Clay’s new text, *Literacy Lessons Designed for Individuals Part One and Part Two* (Clay, 2005a, 2005b) is an expanded presentation and modification of her earlier texts, *Early Detection of Reading Difficulties* (Clay, 1985) and *Reading Recovery: A Guidebook for Teachers in Training* (Clay, 1993), while widening the audience to other professionals who teach children individually. Clay has consistently taken the position that effective teaching must be based upon strong theoretical understanding.

In *Literacy Lessons*, Clay presents a more thorough explanation of both theory and teaching procedures based on current research. Many researchers offer advice about literacy teaching based upon means and averages derived from groups. *Literacy Lessons* represents the interface between theory, research, and teaching at the level of the individual literacy learner. The new text places renewed emphasis on

- developing an understanding of theory and the rationales for the teaching procedures and their variations;
- careful, consistent observation during interactions with the individual learner to develop a theory (hypothesis) of how that child is learning;
- reflective choice of teaching decisions on the basis of the teacher’s hypothesis about each child’s literacy processing system and learning path; and
- openness and flexibility to rethink decisions and assumptions on the basis of evidence, to revisit Clay’s theory and rationales, and to collaborate with other teachers to reanalyze teaching as appropriate for each child’s learning.

In this new text Clay also offers expanded descriptions of procedures that will move children forward in specific areas of processing. A significant portion of the challenge of being a Reading Recovery teacher is in discriminating the processing patterns of each individual child at particular points of time in order to teach effectively for literacy development. The assembly of several elements, including those listed below, is necessary:

- A valid theory of the content (subject matter) being taught. This includes an understanding of the alphabetic principle and the complex relationships between oral and printed language, but also an understanding of literacy and its relation to thinking, learning, and socialization.

A significant portion of the challenge of being a Reading Recovery teacher is in discerning the processing patterns of each individual child at particular points of time in order to teach effectively for literacy development.
Clay’s awareness of significant new research in the fields of education, psychology, linguistics, brain physiology, and other disciplines and topics that bear on issues of literacy acquisition are reflected in this new text. New research has prompted Clay to extend her theory in some areas, shift instructional emphases in certain ways, and redefine and reaffirm her positions in other areas.

This article discusses learning—with special attention to word learning—within the context of Literacy Lessons in order to provide an illustration of how an understanding of Clay’s theory of literacy acquisition and of research that has influenced her thinking are critical to teacher decision making and to children’s learning in Reading Recovery lessons. Following a brief review of important aspects of Clay’s ideas, and qualifying remarks about word learning, the task of word learning is introduced first from the perspective of literate adults and then from the perspective of children at the beginning stages of literacy learning. The next section discusses key aspects of the earliest phases of literacy acquisition: establishing concepts about print, learning to look at and attend to print, and developing and expanding beginning knowledge of letters and words. Change over time in learning, especially in learning words, is discussed in the next section. The last sections of the article address teaching procedures relevant to learning, understanding, and solving words across a child’s series of individual lessons. Emphasized through these last sections is the theme of teacher decision making based upon close observation and a tentative theory of each child’s growing capabilities and awareness of words, grounded upon an understanding of Clay’s ideas.

Key Aspects of the Theory Underlying Reading Recovery

Before undertaking a discussion of any single aspect of literacy learning, such as word learning, it is important to review certain key dimensions of the theory underlying Reading Recovery. The complex nature of literacy processing is evidenced by how reading and writing draw upon several areas of the brain working together (Greenfield, 2000; Lyons, 2003). Three other aspects of Clay’s theory are particularly pertinent to a discussion of word learning.

First, learning is constructive—in other words it is the child who must explore, solve problems, and form concepts that lead to growth. The teacher’s role is not less important because learning is perceived as constructive; the teacher sets conditions under which the child can learn and provides contingent guidance and feedback. Ultimately, however, it is the child who must grasp the
learning (Clay, 2001). Just as it is a teacher's understanding that underlies effective teaching, it is the child's understanding that underlies learning progress.

Second, this constructive learning needs to occur primarily during the reading and writing of meaningful, continuous texts (Clay, 1991; 2001). A child can become proficient in the complex, integrated tasks of reading and writing only by focusing on meaning while engaging in those tasks. Reading and writing should be taught and learned together, especially during the early acquisition stages because of the reciprocal relationships between these processes and their potential for supporting learning from one to the other. Some isolated presentation and practice on items or elements is also necessary and important because it can help the child gain control of certain differences, distinctions or subroutines; much like a musician rehearsing in isolation a difficult short passage to gain control. A variety of contexts (reading, writing, magnetic letters, etc.), purposes, and examples help children to see words from different perspectives, to see relationships among words, and to practice recognition and recall in varied contexts.

Third, Clay's theory of literacy acquisition takes into account the concept of change over time. A child's learning changes as he acquires literacy not just quantitatively (learning more words, more letter-sound associations) and with increasing processing speed, but also qualitatively. His perceptual processing and his strategic activity change. Many sub-processes come under control, in fact his brain actually changes, forms new connections, as literacy capability grows (Clay, 2001). The importance of this concept will be discussed further in relation to word learning and to the understanding of words.

Word Learning in Perspective

The opening paragraph of Adams' influential text (1990) began with the comment, “… that the topic of issue is that of reading words.” When I first read this passage, I reacted to the narrowness of focus. Even when considering broadly the psycholinguistic processes involved in reading and writing (and ignoring issues of literacy in a broader sense), a focus on word learning is narrow. Words are only one of the units and sources of linguistic information—either orally or in print. Other units of print include letters, frequent and meaningful letter clusters within words, spaces, punctuation, lines, sentences, paragraphs, and of course, the sequencing and orthographic conventions of the language. In oral language other units include phonemes, morphemes and morphophonemes, syllables, phrases, sentences, and what are called supra-segmentals—pitch, stress, and intonation—that exert their influence across the smaller units of speech, even across whole utterances.

Nevertheless, words seem to hold a dominant position in our views of language. When we look at a page of print, perhaps because of spacing conventions, we tend to see it as a collection of words. One can also argue that we understand conversational utterances—things that sound like “whujawant?” and “Yagonnagedalottaflack”—by mapping the utterances onto known words.

The teaching approach and procedures of Clay's texts remind us, however, that an overfocus on word learning can be counterproductive and can impede learning acceleration (Clay, 2005a). Words, both printed and oral, are only one of the sources of information children need to be able to access and use in order to learn to read, write, think, and communicate with language. Nevertheless, working with words—solving words, learning words, understanding words, analyzing words, etc.—does play an important role in learning to read and write. The following discussion of issues in word learning is intended to support, not restrict, a more comprehensive view of literacy learning and acquisition.

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1 Reading and writing are reciprocal because they both are concerned with the relationship between language and its printed conventional forms (in this case, a language that is primarily alphabetic); they both involve similar language and psycholinguistic processes, but working in different directions; and they play contrasting but overlapping roles in communication processes.

2 Subroutines may include writing activities such as forming letters and analyzing the sounds of words, as well as reading subroutines or subprocesses (see note 3 below).

3 Subprocesses may include, for example, such things as left-right sequential visual processing, rapid association of sounds and symbols, and the strategic activity of checking responses against meaning, language, and the visual forms of words.
The Task of Learning Words

Word learning is a surprisingly complex issue, both for adult learners as well as for emerging readers and writers. Clay’s new text begins with a quote from a video about brain functioning during learning that is highly applicable to word learning:

You relate what you hear or see to things you already understand. The moment of truth is the moment of input, • how you attend, • how much you care, • how you encode, • what you do with it, • and how you organise it.

How well you access it depends on how well you saved it in the first place. How do you become more savvy about the way you remember things? Have a good system. Notice your errors and try to fix them. (Clay, 2005b, flyleaf, quoting Squire, 1996)

This quotation summarizes work in cognitive psychology that identifies aspects of learning new information, somewhat as follows.

Pick-up of information (which can be visual, auditory, tactile, physical, or any combination of these; in reading, the pick-up is primarily visual)

Prior learning has a great deal to do with this stage. The eye is not a camera, nor are our ears tape recorders; the information picked up is controlled by what the mind is able to understand and, many times, expects to see or hear. For example, children who do not yet control letter identification will have great difficulty, whereas readers who are familiar not only with letters but also with letter patterns will pick information up quickly.

Encoding the information (for example, identifying the string of letters c-a-t as a word you know and understand)

Encoding usually, if not always, involves the grouping of small units into a known larger unit. This may happen at the point of input or shortly thereafter. Encoding is done quickly and efficiently by a mind that is experienced with the subject matter. It may be slow and awkward for minds that are inexperienced.

Relating to what is known (seeing – at in cat; thinking of “Fluffy;” thinking of a catamaran, etc.)

This is perhaps the primary means of encoding information, but relating to prior knowledge can be taken past the input stage and become a major tool for long-term memory storage. Again, for experienced minds, this may happen so quickly that it occurs almost at the moment of input. For novices it involves effort and searching if they care about learning the information; if they do not care, new information rolls off them like water off waxed feathers.

Storage in short-term memory

This is not a given. The skill of retaining information in short-term memory has to be learned. If a person quickly recognizes and encodes or organizes the elements within new information, some rehearsal is still required to retain the information in short-term memory. This is something many children do not know how to do. Remembering a phone number provides a good example. Repeating it over and over to oneself (phonological rehearsal) is a method that is commonly used, but many children do not know how to do this or do not discover it on their own without some coaching.

Storage in long-term memory

Students (and teachers) assume this can be done through study and review, but it will not remain in long-term memory if it is not integrated into a framework of known information. Students who cram for exams by trying to memorize large amounts of information usually forget it within a fairly short time. But if a person has frameworks in which to store the information and actively relates it to other material in that framework, it can remain for years and years. A phone number can be remembered for a long time if it is related to something one knows.

Word retrieval

Although not mentioned in the Squire (1996) quotation cited earlier, learning to retrieve information from memory is a critical aspect of learning something new. Learning to retrieve words from memory is something that struggling readers need to learn how to do.

To illustrate this, think about situations in which you are introduced to a person and hear his name for the first time. It is easy to pay little attention to the name and forget it immediately, but there are some simple ways of overcoming this. It helps to repeat the name aloud or mentally and concentrate on what you are saying. It helps even more for many people to see the name spelled mentally or written down. These activities fall under the headings of pick-up and encoding. The next phase, relating it to prior learning,
can be done in many ways. You might think of someone else you know who shares that first or last name, or you may create a connection of some other sort (e.g., Mr. Bailey reminds me of the song, “Bill Bailey Won’t You Please Come Home”). Long-term memory of the name may be established through many interactions with the person or through rehearsal or review at certain intervals. Remembering or retrieving the name at a later date depends on how well you coded and stored it at the point of learning, but it also helps to have practiced remembering that name on several occasions over time.

Literate adults learn words more easily than novices because they have acquired expertise in all the aspects of learning mentioned above. They have become expert at picking up information from printed language, and they usually surpass children in their awareness of relationships among words because of their world knowledge and their experience with verbal information. Words that are retained in long-term memory fit into networks of semantic, syntactic, phonological, and even affective or emotional relationships. Semantically, we know a duck, for example, as a water bird which is often hunted or raised on farms for food; we may know it as a category of birds that can be separated into dabbling ducks and diving ducks, each of which subsumes several varieties. We associate ducks with characteristics like quacking and waddling; with other birds such as geese and cormorants or loons; with words like decoy, mallard, blind (for duck hunting); eggs and nests, etc. Syntactically, we know it not only as a noun (all of the above), but also as a verb meaning to stoop down quickly. We also know the sound of the word and the spelling of the word—which seems obvious, but contrasts with the knowledge of a novice learner. When adults learn a new word related to ducks (e.g., a brant or a nene or an eider) they fit that word into the complicated set of relationships about ducks and it is understood quickly and retained often for a long time, simply on the basis of one or two encounters.

Children at the beginning point of learning to read and write have learned many words orally, but they have a great deal of learning to do to acquire and to extend both their oral and reading and writing vocabularies. None of the steps above (pick-up, coding, relating, reviewing and storing, and retrieving) is natural for them in relation to printed language, though all children have some ability to do this with oral language.

Some researchers in the past have argued that children go through natural stages developmentally on their way to the visual processing of adult readers. Clay contests this, arguing that reading is learned behavior. New research suggests that for children who become capable readers, adult-style visual processing is established early, by the end of Grade 1 (Aghababian, 2000). Competent first and second graders’ eye fixations are longer in duration than adults but they show very similar patterns of fixation and movement (Raynor & Juhasz, 2004). One of the reasons for reading difficulties (both early and persistent) seems to be failure or delay in establishing the sequential, left-right processing that must occur in skillful reading of English print.

Clay’s new text addresses this issue under the assumption that the best way to assist struggling learners is to help them learn to do the things that good readers do. In chapter 1 of Literacy Lessons Part Two, Clay stresses (a) careful observation and
assessment of visual processing for all children entering Reading Recovery—whether they enter with low scores in all areas or with some strengths, and (b) teaching procedures in each part of the lesson to establish, maintain, and habituate left-right sequential processing. These activities include the following.

**Learning the convention of left-right and top-bottom directionality**
Section 1 of *Literacy Lessons* addresses this issue, beginning with procedures for observing and recording the child’s patterns of performance, followed by teaching procedures. These teaching procedures include demonstrations (in reading and writing), guidance and the use of temporary props (starting signal on the left and finger-pointing). There are discussions of when to remove the props, of monitoring (teacher and increasingly, the child), and of cautions.

**Learning how to attend to a line of items in sequential order**
Some children cannot initially process information sequentially left to right. Clay presents procedures to help these children learn to point sequentially to rows of objects in left-right order. A next step is to pair this sequential movement with object naming; then this can be transferred to finger-pointing during text reading.

**Practice in breaking apart and reassembling known words**
This helps establish the left-right sequential processing essential to reading in English, and it also develops concepts about how words are built and concepts such as *word* and *letter* and *first letter* and *last letter*.

All of these learnings must be assessed, and if lacking, acquired early during a child’s series of lessons. In fact, Clay points out in *Literacy Lessons* that their early establishment is critical in order for accelerated learning to occur. Teachers need to understand they are doing these activities to help initiate, support, and strengthen the processes of self-monitoring, searching for information and confirming responses.

Careful observation is required to determine when left-right, sequential visual processing is established sufficiently and to decide when to begin to move beyond these activities to appropriate new challenges.

At the same time these building blocks of visual processing are being put into place, aspects of auditory processing are also being observed and moved forward, particularly in
the writing portion of children’s lessons. Developing an awareness of the sounds of syllables and phonemes plays an important role in literacy development (Blachman, 2000; Ehri, Nunes, Stahl, & Willows, 2001). Phonological cues are important in word learning and word retrieval, and they play an important role in strategic activity in both reading and in writing (Clay, 1993; 2005b). Writing also aids in establishing and confirming left-right sequential visual processing, in developing concepts about words and letters, and in encouraging learners to see relationships among words. Clay’s lesson format assures that the child experiences reading and writing activities of different kinds and purposes and a small amount of carefully chosen letter and word work using magnetic letters or board writing. These varied activities allow the child to establish basic learnings and revisit and apply them in new and different contexts to develop thoroughness, fluency, and flexibility in their knowledge and to begin to make connections and develop new insights.

Extending Letter Knowledge
Building and extending a knowledge repertoire of words and letters begins at the same time the teacher is helping the child establish left-right sequential visual processing and continues, with growing complexity, throughout the child’s series of lessons.

Letter learning is one important and basic aspect of learning to read and an important condition for picking up information from print and for word learning. Quick, confident control of letter identification enables a learner to conduct an efficient search and problem solve at point of difficulty in reading. Control over letter formation allows a learner to write quickly and fluently while maintaining focus on the message. Letter learning involves visual discrimination and concept learning that may extend over a period of more than 1 year. A child must learn the features of a letter that distinguish it from all other letters, even when written in different fonts, cases, or styles. A child who can tell the differences between b, n, u, and r must also learn how to write them so that they are distinguishable, and he must be able to pair them with H, N, U, and R and with other variations. The persistent research finding that knowledge of letter names correlates quite highly with success in learning to read (Ehri, 1983; Snow, Burns, & Griffin, 1998) makes sense if one takes into account the complex visual processing involved in learning to tell letters apart and classify them when written in different ways.

Children can easily form misconceptions about letters for a time. Ferreiro and Teberosky (1982) write about a 3-year-old boy who thought each letter belonged to a different person because he was told things like, “The J is for you, Juan; the A is for Ana, and the P is for Papa.” He got very upset when he was told that P is also for Pedro. One little girl commented to her Reading Recovery teacher after seeing an alphabet book, “You mean that’s all there are?” She had thought that the supply of letters she had to learn was unending. Many school-age children have not sorted out what the teacher means by the terms letter and word and their confusions multiply during instructional sessions that do not make much sense to them (Clay, 1991). Many children also struggle for a time with the idea that spatial orientation does make a difference in letter learning (e.g., an n turned upside down becomes a different letter). Other concepts that take some time to absorb include: I and i are letters but also words; c does not mean see; and a straight vertical line could be an I, an L, or a T.

Children do not have to learn all their letters, or even very many letters, before they begin learning words. However, a teacher must be aware of which letters a child knows as she chooses words for the child to learn. She must also keep a close eye on the child’s performance and speed in letter identification and make teaching decisions to continue to move this forward. Fast visual processing of letters must be developed and letter activities need to continue until there is good evidence that this is well under control for each child.

Building and Extending Knowledge of Words
Word learning is a complex issue because the learning changes and progresses in several directions, sometimes simultaneously and sometimes successively. In this section we analyze the different kinds of changes in learning that must occur in order for word learning to progress adequately.

The number of words a child knows
One change is in the number of words a child is able to write and the number of words he is able to read. These two sets are not equivalent initially for many young children. The action of writing a word, like a name, is quite different from the task of recognizing a set of letters in print and recalling the associated word. The child may “know” a word in writing primarily from a memorized
motor routine or a memorized set of letter names. In reading, the child may identify the word because of one or two visual features that catch his eye, such as the two m’s in mon. Clay suggests that during the early part of a child’s series of lessons, a teacher might benefit from recording two cumulative lists for each child: words known in writing and words known in reading. A primary reason for this close observation of words known in each domain is for the teacher to be able to help the child make the connection that he can read words he can write, and vice versa. By helping him make the connection between these two sets of partial knowledge, the knowledge of each word is augmented and becomes more firmly established in his mental lexicon. These connections can also help the child learn more about how to recall or retrieve words.

Knowledge of individual words

Another change occurs in the child’s knowledge of each individual word. In earlier writing, Clay tells us “…anything a child can write… has to take three journeys:

• Unknown, to partially known, to just known, to easily produced, to never wrong in any context…

• From slow to laboured production to fast execution of the writing…

• Finding and continually adjusting its placement in the orchestration of the whole system of written language as understood by the learner at any particular time.”

(Clay, 1998, p. 156)

When a word is partially known, there will be lapses—times it cannot be recalled or times that errors occur. Writing the word will take concentration and effort during these intermediate stages, and the child’s awareness of linkages to reading the word or to similar words or other forms of the word will be limited.

Using visual information

Another change in word learning can be observed in the way the child uses visual information from print (words, letters and spaces, etc.) in his literacy processing system, which might be described as the psychological processes going on in the head of a child during reading and writing activities. These processes include things like perceiving, linking, and decision making (Clay, 2001, p. 42), but they also include the child’s strategic activities and tacit concepts that can guide the child’s actions. Reading is a composition process in which the child creates language to express a meaning (Tierney & Pearson, 1983), but it must be consistent with the visual information on the page. At the beginnings of literacy learning, many children have difficulty using what they know about words and letters to keep their reading accountable to the text. At this stage, a child who can write the words can and see might read the line “I can see…” as “I like to…” Some children, on the other hand, are extremely hesitant to take risks. They want confirmation that they know a word for certain before even attempting to pronounce it—even words they have been known to write quite confidently. All children have to learn how to use information from many sources, including their accumulating knowledge of words, to generate a meaningful message from a text.

This is an area where a teacher must learn to be very observant and thoughtful in creating a theory of how a child is working—a theory about his current operating system. One aspect of this is to carefully observe the patterns of visual information the child seems to be using and the visual information that is ignored. Comparison of these patterns with the child’s list of known words in reading and writing can be very useful. One beginning reader was able to write is and see, yet he had a tendency to try the word said for many words containing an s, even is and see. His searching during reading seemed to be limited to searching for one salient letter within a word. Based upon close observation and analysis, the teacher can make teaching decisions to help the child make links to his known information to help him expand his processing system and, at the same time, extend his knowledge of words.
Another aspect of the child’s processing is the concepts about words and reading that seem to guide the child’s processing of print. It would be very difficult, and probably unnecessary, to try to explain all the concepts a child needs to understand about words and letters and print. Nevertheless, teachers need to be observant and watchful for misconceptions that may explain a child’s errors or difficulties. Examples of such confusions include the child who thinks that the ends of lines are the ends of sentences, or the child who doesn’t make the connection between oral word endings and the letters that signal those endings. I remember observing a child reading a book that consisted of one long sentence across the entire book, *The Horrible Big Black Bug* (Rigby Heinemann, Level 6). The child either did not understand that a book could work this way, or did not understand that this book did. Each page consists of a different prepositional phrase adding to the places where the bug crawled (e.g., “. . . along the counter . . . across the floor . . .”). The child struggled with these prepositions (some of which were on his known list), while the teacher prompted for word knowledge. Finally the child said, “Oh, I wish it said *it*!” revealing his confusion. He seemed to expect each page to be the beginning of a new sentence, and he was looking for a sentence subject.

A third aspect of literacy processing concerns the strategic activity used by the child to problem solve words as he reads and writes. Does he appear to be checking one source of information against another? Does he search for information and/or monitor his performance, and what kinds of information does he appear to be searching for, or monitoring on?

These issues are directly related to a child’s developing word knowledge in several ways. Word knowledge is not complete or firmly established unless the child reads the word consistently when he encounters it (allowing for minor lapses for extraneous reasons) and writes it fluently and correctly when he needs to write it. Meanwhile, word knowledge contributes to the establishment and expansion of the processing system because it is an important part of the knowledge he brings to print and the problem solving involved in reading.

**Ability to take words apart**

A fourth area of change involves the child’s ability to take words apart, to see similarities in parts of different words, and then be able to draw upon that knowledge in problem solving words in reading and writing (Clay, 2005b, Section 12). This level of word knowledge is important because it moves the child beyond the rigid epistemology of just knowing a word as a word. Experiences manipulating and taking apart words inform the child’s knowledge of particular words, his concepts about how words work, his awareness of clusters of letters within words, and the general strategy of using parts from words you know to solve other words by analogy. The learning potentials of lessons that include reading, writing, and word manipulation are powerful.
if the words selected for brief, isolated attention and manipulation are chosen carefully on the basis of what he appears to be noticing in reading and writing.

**Developing awareness of spelling patterns**

A fifth area of change is closely related to taking words apart; this is developing awareness of regularities and patterns in the spellings (orthographies) of English words (Clay, 2005b, Section 13). This is not just a memory bank of stored visual images (representations) of words. It is also an internalization of certain concepts about the regularities of our language and about how words are built and changed in different contexts. Clay alludes to this kind of knowledge in her discussion of three learning journeys cited earlier. Evidence of a child’s use of orthographic knowledge in his writing and reading usually doesn’t become apparent until the child is well along in his series of lessons. Some examples of emerging orthographic knowledge might include:

- putting vowel letters in words he is writing,
- spelling the word *snake* as *snack* (wrong, but aware of an orthographic pattern),
- doubling a medial consonant in writing a word,
- thinking that a word needs a silent *e* at the end to make it look right (initiated by the child without verbal or non-verbal cues from the teacher), and
- a reading response that shows they are attending to a word part or cluster (e.g., seeing the two parts of *maybe* and using these to solve the word).

Teachers need to be thoughtful in interpreting evidence of this kind. They need to think about what the child seems to be attending to and then help the child make connections that extend his understanding. For example, a child who writes *git* in boxes for the word *got*, is probably using letter names as his cue for the sound of the vowel (when you start to say the letter name *i* your mouth is in the same position as it for the vowel in *got*). Early on the teacher may decide that the best thing to do is just say, “Yes, it does sound like that, but it’s an *O*.” Later, when the child knows words like *not* and has begun to take words apart, the teacher will begin to prompt the child to think about how words look.

**Teaching Procedures for Learning Words**

Teaching procedures begin with what the child already knows for several reasons. Words that appear to be known may be only partially known, and may be known and used only in rigid, inflexible ways. Examples may be seen in how children first learn and write their names. I taught a child whose name ended in a *y*, which she always drew from the bottom up first as a line and then two diagonal branches. (One strength was that she always made the left branch first.) One day we worked on learn-
ing and writing the letter y in the conventional way, and then she did it beautifully when I asked her to write the known word my. So I asked her to write her name and, of course, she reverted. When I suggested she might write the y in the way she had just learned, she strongly objected, “My mother taught me to write it that way and I think I’ll do it the way my mother says.”

A second reason for beginning with the known is that children have much more to learn about how words are constructed, how to analyze a word sequentially left to right, how to store and recall a visual image of the word, how to use the word label (its name) to retrieve it, how to associate sounds with letters, and how to use sounds to help retrieve words, etc. If the word is new the child’s attention and energy becomes absorbed in the same rather primitive learning pattern used previously, and little attention is available for the new concepts and new learning.

The careful, thorough procedures Clay explains in *Literacy Lessons* under the heading, “Extending a Meagre Knowledge of Words” need to be understood as more than procedures for learning a particular word. These procedures are teaching a child how to learn words. They teach the child to pay attention to the details of print, how to attend to them in left-right sequential order, and to a certain extent, how to hold them in mind and retrieve (recall) them after short and longer intervals. Actually, the procedures in themselves are incomplete because the child needs to encounter the word in reading situations where he must search memory for the letter sequence or for the motor program for producing the word. The teacher’s concern should be three-fold:

- Is the child learning the word? (Does he show increased control over this word?)
- Is the child learning how to learn words? (For example, is he learning new words in a shorter amount of time?)
- Is the child using his knowledge words in his literacy processing? (Is he monitoring, cross-checking, and searching on known words; on other sources of visual-phonological information, as well as meaning and language structure?)

At the same time the child will be learning how to attend to the sounds in words, an important requirement for storing and recalling words and for seeing relationships among words. Learning to read necessarily includes learning words, but it also includes much more than learning words. Words are just one of the many building materials needed to begin the construction of a literacy processing system.

**Word Learning and Strategic Activity**

One of the main ways a child learns words is through the problem solving he does during reading. A child’s success in solving a word that fits the sources of information he is able to search is highly instructive and highly rewarding (Clay, 1991). The searching may include some or all sources of information (meaning, language structure, visual information, and letter-sound associations). The searching may occur during the process of coming up with the word or the process of confirming that the response fits all sources of information. Either way, the effects on learning and motivation are powerful.

Initially, of course, children are quite limited in their ability to do this for many and almost always somewhat different reasons. Their perceptual processing may not be left to right and sequential. They may lack knowledge of letter-sound associations or not know how to use these during reading. They may focus on one source of information as an aid to recall. In short, they may not know how to pick up essential information, encode and organize it, and use it to retrieve a word from their mental store of words.

A beginning reader can only solve words in this way if the word he is reading or writing is in his mental lexicon; i.e., it must be a known oral word. For this reason words that may be new to a child’s oral vocabulary need to be heard, practiced, and perhaps explained when the book is introduced to the child. Many children enjoy learning new words, especially when the concept is interesting to them. With one struggling learner I used the book, *Big Things* (Rigby, Level 1) that begins with the sentence, “A bulldozer is big.” He had never heard of a bulldozer (or a crane, either), but he liked the book; and we had pretty much solved the problem of keeping the finger still while pointing to multi-syllable words. As he reread it one day, he came to bulldozer and looked at me briefly (a look was his signal to get help); I said nothing and he went back to the book and started again. When he paused again at bulldozer, I waited.
just a bit and then said, “That word is bulldozer.” Evidently he was right on the brink of saying it because he closed the book, looked at me disgustedly and said, “Now I’ve got to wait until I forget what you said!” I had robbed him of the satisfaction of successful problem solving; in this case recalling a new hard word on his own.

Many phonics programs teach children the trick of sounding letters so that they can “sound out” words they have never heard before, including pseudowords. This is a path to reading ability that works for many children when augmented by other appropriate experiences. However, it is not a path that allows struggling readers to develop problem-solving abilities that are self-instructive and eventually self-extending. The ability to read words never heard before begins to develop toward the end of a child’s series of Reading Recovery lessons, although the exact pronunciation may not come until the child has a chance to hear the oral word.

During this period of initial learning the teacher must be very aware of what the child knows and knows how to do, and she should expect or encourage the child to use that knowledge. However, there will be much that he cannot do on his own. In such cases, the teacher must be observant and aware, and for a short time, supply information the child needs so that he can still solve problems on his own, even though he cannot marshal all the resources he needs to do this independently. For example, a child who still has not learned how to go from letters to sounds (look at a word and think the sound of the first letter or letters) may need help from the teacher for a short time until this comes under control. One little girl I taught had this difficulty. She was beginning to hear and record initial sounds when using Elkonian boxes, but she could not come up with the sound of a letter just from looking at it. I supported her when she came to an unknown word by sounding the letter softly for her. This worked quite well. She would solve the word and then we would often revisit the word for a teaching point after the child had finished reading the book. I realized one day that this crutch needed to be removed—when she came to an unknown word she would cup her hand to her ear on my side, a blatant request that I continue to help her.

### Writing and Word Breaking

Much word learning occurs during the writing segment of the lesson format recommended in *Literacy Lessons*. Writing provides opportunities for demonstrations (“Watch how I make the letter y when I write this word”); opportunities to give information (“We use the letters c and h together for the /ch/ sound”); opportunities to strengthen through repeated writing knowledge of a word that is almost under a child’s control; and opportunities to continue to develop awareness of and access to phonological information (phonemes or individual sounds, syllables, and other sound patterns). There are also opportunities during writing for the child to see connections among and across words. If the teacher is aware of how the child is processing information, what words the child knows, and what he is beginning to show some awareness of (both reading and writing), she can foster or reinforce connections during both writing and reading that can have a strong effect on the child’s word knowledge and awareness.

The activity of breaking words plays an important role in word learning throughout a child’s series of lessons. Clay has changed this from a regular activity following the second reading of the new book (on which the teacher takes a running record) and following any letter work that may occur. It is now presented more clearly as a flexible tool that may occur at almost any time in the lesson to serve various purposes. Early in the lesson series, breaking known words informs and reinforces concepts about sequential order and word and letter concepts. Later, the breaking builds awareness of the full letter sequence of words as the child extends his ability to search and monitor visual information. Still later, it helps develop connections across words and the use of analogy in solving words in both reading and writing. One child I taught worked very hard to monitor his reading and make everything match, but his initial search of visual information was still primitive. Reading the book, *Ben’s Dad* (Rigby, Level 7) he read:

<table>
<thead>
<tr>
<th>Child:</th>
<th>√</th>
<th>√</th>
<th>out</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text:</td>
<td>Ben shouted, —</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child:</td>
<td>Tom [SC] √</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text:</td>
<td>Today, Today</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Then he went back and tried *Dad* for Ben and self-corrected, and then reread, trying *said* for *shouted* before rereading both lines correctly. Since his visual searching was limited to first letters, he probably still needed some of the early word breaking and building procedures of *Literacy Lessons*.

The change in terminology, from *making and breaking* to *breaking words*, is more than just a change of terminology. The older terminology...
The change in terminology, from making and breaking to breaking words, is more than just a change of terminology. The older terminology led teachers to use this time to introduce and teach new words, based upon their similarity to the known. The new emphasis is on analyzing (breaking) the known to gain understanding of elements smaller than the entire word.

led teachers to use this time to introduce and teach new words, based upon their similarity to the known. The new emphasis is on analyzing (breaking) the known to gain understanding of elements smaller than the entire word. Starting with a known word frees attention to what is new learning—the word parts. It is these word parts—letter clusters, phonograms, affixes, and word *rimes*—that build capacity for seeing relationships among words and using those relationships for word solving in reading and writing. Recent research suggests that awareness of these units—smaller than the word and larger than the individual phoneme—plays an important part in guiding readers’ fixations and eye movements during reading (Raynor & Juhasz, 2004). Readers tend to fix their eyes not on the initial letters of words, but on the first part of the word or about one-third or one-fourth of the way through the word (Raynor & Juhasz). This allows them to recognize letter patterns at the beginning of the word, which in English play a key role in word identification. Research evidence indicates that this pattern of eye fixations is established for good readers by the end of first grade (Raynor, 1986). Clay’s reasoning would seem to be that this is what struggling readers need to do; with guidance from a skilled teacher within individual lessons utilizing contingent teaching, this can be accomplished.

When the child is well along in his series of lessons, breaking words also provides opportunities to explore and use analogies to solve words. Breaking words can occur at any time in lessons—during reading, during writing, or while analyzing words in isolation with magnetic letters or writing on boards or on paper. As children enter a stage of advanced learning, skillful contingent teaching can help them focus on and manipulate the sounds of words and the letters of words and see connections across words. Clay advises teachers that, “working with words in isolation depends for its success on how carefully the teacher matches the tasks to the child’s growing competencies” (Clay, 2005b, p. 146).

**Teacher Prompting and Seeing Connections**

Teacher prompts and comments throughout the lesson also play a very important role in word learning for struggling readers. The teacher must decide whether to

- supply information when the child does not have or cannot access that information (such as the girl who could not yet go from letters to sounds),
- prompt the child to search for information of a specific type (“Does that make sense?” “Does that look like a word you know?”),
- prompt the child for strategic activity (e.g., “Was that right?” or “Try that again and think what could start with those letters.”), or
- confirm for the child, if he appears uncertain, that he is doing the right things.

Deciding what to say and when to say it is the hardest part of teaching. Teachers-in-training struggle to remember the language of prompts they might use. Control over the language of prompts is important, but what is more important is their analysis of the child’s processing and knowledge in order to make appropriate choice of prompt (or comment) and the appropriate level of prompt or comment.

Choice of prompt depends upon how the child appears to be processing information. Is he anticipating the word but not looking at or using the visual information? Is he seeing the word but needs also to be searching for the sounds? Is he trying out the sounds associated with those letters but not thinking of meaning or language structures? Does the child know the sound association for those letters? Is he able to go from sounds to letters (in writing, but also in reading)? Is he able to go from letters to sounds (in reading)?
Level of prompt depends upon the teacher’s knowledge of the child’s repertoire of known words and sounds, and his control of language and control of meaning as he reads. But it also depends upon the teacher’s ability to guess what is going on in the child’s mind while he is working. One child I tutored read correctly and fluently the first two pages of *The Biggest Cake in the World* (Learning Media, Level 9). Then he came to the sentence, “Mrs. Delicious got a trailer...” and on the word *trailer*, he began sounding letters, but was obviously stuck. I asked him to leave that word alone so we could come back to it later, and he read the rest of the page and book quite easily.

After talking about the story we turned back to that page to reread, and he did so successfully with just a brief pause on the word *trailer*. I said, “The first time you read that you were making all those sounds, what were you thinking? He slapped his forehead and said, “I was thinking *wagon*.” He was doing lots of things right, but in that instance he was not able to stop doing something unproductive and act on the mismatch between the word he had in mind and the information he was seeing on the page. I’m not sure why I asked him what he was thinking, but his response helped me understand his reading processing.

What is certain about teacher prompting and commenting is that it is a tentative process. Often the teacher will not know whether what she said was useful, unproductive, or a hindrance until she observes the results, both immediately and over time. The boy who read *Ben’s Dad* and was using the capital *T* of *Today* to read *Tom* was also reading *Mom* for either *Mom* or *Mother*. One day I had him build *Mom* with magnetic letters. I built *Mother* and we discussed and rebuilt the two words. Then I went too far. I had him clap *Mother* and break it into two parts: *Mo-ther*.

The next day’s running record was on *Nick’s Glasses* (Learning Media Limited, Level 7). He read correctly the page that shows Nick searching under the table while the text says, “Have you looked on the table?” Then he glanced up at the picture and “un-self-corrected” his first attempt by reading, “Have you looked under the table?” After talking about the story I asked him to reread that page, which he did again, incorrectly (*under for on*). I asked him to show me where it said *under*. He pointed across both words, *on* and *the*, reading “un–ther.” Upon reflection, I wondered whether breaking words into syllables might be premature if the child isn’t secure in either his knowledge of the specific word or his understanding of what a word is! Clay’s new text advises teachers to break known words and then put them back together so they see how the whole is related to the parts.

Effective teacher decision making depends upon careful and sensitive observation during teaching and also upon careful and thoughtful analysis of records after teaching. This is hard work; and what is hard is always easier if the task is shared with someone else. That’s why Clay recommends collaboration with colleagues—teacher leaders or fellow teachers—at your teaching location, on colleague visits, or during professional development sessions. The discussion needs to center on how the child appears to be able to use information from all sources and how he seems to be changing over time in his ability to do this. These discussions can also help teachers improve their abilities in recording and interpreting lesson records and running records. Clay’s new *Literacy Lessons* will be a powerful resource during these exchanges, not just for teaching procedures, but also for rationales about why certain choices may be better than others for a specific child at a specific point in his series of lessons.

Just as in learning words, the task of learning to teach effectively is never ending. We encounter new words and word usage throughout our lives. As we continue to teach, the sensitive and observant teacher learns to analyze the child’s performance, develop hypotheses about how he is functioning, and then attempt to match her teaching carefully to the child’s processing. In effect, she extends the interface between theory, research, and teaching to her daily interactions with children, and to the collaborative conversations with colleagues about teaching and learning. In doing so, she gains new understandings each day, not only about particular children, but also about literacy processing and teaching in general. *Literacy Lessons* provides us a challenging and useful pathway for these learning journeys to continue.

**References**


**Children’s Books**


**About the Author**

Noel Jones is an associate professor emeritus of the University of North Carolina, Wilmington, where he taught from 1977 to 2003, and also a Reading Recovery trainer emeritus. Before coming to UNCW, Jones served for 20 years as a classroom teacher, reading specialist, and reading curriculum director before receiving his Ph.D. from Cornell University. He continues to work with the North American Trainers Group and RRCNA. He taught children continually until late August of 2004.