processing. Our certain belief is that development of this element, a sixth essential element, allows young readers the capacity to learn and use the other five essential elements.

Alphabets: Phonemic Awareness and Phonics

Alphabets

The general term *alphabets* references the alphabetic principle of our written English language. Written words are comprised of letters (graphemes) that represent the sounds of language (phonemes). Briefly, phonemic awareness is considered basic to this understanding, and phonics instruction “entails teaching students how to use letter-sound rela-

tions to read or spell words” (NICHD, 2000a, p. 7). Consequently, the two recommended elements are

1. phonemic awareness instruction
2. phonics instruction

Understandings and instructional recommendations relative to these areas are complex, and development of a reader’s facility with these elements is not simply linear. For, while phonemic awareness is considered basic, it is not a single concept (Cunningham, 2000), meaning that while it contributes to initial understanding of the alphabetic principle, it may not be fully grasped until the child has learned to read and write.

Phonemic Awareness Instruction

Phonemic awareness refers to the child’s abilities to recognize that spoken words are comprised of discrete sounds (phonemes). Phonemes are the smallest units of sound in a word or syllable. The word *mat* contains three



Reading Recovery teachers incorporate attention to developing each learner's phonemic awareness and ability to analyze the discrete sounds of words in the writing component of the lesson. Explicit instruction, based on assessed needs, is offered daily.

phonemes (/m/ /a/ /t/), the word *little* contains four phonemes (/l/ /i/ /t/ /l/), and the prefix *re-* contains two phonemes (/r/ /e/). In spoken English, individual phonemes in word and syllable production stream together, or are coarticulated; it is therefore very difficult to hear them distinctly. The understanding required of the learner in relation to phonemic awareness tasks is analytic knowledge, that is, understanding that phonemes are “abstractable and manipulable” (Adams, 1990, p. 65). These are complex tasks.

Phonemic awareness is best defined as one aspect of phonological awareness, which entails “the awareness of various sound aspects of language (as distinct from its meaning)” (Chapman, 2003, p. 92). Chapman (2003) details the various abilities expected of young children relative to phonological awareness, or the sound aspects of oral language, as follows:

- “hear and create rhyming words
- hear and create alliterations
- segment the flow of speech into separate words (concept of word)
- hear syllables as ‘chunks’ in spoken words
- separate spoken words into onsets and rimes (e.g., c-at; dr-ink)
- phonemic awareness: segment spoken words into phonemes (e.g., c/a/t and d/r/i/n/k) and blend phonemes into words” (p. 93).

The order of Chapman’s list corresponds to the level of difficulty associated with phonological awareness tasks in other discussions (see for example, Adams, 1990). Young children can hear syllables and identify the onsets and rimes in words and syllables more readily than they can deal with phonemic segmentation and

blending tasks (Adams, 1990).

According to both Adams and Williams (1995), the most difficult tasks, the phonemic awareness tasks, seem “to develop only after instruction in word recognition has taken place” (Williams, 1995, p. 185). And it is the difficult phonemic awareness tasks that correlate highly with success in beginning reading (Adams, 1990; NICHD, 2000b; Williams, 1995).

In general, the relationship between phonemic awareness and reading is complex. Research has revealed that for children who develop phonemic awareness early, through preschool language and literacy experiences, this early phonemic awareness correlates with success in beginning reading (Adams, 1990). While this finding seems to support the need for phonemic awareness training prior to beginning reading instruction, additional research confirms that reading and writing instruction also develop phonemic awareness, particularly if the teacher is deliberate in attending to this capability (Adams, 1990; Juel, 1991).

Children acquire facility in using the sounds of their language as they acquire oral language competence. They manipulate and combine phonemes to produce comprehensible utterances: words, phrases, and sentences. Because their primary focus is the communication of meaning, they do not give specific attention to discrete phonemes (the individual isolated sounds). Facility with the sounds of language exists “prior to entry to school but not in the form needed by the reader” (Clay, 1991, p. 322). In order for “the child to discover that the single syllable which he hears really contains three different sounds requires learning” (Clay, 1991, p. 82).

Specific instruction is needed to enable many children to hear the sounds in words.

“Instruction in phonemic awareness involves teaching children to focus on and manipulate phonemes in spoken syllables and words” (NICHD, 2000a, p. 7). According to the NRP, phonemic awareness can be developed by instruction that helps children

1. learn the letter names, shapes, and sounds along with phonemic awareness;
2. focus on one or two types of phoneme manipulations;
3. see how phonemic awareness relates to their reading and writing (NICHD, 2000b).

A further recommendation for classroom programs is that phonemic awareness instruction does not need to consume long periods of time to be effective. Programs lasting less than a total of 20 hours were found to be more effective than longer programs (NICHD, 2000b, p. 2-6).

Reading Recovery Instruction

The *Reports of the Subgroups* (NICHD, 2000b) suggests the need for teachers to assess students' phonemic awareness prior to beginning instruction (p. 2-33). In the Reading Recovery context, assessments are administered before instruction begins. The Hearing and Recording Sounds in Words task published in the *Observation Survey of Early Literacy Achievement* (Clay, 2002) yields evidence of how successful the child is at hearing discrete sounds in words and representing them with graphemes: letters or letter clusters, or both. The child is given credit for every phoneme he represents correctly, even though a word may not be spelled conventionally. Clay advises

that this test is not a pure measure of phonemic awareness. What the child has learned about spelling, or orthography, may also appear in the written products (Clay, 2001, p. 112).

Instruction in phonemic awareness is presented in “the writing segment of the lessons, under the title ‘Hearing and recording sounds in words’” (Clay, 2001, p. 22). These procedures “help the child think about the order of sounds in words...and help the child to analyze a new word he wants to write into its sequence of sounds” (Clay, 1993, p. 32). Clay explains that the procedures used are an adaptation of those suggested by Elkonin (Clay, 1991), whose work is referenced by others (Adams, 1990; Williams, 1995) as a valuable approach to training in phonemic analysis.

The Reading Recovery teaching procedures provide a systematic approach that is directed by the teacher's close observation. Initially, teachers establish the task of articulating slowly and moving counters into a set of sound boxes (lines outlining a specific box for each discrete phoneme) as an aural task, a phonemic analysis task devoid of letters or print. The teacher models and directs this activity, accepting approximations while working for the child's coordination of breaking a word into sounds (phonemes) with pushing the appropriate counters.

Next the teacher applies this process to words the child wants to write in the daily stories. The focus is on hearing the sounds in words, locating the position in the set of sound boxes, and representing each phoneme with the appropriate letter or letter cluster. At first the teacher accepts any sound in any order and assists the child in locating its position in the sound boxes. The teacher encourages the

child to record the letters that are known; the teacher writes any letters the child may not know. As soon as the child demonstrates control over the task of saying the word slowly, identifying discrete phonemes, and locating the positions of sounds with the markers, the teacher shifts to asking for the sounds in sequence (a beginning-to-end sound analysis).

The procedures used in hearing and recording sounds in words develop the child's phonemic awareness by teaching the learner to articulate words slowly, to segment and isolate individual phonemes, to identify the position of discrete phonemes within words, to analyze the sounds of words sequentially, and to link phonemes with the letters and letter clusters that represent them. These procedures have been deliberately embedded in the writing portion of the lesson (Clay, 2001). It is in writing that the learner segments language and attends to discrete phonemes in the act of recording messages. The tasks therefore have an important application and connect phonemic awareness to real communication. Ultimately, the child learns that one way to write unknown words is to analyze the sounds heard.

Gradually, the child becomes more secure in the sequential analysis of sounds in words and expands knowledge of letters of the alphabet (the focus of instruction in the letter identification component of the Reading Recovery lesson). The teacher later shifts from sound boxes to letter boxes, a set of boxes with one box for each letter, with a focus on orthographic knowledge. The child is then asked to say the word slowly and think about the letters the child would expect to see.

Other researchers have documented

the power of allowing children to explore words and represent sounds using invented or phonemic spelling in writing. Adams (1990) concludes that such writing and spelling activity promotes phonemic awareness and understanding of the alphabetic principle. The *Reports of the Subgroups* (NICHD, 2000b) states that when instruction “involves teaching students to segment words into phonemes and to select letters for those phonemes, it is the equivalent of teaching students to spell words phonemically” (p. 2-34).

Hearing and recording sounds in words, as taught in Reading Recovery lessons, engages learners in experiences that create facility with phonemic awareness and the challenging tasks of segmenting and blending phonemes. Most importantly for Reading Recovery teachers, this activity promotes independence in writing and creates a reservoir of new understandings, including the relationships between sounds and letters, that can be further developed and applied in reading.

Summary

Phonemic awareness is identified by the NRP as an essential element of beginning reading instruction as correlational studies have established a strong relationship between this awareness and reading performance in the first 2 years of instruction. Phonemic awareness is the awareness that spoken words are comprised of discrete phonemes. This understanding sets the stage for analyzing sounds in words to be written (spelling) and for decoding words in text via sounding and blending (phonics). Initially, training may involve manipulating sounds (matching, segmenting, deleting, combining) as an aural task

devoid of print; however, the NRP *Reports of the Subgroups* (NICHD, 2000b) suggests that “instruction may be most effective when children are taught to manipulate phonemes with letters” (p. 2-6). The Panel advocates phonemic awareness training as a prerequisite for beginning reading instruction. Other researchers suggest that advanced phonemic awareness skills develop as a result of learning to read and write (Chapman, 2003; Williams, 1995).

Reading Recovery teachers incorporate attention to developing each learner’s phonemic awareness and ability to analyze the discrete sounds of words in the writing component of the lesson. Explicit instruction based on assessed needs is offered daily. This instruction is embedded in lessons engaging learners in a range of literacy experiences including letter work, word study, and reading and writing continuous texts. From these lesson components, the learner gains important concepts (e.g., about language, print, text, and phonological awareness) that support the acquisition of more complex aspects of phonemic awareness. Therefore, Reading Recovery instruction provides for both the initial development of rudimentary understandings of phonemic awareness (i.e., in hearing and recording sounds in words) and the ongoing extension of phonemic awareness abilities to ensure proficiency in reading. In the following section, phonological awareness, letter work, word study, and word analysis are discussed further.

Phonics Instruction

The goal of phonics instruction is development of the reader’s facility with the alphabetic principle, i.e., understanding sound-symbol relation-

ships and applying this knowledge in reading and spelling. Phonics instruction may be described either in terms of the approach used to teach specific generalizations and rules (e.g., synthetic, analytic, embedded) or in terms of the content covered (e.g., long vowel sounds, short vowel sounds, phonograms, etc.). The NRP focused on alternative approaches to teaching phonics for their review and meta-analysis, and they compared three types of programs:

1. “synthetic programs that emphasized teaching students to convert letters (graphemes) to sounds (phonemes) and then to blend the sounds to form recognizable words;
2. larger unit phonics programs that emphasized the analysis and blending of larger subparts of words (i.e., onsets, rimes, phonograms, spelling patterns) as well as phonemes; and
3. miscellaneous phonics programs that taught phonics systematically but did this in other ways” (NICHD, 2000b, p. 2-132).

The findings revealed that the three categories of programs were “more effective than non-phonics approaches in promoting substantial growth in reading” (NICHD, 2000b, p. 2-132); and yet there was no statistical advantage for any one of the three approaches over the others. On the basis of these findings, the Panel concluded that “systematic phonics instruction enhances children’s success in learning to read and...is significantly more effective than instruction that teaches little or no phonics” (NICHD, 2000a, p. 9). The Panel further explains that “the hallmark of

systematic phonics programs is a delineated, sequential set of phonic elements that are taught explicitly and systematically” (NICHD, 2000b, p. 2-89). More detail of the content of phonics instruction is offered in the *Put Reading First* (Armbruster, Lehr, & Osborn, 2003) document that states

“Effective programs offer phonics instruction that

- helps teachers...instruct children in how to relate letters and sounds, how to break spoken words into sounds, and how to blend sounds to form words;
- helps students understand why they are learning the relationships between letters and sounds;
- helps students apply their knowledge of phonics as they read words, sentences, and text;
- helps students apply what they learn about sounds and letters to their own writing;
- can be adapted to the needs of

individual students, based on assessment;

- includes alphabetic knowledge, phonemic awareness, vocabulary development and the reading of text” (p. 16).

Reading Recovery Instruction.

Reading Recovery instruction develops the reader’s understanding of the alphabetic principle (the letter-sound correspondences) and ability to use knowledge of letters and sounds in both reading and writing tasks. This knowledge (letter-sound correspondences) is but one source of information the reader may draw from in order to read with meaning. Reading is an active, decision-making process. Therefore, readers may use phonological information to monitor letter-sound correspondences, to search for letter-sound correspondences, or to confirm letter-sound correspondences as needed. However, knowledge of letter-sound correspondences alone is not adequate. Proficient readers attend to a rich range of information sources (e.g., at the semantic, syntactic, and word levels) as well as phonological

elements beyond the individual letter (e.g., letter clusters, digraphs, syllables, prefixes, suffixes). The goal of Reading Recovery instruction is to support the reader’s acquisition of flexible working systems for processing print using all sources of information.

Reading Recovery instruction that builds the child’s facility with the alphabetic principle begins in early lessons, is individualized, is presented in a well-sequenced manner, and provides applications of new learning to authentic reading and writing tasks. Readers may begin with very rudimentary skills; however, their knowledge and abilities grow in depth and breadth over time. The teaching is explicit, and the content is presented within the full range of lesson components: reading activities (familiar and novel texts), writing activities, and the decontextualized activities (letter work and word work).

The Reading Recovery teacher, trained to be an expert observer and proficient planner of appropriately sequenced instruction, controls the specific content of phonics instruction for each child. Instructional goals are focused not only on strengthening the reader’s facility to integrate knowledge of the alphabetic system into networks of processing systems for reading and writing, but also on the acceleration of learning. Therefore,

- the child’s skills determine the sequence,
- the word segments attended to are those used by good readers at this level of learning to read,
- the sequence is ordered by psychological rather than logical factors (Clay, 1993).



Readers may begin with very rudimentary skills; however, their knowledge and abilities grow in depth and breadth over time.

Reading Recovery teachers give careful attention to introducing letters of the alphabet. This instruction is based on assessment and is powerful.

Consequently, the *Guidebook* (Clay, 1993) does not detail a compendium of objectives. It does offer research findings that teachers take into account as they design an individual, superb curriculum for each child. These research-based findings confirm

- “that final letters or initial letters are the starting points for a child’s detailed analysis of words
- that inflections added to words are easy to recognise;
- that an early achievement is to know that you work left to right across a word
- that consonants in the word are quite easy to deal with
- that easy-to-hear vowels are somewhat more difficult
- and that there are very hard-to-hear consonants or vowels” (Clay, 1993, p. 47).

Instruction focusing on consonants, vowels, inflectional endings, and the application of the related generalizations to reading and writing activities correspond to the recommendations of the Panel. The *Reports of the Subgroups* (NICHD, 2000b) states that “the full array of letter-sound correspondences (e.g., consonants, vowels, digraphs, final stems, etc.) and the application of this knowledge in reading and writing must be taught” (p. 2-99).

In the Reading Recovery context, the emphasis of instruction is based on assessment and ongoing observations of the learner. Specific foci change over time as the reader gains understanding and demonstrates ability to apply new learning independently. In summary, the attention given in Reading Recovery to developing the reader’s understanding and application of the alphabetic principle (the real goal of phonics instruction) is comprehensive and systematic.

Systematic Instruction. The depiction of systematic instruction offered by the NRP report (NICHD, 2000b) focuses on the content of the phonics program (i.e., a planned, sequential set of phonics elements) and the approach to instruction (a logical, instructional sequence providing ample opportunities to practice). This definition is contrasted with nonsystematic or no-phonics instruction; however, no further description is given.

To examine the nature of systematic instruction in Reading Recovery, one must note that the model of instruction accommodates a complex definition of literacy (detailed previously) and the need to enable each child’s rate of learning to accelerate. Reading Recovery teachers apply effective acts of strategy and skill instruction as discussed by Pearson and Dunsmore (2000). They do not leave the learner’s discovery of new knowledge to chance; rather, they offer substantial assistance to support new learning. They provide explicit lessons (meaning that they offer models as appropriate), engage learners in guided practice, observe performance, and give feedback and scaffolding as needed. They ask students to apply new learning to many reading and writing tasks.

This instruction occurs within the framework of the Reading Recovery lesson, which was “designed to ensure daily coverage of necessary sub-component skills or strategies in a literacy processing model” (Clay, 2001, p. 221). Studies of the effectiveness of this instructional plan confirm that the type, order, and sequence of activities in a Reading Recovery lesson keep both teachers and children involved and interested (Clay, 1985, 2001).

The Reading Recovery approaches to developing a learner’s facility with phonological awareness and the alphabetic principle resonate with the conclusions detailed in the panel report summary. These are as follows:

1. Phonics instruction taught early is more effective than phonics instruction introduced after grade one.
2. The application of phonics skills to text is another critical skill that must be taught.
3. Teachers need to be flexible in their phonics instruction in order to adapt it to individual needs.
4. Phonics instruction is only one component of a total reading program.
5. Phonics skills must be integrated with the development of phonemic awareness, fluency, and text comprehension.
6. The individual tutoring setting is an effective venue for phonics instruction (NICHD, 2000b).

However, Reading Recovery methodology goes beyond these conclusions, and the connections are not directly parallel. This is because Reading Recovery instruction accounts for the

complex prerequisite learning needed for efficient visual analysis, extends the study of phonemic elements beyond the basic letter-sound associations, integrates the use of letter sequences and sound sequences with the full range of information sources available in text in order to develop the learner's literacy processing system, and includes attention to the power of writing.

The following discussion reviews aspects of Reading Recovery instruction relative to developing the beginning reader's proficiency with the alphabetic principle and visual analysis by presenting the following topics:

- Letter Identification,
- Word Analysis: Reading and Writing at the Word Level,
- Assessment,
- Early Learning,
- Learning How Words Work,
- Making and Breaking,
- Taking Words Apart in Reading, and
- Writing.

Letter Identification. Letters of the alphabet are the building blocks of written language. Their importance in early reading acquisition has been confirmed by a range of researchers who conclude that knowledge of the letters is the single best predictor of success in first-grade reading (Adams, 1990; Snow, Burns, & Griffin, 1998). Proponents of systematic phonics instruction stress teaching students to convert letters to sounds and then blend sounds to read words (NICHD, 2000a, 2000b). Knowledge of letters is assumed; however the Panel report does not detail procedures for teaching letters of the alphabet.

Reading Recovery teachers give careful attention to introducing letters of the



Magnetic letters are used to facilitate grouping and categorizing activities, important tasks for promoting the rapid discrimination of letters needed for text reading (Clay, 2001).

alphabet. This instruction is based on assessment and is powerful. In addition to assisting children to acquire a network of information for each letter—including its identity, its formation, an associated sound, and awareness of how letters form words—teachers account for the complex visual perception needed for processing letters and print and also help children learn how to learn. The evidence of this ability to generalize procedures for looking at and learning letters is found in teachers' daily records. Most teachers have discovered that while direct instruction of letters is needed early in lessons, they observe that children begin to expand their knowledge of letters as they learn how to learn effectively.

Initially, each child's letter knowledge is examined using the Letter Identification task of the Observation Survey. This task presents all letters (capital and lower case) in random order. Acceptable responses include the correct letter name, an appropriate

sound, or a word beginning with the target letter. In this way, the child's way of knowing and specific item knowledge are honored without giving advantage to one instructional approach over another (i.e., the approach used in kindergarten to teach letters). With this record of the child's known letters, any confusions, and unknown items, teachers individualize instruction building from the child's known repertoire. This individualized approach to instruction is considered more efficient for at-risk learners than any sequence offered by a curriculum guide (Clay, 2001).

The acquisition of letter knowledge requires learning that entails the visual perception and discrimination of the distinctive features of letters. The order of inspection is critical, and the goal is fast recognition requiring only minimal attention (Clay, 2001). For many Reading Recovery children, this complex learning is a new challenge.

Clay (2001) draws on the research of Goldstone (1998) to explain how dis-

crimination performance can be enhanced by sequencing the letter learning tasks from easy to more difficult. Specific considerations suggested to guide the sequence of tasks for a particular child include the following:

- “Children begin with easy-to-see letters.
- Letters will be easy to see in isolation.
- They are harder to see when embedded within words or within text.
- A new letter introduced along with known letters will be easy to see; two or three new letters will make the learning much harder.
- Forms that differ most are easier to discriminate.
- Ask the child to group what he or she sees as similar.
- Match, pair and group things that are similar.
- *Later*, ask the child to find what is different; this is the harder task. It calls for many comparisons” (Clay, 2001, p. 172).

The instructional procedures allow teachers to accommodate for learners’ needs by using multisensory approaches to organize and adjust the process of visual exploration. Applying research in the development of perceptual processes in early childhood, Clay (1991) suggests that teachers provide guided practice in using movement (of the hand) and language (verbal descriptions) to learn letter formation, and this fosters remembering. Magnetic letters are used to facilitate grouping and categorizing activities, important tasks for promoting the rapid discrimination of letters needed for text reading (Clay, 2001). A range of materials (e.g., multi-

dimensional letters, felt letters) and mediums (e.g., pens, chalk) are suggested to allow overlearning and flexibility.

Teachers may introduce letter books to help learners notice that letters form words, to learn the concept of initial letter, or to associate initial letters with the initial phonemes in words. Alphabet books personalized for each child are used to reinforce letter identification and letter-sound associations.

The attention to developing letter knowledge is so important it comprises one component of the daily lesson plan; however, letter work is not confined to this isolated, decontextualized activity. Reading and writing activities, which can proceed in spite of limited letter knowledge, offer productive opportunities to reinforce letter identification and related concepts (e.g., phonemic awareness).

Embedded instruction occurs when a new story is introduced, and the teacher directs the child’s attention to use letter knowledge and phonemic awareness (sound and identity) by asking the child to find “one or two new and important words in the text after he has said what letter he would expect to see at the beginning” (Clay, 1993, p. 37). As appropriate, the teacher selects the words for this activity with awareness of the letters and sounds the child controls. For the child, the processes of saying the word, isolating the initial phoneme, linking the sound to the letter, and searching for the visual representation of the sound or letter is a productive way to apply letter knowledge in reading. Teachers also assist readers to apply their knowledge of sounds or letters in reading by prompting them to use visual information (e.g., at the

letter level) to search, to confirm, or to cross-check, and this occurs in both familiar and novel text reading. Teachers praise children’s attention to visual information and use of letter knowledge, honoring the partially correct and reinforcing the reader’s noticing. Teachers monitor the growing efficiency of the child’s use of letter knowledge and visual information by analyzing daily running records. Finally, letter identification may be extended after the reading of any book by using magnetic letters or by drawing attention to letters in text.

The daily writing activity begins for each child with the first lesson, regardless of letter knowledge. This experience offers a rich opportunity to reinforce letter formation, utility of alternate letter forms (upper and lower case), sound-letter correspondences, phonemic awareness, and understanding that each word is a specific sequence of letters. The use of sound and letter boxes (discussed previously) advances concepts of letter use and word formation and the awareness of many unique letter patterns, e.g., letter clusters and silent letters.

In summary, in Reading Recovery lessons attention to letter knowledge is provided through explicit, systematic instruction—in isolation and in the context of reading and writing activities. This instruction builds from the child’s known repertoire, accommodates for the perceptual learning and abstract understanding that is so easily overlooked in classroom programs, and links the acquisition of items (letters and words) to authentic reading and writing tasks. In Reading Recovery, children gain knowledge of letters (e.g., identification of the symbols, association of sounds with sym-

bols, links of letters to known vocabulary), procedures for learning letters, ability to discriminate letters rapidly, and understanding of how to use letter knowledge in reading texts and writing stories.

Word Analysis: Reading and Writing at the Word Level. In addition to knowledge of letters of the alphabet, a wide range of phonological information is developed in Reading Recovery lessons in concert with growing facility with the full range of knowledge sources available in text (features, letters, letter clusters, words, language structure, semantics). Instruction is based on assessment, accommodates for individual's previous learning and current needs, accounts for prerequisite behaviors and concepts, acknowledges the reciprocity of reading and writing, and shifts the instructional focus from items to strategic processing immediately.

Assessment. Five tasks of the Observation Survey assess the learner's knowledge and abilities relative to word analysis. These tasks include Concepts About Print, Writing Vocabulary, Word Reading, Text Reading, and Hearing and Recording Sounds in Words. The discussion here is limited to the aspects of these tasks that pertain to working at the word level, specifically with the visual features of words and the sounds of words (see *An Observation Survey of Early Literacy Achievement*, Clay, 2002, p. 129). For lesson planning purposes, numeric scores on these measures are not as informative as the teacher's observations and analyses of the child's recorded behaviors, responses, and actual written products.

Several of these tasks provide indication of the child's facility with the

visual features of words in isolation and in context. A range of items on Concepts About Print reveals features of print the child attends to and in what order. The child's control of visual scanning abilities for processing words and text, concepts of words and letters, and ability to attend to print in a left-to-right sequence are examined to determine instructional needs.

The Word Reading task gives a sample of the reader's competence with identifying words in isolation. Words recognized instantly may be considered part of the child's basic sight vocabulary, meaning those words recognized without analysis. An examination of incorrect attempts may provide some indication of the child's word analysis skills, including use of initial consonants, final consonants, medial letters, and endings.

The Writing Vocabulary task yields a sample of words the child knows in every detail. Observation of the child's performance and examination of all attempts may also indicate the child's concept of a word, letter knowledge, awareness of letter-sound correspondences, left-to-right sequencing behaviors, and ability to write using a sound analysis.

Further indication of the child's awareness of the sounds of words is gleaned from the Hearing and Recording Sounds in Words task. This measure allows observation of the child's ability to articulate words slowly and to write new words using a sound analysis.

The child's use of visual information in reading is assessed by analyzing error and self-correction behaviors on running records of continuous text reading. This process allows teachers to examine how the reader is process-

Explicit instruction accounts for each learner's needs and systematically builds proficient skills for reading and writing.

ing text and to describe the reader's use of visual and phonological information (letters, letter clusters, words) as well as other sources of information.

Reading Recovery teachers base instruction on the results of these initial assessments and work with the child's strengths to increase proficiency in word-solving skills. Explicit instruction accounts for each learner's needs and systematically builds proficient skills for reading and writing.

Early Learning. For many Reading Recovery children, the Observation Survey results will indicate that teachers must attend initially to developing learners' concepts about print, linguistic awareness (the hierarchical structure of language, including sentences to phrases to words to phonemes), and attention to details in print. This early learning, essential for literacy development and word analysis, "falls under the collective heading of 'Literacy awareness and orientation to print'" (Clay, 2001, p. 137). The associated abilities, including concepts and behaviors, include the following:

- "how to assemble stories
- that print can be written
- that attention must follow the rules of direction
- that symbols have only one orientation
- how to switch out to the page and back to the head

The attention to onset and rime in making and breaking procedures results from research confirming that good readers read in chunks, meaning they attach sounds to groups of letters (Gibson, 1965).

- how to work with complex information and come to decisions” (Clay, 2001, p. 137).

In addition to these basic understandings, the reader must learn to focus attention on print (where to look, what to look for, how to fixate, how to move eyes across print) and to process symbols in sequence (Clay, 2001).

Reading Recovery teachers engage children in the reading and writing of complete, meaningful messages from the first lesson. From these carefully planned experiences, most learners gain control of the basic print concepts as well as the appropriate directional schema (left-to-right movement and scanning) and the ability to search visually in sequence (e.g., word by word or letter by letter). “Saying and reading a few words across a line helps the learner to work with order. Writing a few words helps establish both letter and word order, and more generally establishes the importance of sequence” (Clay, 2001, p. 169).

Successful reading also involves controlling sound sequences in sentences, words, syllables, and letter clusters (Clay, 1991). The procedures of hearing and recording sounds in words lead directly to a sequential analysis of phonemes within words.

The acquisition of these concepts and abilities is essential for efficient reading and the ongoing development of word analysis skills. For those children needing more instructional support, specific suggestions are detailed in the *Guidebook* (Clay, 1993; see for example, Learning to look at print, Learning about direction, Locating responses, Hearing and recording sounds in words, and When it is hard to remember).

This brief review of early learning highlights aspects of the reading acquisition process that are more complex than may be indicated by programs designed to teach beginning readers letter-sound associations in order to sound out words. Reading Recovery instruction accounts for this complexity, especially as it relates to struggling readers.

Learning How Words Work. Phonics instruction, as emphasized by the NRP, stresses the acquisition of sound-symbol relationships and the use of this knowledge in decoding successfully in reading and spelling correctly in writing. Reading Recovery instruction gives direct attention to building extensive knowledge of the letters of the alphabet (e.g., visual perception, identity or letter name, and sound as discussed previously) and focuses attention on the use of letter sounds in both reading and writing tasks. However, the sounds of letters represent only one constituent of words (or language) that Reading Recovery students learn and use. Activities with words across the Reading Recovery lesson build extensive phonological awareness that includes discrete phonemes (single letters or sounds), onset and rime, and syllables. As a result of explicit and systematic word study, learners gain

control of letters, digraphs, clusters, prefixes, suffixes, root words, and multisyllabic words. Specific instructional procedures develop abilities to perceive and scan print appropriately, to make sound sequence analyses of spoken words, to perform sequential analyses of visual symbols, and to coordinate these two sets of operations (Clay, 1993). In the process, children learn how words work. They gain awareness and control of generalizations that they apply to analyze unfamiliar words in their reading and in their writing.

“Children need experience with words in text and words in isolation; words in continuous text favours learning about word probabilities while words in isolation favours learning about letter sequences” (Clay, 2001, p. 171). While the learner’s attention may be directed to word study across the lesson, specific focus on word work occurs “when making and breaking words in the letter identification section of the lesson, after familiar book reading, during the reading of the new book, after the new book” (Clay, 1993, p. 48). Writing activities also provide opportunities to focus on working with words.

Making and Breaking. Teachers engage learners in working with words in isolation as soon as the learner has gained control of approximately 15 to 20 letters (Clay, 1993, p. 44). This work becomes the focus of the letter identification component of the lesson and is referred to as making and breaking. Initially, the learner manipulates magnetic letters for known words, “taking them apart into component letters and reassembling them” (Clay, 2001, p. 229). The teacher reinforces that words are constructed of letters and demonstrates that words

can be taken apart and reconstructed letter by letter or in letter clusters (e.g., inflectional endings) or in chunks (e.g., manipulating onsets and rimes). It is relatively easy for most children to draw on their oral language abilities to break words at these easy-to-find breaks (letter clusters and chunks), and this activity facilitates the ability to work with words (Clay, 1993).

The attention to onset and rime in making and breaking procedures results from research confirming that good readers read in chunks, meaning they attach sounds to groups of letters (Gibson, 1965). Examples are *an*, *ight*, *ent*, etc. Therefore, these procedures establish phonological identities for units of letters and sounds larger than the single letter or single phoneme and help to make word analyses in reading more efficient. “The perceptual and cognitive challenges are to attend to detail in print, to have maximum opportunities to construct or act on the task, to attend to order (that is, sequences of letters), and, increasingly, to phonemes, patterns, clusters, syllables and words, for the speeding up of processing” (Clay, 2001, p. 229).

As the child gains control of the action of making and breaking words and with the use of “clusters of letters and chunks of sound” (Clay, 1993, p. 45), the teacher introduces the use of analogies to analyze unfamiliar words. This process is initiated by using predictable letter-sound sequences, the specific letter clusters known by the child. The teacher bases instruction on analyses of the child’s known words and known letter clusters revealed in both reading and writing activities and also observes the child closely to confirm what

the learner is attending to and gaining from the teacher’s demonstrations.

Gradually, the teacher engages the child in working with harder analogies. The child continues to manipulate magnetic letters, to work with the known flexibly, and to gain important generalizations for analyzing words. The anticipated result for the learner is acquisition of “the complex associations between sound sequences and letter sequences that enable us to become fluent readers of three categories of words in English:

1. “those with sound sequences that can be predicted from the letters...[e.g., mat, crash]
2. those with alternate letter-sound correspondences... [e.g., read, bow, circus]
3. those that are better described as orthographic...[e.g., night, know]” (Clay, 1993, p. 46).

In general, the procedures used in Reading Recovery for developing word analysis skills extend beyond the application of phonics, which focuses on discrete letter-sound associations, and develop the reader’s facility to apply a wide range of linguistic and phonological information. The result is a sophisticated understanding of the alphabetic principle and both the knowledge and strategies to analyze and identify words of varying difficulty, including irregular and multisyllabic words.

Taking Words Apart in Reading.

Teachers foster the visual and phonological analysis of words in text from the earliest lessons. In both familiar and novel reading, the strategic use of the reader’s knowledge of letters and letter sequences is reinforced. Staying

As the child gains more understanding of how words work and more awareness of the range of phonological elements through making and breaking activities, the teacher supports the child’s application of this information.

with what the child knows, teachers prompt readers to search, to monitor, and to cross-check using initial and final letters, including inflectional endings, by saying:

‘What do you expect to see at the beginning?’
 ‘...at the end?’
 ‘...after the “M”?’
 ‘It could be..., but look at the [t]’ (Clay, 1993, p. 41).

Teachers incorporate attention to the alphabetic principle by asking the child to go from the first letter to its sound when looking at print, to go from a sound to the expected letter when anticipating words in text, and to go beyond the initial letter to use more grapheme-phoneme information (e.g., final letters) by asking “What else could you check?” (Clay, 1993, p. 48).

Occasionally, the teacher demonstrates the use of letter knowledge during reading by giving the sound of an initial letter for a challenging word. And, for the child who has mastery of sound-to-letter correspondences but does not demonstrate ability to analyze simple words sequentially, the teacher may write the word letter by

letter on the blackboard, supporting the child's articulation and blending to read a word that fits the context, e.g., *c-*, *cr-*, *cr-ash* (Clay, 1993).

As the child gains more understanding of how words work and more awareness of the range of phonological elements through making and breaking activities, the teacher supports the child's application of this information. The teacher may prompt the child to use what he knows to solve the unknown word by analogy by asking: "Do you know a word like that?" "Do you know a word that starts with those letters?" "What do you know that might help?" (Clay, 1993, p. 49).

The teacher may scaffold the child's ability to take words apart in reading by providing concrete demonstrations. The teacher may construct the word part with magnetic letters or divide the word in print with a masking card. The child may also find that using a masking card on his own facilitates his visual analyses of unfamiliar words in text (Clay, 1993).

More work on taking words apart and developing proficiency in using the process of analogy to read new words may be provided following the reading of any books. The teacher uses paper or a whiteboard and selects examples for illustration from the text. Activities may include adding, subtracting, substituting letters, or making analogies to solve an unknown word. The objective is to extend the child's ability to analyze unfamiliar words quickly so that the reading is not slowed down.

The teacher continues to assess the child's facility to process visual and phonological information in text reading by analyzing daily running records. The teacher bases teaching decisions on this analysis of behaviors

and "selects texts...which not only draw upon working systems that the child has in place, but also challenge these to change" (Clay, 2001, p. 96). So books are selected carefully to allow the child to use and extend literacy processing skills, including the use of visual information.

Writing. "It is in the writing part of the daily lesson that children are required to pay attention to letter detail, letter order, sound sequences and the links between messages in oral language and messages in printed language" (Clay, 1993, p. 11). Teachers support learners in composing and recording a complete message. In the process, the learner attends to the details of print (e.g., letters, clusters, words) and the conventions of written language (e.g., word order, use of upper- and lower-case letters, directional constraints).

The range of procedures used to develop the child's ability to record messages correctly develops and enhances both phonemic and phonological awareness. As discussed previously, the use of sound boxes supports the learner in hearing and recording sounds in words sequentially and extends understanding of phoneme-grapheme correspondences. When letter boxes are introduced, the child acquires refined understanding of the complex relationships between sounds of the language and the way words are written. The child gains awareness and proficiency with unique ways of spelling English words, including the use of silent letters and irregular spellings. These experiences with words in writing build a reservoir of known elements that may be tapped when analyzing words in reading.

As appropriate, the teacher may prompt the child to recall and use a

known word to generalize the spelling of a new word, calling on the child to make analogies, a process that is also a productive reading strategy. Again, the writing experiences are used to reinforce the study of how words work and the development of strategies for analyzing words.

"The power to construct or generate unknown words comes from having a personal writing vocabulary" (Clay, 2001, p. 24). Therefore, teachers use the child's writing experiences to select high-frequency and helpful words to take to fluency. This means the child practices writing the target word repeatedly in order to produce it fluently with a minimum of attention (Clay, 1993, p. 30). Over time, the child acquires a personal core of known words that includes a wide range of different exemplars from which the child can generalize to spell unfamiliar words.

Summary

The NRP (NICHD, 2000a) states that phonics instruction is an essential element of beginning reading instruction. Their meta-analysis revealed that phonics instruction "enhances children's success in learning to read and...is more effective than instruction that teaches no phonics" (NICHD, 2000a, p. 9). In summary, phonics instruction "stresses the acquisition of letter-sound correspondences and their use in reading and spelling" (NICHD, 2000a, p. 8). Reading Recovery instruction accounts for this skill development (single letters/sounds) and extends the learner's use of phonological elements from discrete phonemes to onset and rime and to syllables. Students acquire generalizations for analyzing the range of words they encounter in texts and choose to write in their stories.

This discussion has reviewed procedures used by Reading Recovery teachers to develop the beginning reader's proficiency to analyze words proficiently in both reading and writing contexts. Instruction is systematic, based on assessment, and tailored to each learner's specific needs. Phonemic awareness, phonological awareness, letter knowledge, letter-sound relationships, control of a range of phonological elements (clusters, inflectional endings, spelling patterns), and understanding how words work are developed in concert with real reading and real writing. The goals include but also extend beyond decoding to learning how to learn. Teachers support the development of the reader's strategic literacy processing systems that allow the learner to continue to gain competencies through ongoing reading and writing activities.

Fluency

The NRP (NICHD, 2000b) defines fluency in reading as "the ability to read a text quickly, accurately, and with proper expression" (p. 3-7). Fluency, according to the Panel, includes automatic word recognition, rapid use of punctuation, and rapid determination of where to place emphasis and to pause.

The NRP states that readers must develop *automaticity* in word recognition if they are to be fluent. The term automaticity does not apply to things which were always fast and easy. It refers to mental processes that originally were performed slowly and with a great deal of attention, but which are carried out quickly and with little attention after they have been learned and brought under control. Word recognition is just such a complex process that must be learned and con-

trolled so that it becomes automatic and very fast. "Automaticity involves the processing of complex information that ordinarily requires long periods of training before the behavior can be executed with little effort or attention" (NICHD, 2000b, p. 3-7).

Although Reading Recovery instruction addresses the areas of fluency emphasized by the Panel, the instructional suggestions of the NRP (NICHD, 2000b) are appropriate for classroom or group instruction rather than the one-to-one situation. The one-to-one instructional setting of Reading Recovery affords the teacher the opportunity to monitor and guide the student's fluent responding and phrased reading daily on every book read in the lesson.

Reading Recovery instruction includes work on extending a meager knowledge of words which emphasizes the importance of fluent responding. Clay explains that "a glimmer of recognition in either reading or in writing is a beginning out of which knowledge of the word can emerge through many contacts in different settings" (1993, p. 27). Reading Recovery teachers create opportunities for students to encounter and work on the words they are learning in many contexts in many parts of the lesson. The teacher is careful to observe that students develop fluent responding to the words they know. Clay (2001) describes the two journeys that letters, letter clusters, parts of words, and words take in terms of the child's learning:

"The first journey is:

- from being new,
- to only just known,
- to working to get a solution,
- to easily produced but easi-

ly thrown,

- to a well-known old response in most contexts,
- and later, known in any variant form.

The second journey is:

- moving from very slow,
- to very fast production or very fast recognition measured in thousandths of a second (or milliseconds)" (p. 20).

Clay's clear description of the development of automatic visual recognition or responding to printed forms (letters, letter clusters, or words) provides an overall map for progress.

Fluent responding, or automaticity, is something that is taught from the very beginning of a child's series of lessons, even in *Roaming Around the Known*. Clay (1993) instructs the teacher to

go over what he [the student] knows in different ways until your ingenuity runs out, and until he is moving fluently around this personal corpus of responses, the letters, words and messages that he knows how to read or write (p. 12).

Although there are times when we ask a child to recognize a word in isolation, much of the practice of word recognition in Reading Recovery lessons occurs while reading continuous text. This is consistent with the recommendations of the NRP (NICHD, 2000b) as well.

If fluency were just a word recognition phenomenon, then having students reviewing and rehearsing word lists might make sense. Although there is some benefit to isolated word recognition study of this type,

The teacher teaches for fast visual recognition and for phrasing all along the child's path of progress. Moving up a gradient of texts carefully chosen with this child's strengths in mind, the student makes continuous progress in reading fluency and phrasing.

the evidence is that such training is insufficient as it may fail to transfer when the practiced words are presented in a meaningful context (Fleischer, Jenkins, & Pany, 1979). Competent reading requires skills that extend beyond the single-word level to contextual reading, and this skill can best be acquired by practicing reading in which the words are in a meaningful context (p. 3-11).

Thinking of reading as word reading only is too simplistic. Reading Recovery teachers understand that readers must direct their attention to many different sources of information, including the meaning of the story and episode within the story, the language structure just read, pictures within the story, phrases, words, word parts, clusters of letters, and letters. Readers also learn how these various sources of information are related. The complexity of the learning that a beginning reader must do cannot be explained by a simple theory of word reading, but certainly, fluent word reading is a part of the more complex reading process.

In addressing fluency, the NRP report (NICHD, 2000a, 2000b) stresses the importance of reading expressively as well as automatic word recognition. Reading Recovery teachers teach for expressive reading daily from very early in the child's literacy development. Shortly after the child develops correct directional responding and the child can make a voice to print match without the use of the finger to point to each word, the teacher can start to teach for expressive reading. "Before long the teacher can begin to require the child to read groups of words together, using the phrasing that is natural in normal speech, and the intonation of normal conversation" (Clay, 1993, p. 21). An entire section in Chapter 4 of the *Guidebook* (Clay, 1993) is devoted to the understanding of and procedures to teach for phrasing in fluent reading (expressive reading). Teachers encourage students to read familiar texts quickly and expressively, and they teach for phrased reading on familiar and novel text whenever possible.

The NRP recommends several informal measures which teachers can use to assess fluency. All of the measures involve recording oral reading of students at their instructional reading level. One of the recommendations is the running record (Clay, 2002). In *An Observation Survey of Early Literacy Achievement* (Clay, 2002) there are specific recommendations for recording how the reading sounded each time a running record is taken. Clay tells the teacher, "Ask yourself, 'How did that reading of continuous text sound?' Then add a comment about the sound of the reading at the foot of the Running Record page" (p. 60). Clay explains,

Comment on what the reader

did well. Was the reading done at a good pace, or was it slow, or too fast? Are things in balance in your judgment? Is he reading groups of words together in a phrased way? Attend particularly to change over previous readings (p. 61).

In every lesson Reading Recovery teachers monitor how a child's reading sounds on yesterday's new book and record a brief description of the sound of the reading on the running record sheet.

Another area of agreement between the NRP and Reading Recovery is the understanding that fluency develops over time with instruction and practice. The NRP (NICHD, 2000b) describes the findings reported by Samuels (1979),

Such data reveal a gradual, continuous improvement in reading speed in which only the beginning and end points could be justifiably characterized as 'slow' or 'fast'. Reading speed, like other aspects of fluency or other automatic behaviors, shows gradual or incremental improvement through practice (p. 3-8).

During a child's series of lessons the speed with which he reads increases as his learning expands and his visual recognition of known letters, letter clusters, and words becomes faster. The teacher teaches for fast visual recognition and for phrasing all along the child's path of progress. Moving up a gradient of texts carefully chosen with this child's strengths in mind, the student makes continuous progress in reading fluency and phrasing. "It takes time to develop fast control of many subparts of a complex whole so that it operates smoothly and fluently" (Clay, 1993, p. 52).

A Sixth Essential Element

In this article we have emphasized three of the essential elements identified by the National Reading Panel: phonemic awareness, phonics, and fluency. We have examined each of these elements and described how they are taught in Reading Recovery. It is problematic to think of these elements in isolation. Successful reading requires that the reader develop a system in which these elements play a part. The reader must develop an efficient processing system to become a successful reader.

The sixth essential element can be identified by several terms: strategic activity, reading work, effective processing, integration, or assembling working systems (Clay, 2001). Although these terms might not be used interchangeably, they most certainly all address the in-the-head processes which must begin early and develop over time as the reader gains proficiency in reading. **Phonemic awareness**, the ability to use **phonics** knowledge, **fluent reading**, demonstrating **comprehension** of what is read, and the expansion of known **vocabulary** are outward manifestations of the developing inner processing system.

The Panel emphasizes the importance of teaching children how to apply knowledge in any of the five essential elements to the act of reading. In Reading Recovery, teachers value the child's application of new learning and provide instruction which is closely tied to the use of that information in the context of reading or writing continuous text. Teaching new information is done within the context of reading and writing, or if decontextualized for emphasis and clarity, the teacher provides opportunities for the

student to use the new information in context within the same lesson.

Reading Recovery teachers make decisions about what to teach based on observations of the student's current abilities—what the child is currently applying while reading and writing. The teacher expects to see the child apply the new learning immediately, since the new knowledge is just beyond the edge of the child's current knowledge.

The teacher cannot directly teach the child how to use the new information. The teacher may demonstrate, explain, or prompt, but it is the child who must incorporate the new information into existing knowledge and learn how to use it flexibly. The teacher chooses carefully what, when, and how to teach something new to the child, constantly bearing in mind that the child needs to develop self-regulation of the learning involved. Reading Recovery teachers monitor and teach for the reader's development of self-regulation.

The notion of applying new learning is important but not comprehensive enough to explain the complex and powerful processing system which successful readers develop. Clay (2001) explains that the term *strategic activity*

refers to what goes on in any of the aspects of processing which Singer proposes, when the brain

- picks up information,
- works on it,
- makes a decision, and
- evaluates the response.

as well as the overarching execution of that sequence (pp. 127–128).

This processing may be slow at first, but it develops into a very fast process

which cannot be easily discerned by an observer. Clay sometimes refers to strategic activity as reading work. When working with emerging readers, “some of this reading work is signaled by behaviours teachers can observe and record” (Clay, 2001, p. 128). The ability to observe those behaviors in emerging readers provides teachers with the opportunity to teach for the development of effective processing in Reading Recovery.

If the processing is to develop into an efficient system, the reader must have opportunities to use the processing system frequently on continuous text. The system will change in two ways if it is developing well. It will develop in effectiveness so that the reader is able to read ever more challenging texts, and it will become faster so that it is increasingly more efficient. Both of these changes allow readers to expand their knowledge and capabilities in all aspects of reading, including phonemic awareness, phonics, fluency, comprehension, and vocabulary development.

In the Next Issue...

We will address the elements of comprehension and vocabulary development. The sixth essential element will be explained in terms of those elements. With these two articles Reading Recovery professionals will have information at hand about how Reading Recovery aligns with the recommendations of the National Reading Panel.

References

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: M.I.T. Press.
- Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *Put reading first: The research building blocks for teaching children to read*. Jessup, MD: National Institute for Literacy.
- Chapman, M. L. (2003). Phonemic awareness: Clarifying what we know. *Literacy Teaching and Learning*, 7 (1 & 2), 91–114.
- Clay, M. M. (1982). *Observing young readers: Selected papers*. Portsmouth, NH: Heinemann.
- Clay, M. M. (1985). Reading Recovery: Systematic adaptation to an educational innovation. *New Zealand Journal Of Educational Studies*, 22(1), 35–38.
- Clay, M. M. (1991). *Becoming literate: The construction of inner control*. Portsmouth, NH: Heinemann.
- Clay, M. M. (1993). *Reading Recovery: A guidebook for teachers in training*. Portsmouth, NH: Heinemann.
- Clay, M. M. (2001). *Change over time in children's literacy development*. Portsmouth, NH: Heinemann.
- Clay, M. M. (2002). *An observation survey of early literacy achievement* (2nd ed.). Portsmouth, NH: Heinemann.
- Cunningham, P. M. (2000). *Phonics they use: Words for reading and writing*. New York: Longman.
- Gibson, E. (1965). Learning to read. *Science*, 148, 1066–1072.
- Goldstone, R. L. (1998). Perceptual learning. *Annual Review of Psychology*, 49, 585–612.
- Imlach, R. H., & Clay, M. M. (1982). Juncture, pitch and stress as reading behavior variables. In Clay, M. M. (Ed.), *Observing young readers: Selected papers*. Portsmouth, NH: Heinemann.
- Juel, C. (1991). Beginning reading. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research, Vol. 2*. White Plains, NY: Longman.
- National Institute of Child Health and Human Development (2000a). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- National Institute of Child Health and Human Development (2000b). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Report of the sub-groups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.
- Ng, S. (1979). Error and self-correction behavior in reading and oral language. Doctoral dissertation, University of Auckland Library.
- Pearson, P. D., & Dunsmore, K. (2000). *What research reveals about practice: A summary of research-based understandings about teaching beginning reading*. Unpublished manuscript. Lansing: Michigan State University.
- Snow, K., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Williams, J. (1995). Phonemic awareness. In T. L. Harris & R. E. Hodges (Eds.), *The literacy dictionary*, pp. 185–186. Newark, DE: International Reading Association.
- Yatvin, J. (2002). Babes in the woods: The wanderings of the National Reading Panel. *Phi Delta Kappan*, 83, 364–369.