DISTINGUISHED SCHOLAR SERIES

A Vygotskian Interpretation of Reading Recovery

Marie M. Clay and Courtney B. Cazden

Editors' Note

Marie Clay and Courtney Cazden began their 25-plus year friendship, travel, and exploration of literacy theory in the early 1980s at a conference in Pittsburgh.

We thank Cambridge University Press for giving us permission to reprint this article for JRR readers. Please note that style conventions have changed since 1990 and are not updated.

This is an analysis of one tutorial program, Reading Recovery® (RR), for children who have been in school for 1 year and have not yet "caught on" to reading and writing. RR was designed and evaluated by Clay in New Zealand (1985, 1991) and is becoming available to children who need it throughout that country. Because of its success there, it is being tried out in the United States, notably through The Ohio State University (DeFord, Lyons, & Pinnell, 1991; Lyons, 1987; Pinnell, 1985). Cazden learned about RR while on extended stays in New Zealand during 1983 and 1987 and became interested in features of its instructional design after viewing videotapes of New Zealand RR lessons.

Reading Recovery was designed from Clay's theory of the nature of reading, observations of children's behavior in learning to read, and collaboration with experienced New Zealand infant school teachers. Although no thought was given to Vygotsky's theories during this program development, it is possible to interpret features of RR in Vygotskian terms. At first it seemed to Cazden that RR was simply an elegant example of scaffolded instruction. As we worked together on this article, more relationships to Vygotsky's ideas appeared.

After a brief introduction to the theory of reading that guides literacy instruction in both regular New Zealand and RR classrooms, we analyze features of RR that require teacher and child to collaborate in shared tasks—reading a new book and writing the child's story; we present evidence in both cases of a shift from teacher/child interindividual functioning to increasingly complex intraindividual functioning by the child. We then suggest Vygotskian interpretations of RR as a system of social interaction organized around the comprehension and production of texts that demonstrably creates new forms of cognitive activity in the child.

A Theory of Reading

According to Clay's theory of reading and writing instruction (1991), all readers, from 5-year-old children attempting their first book to the efficient adult reader, have to monitor and integrate information from multiple sources. Readers need to use, and check against each other, four types of cues: semantic (text meaning), syntactic (sentence structure), visual (graphemes, orthography, format, and layout), and phonological (the sounds of oral language) (see Figure 9.1).

The endpoint of early instruction has been reached when children

have a *self-improving system:* They learn more about reading every time they read, independent of instruction (Stanovich [1986] calls this "boot-strapping"). When they read texts of appropriate difficulty for their present skills, they use a set of mental operations, strategies in their heads, that are just adequate for more difficult bits of the text. In the process, they engage in "reading work," deliberate efforts to solve new problems with familiar information and procedures. They are working with theories of the world and theories about written language, testing them and changing them as they engage in reading and writing activities.

By the age of 6, after 1 year of instruction, high-progress readers in New Zealand classrooms operate on print in this way. As cue users, not just oral language guessers, they read with attention focused on meaning, checking several sources of cues, one against the other, almost simultaneously. When such higher-level strategies fail, they can engage a lower-processing gear and shift focus to one or another cue source in isolation—such as letter clusters or letter-sound associations—while maintaining and directing attention on the text message at all times.

Low-progress readers, on the other hand, operate with a more limited range of strategies—some relying too much on what they can invent from memory without paying attention to visual details, others looking so hard for words they know or guessing words from first letters that they forget what the message as a whole is about.

For all children, the larger the chunks of printed language they can work with, the richer the network of information they can use and the quicker they learn. Teaching should only dwell on detail long enough for the child to discover its existence and then encourage the use of it in isolation only when absolutely necessary.
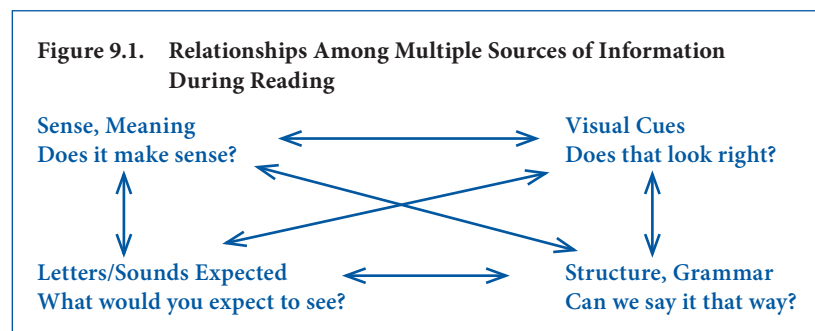
Overview of Reading Recovery

RR addresses a problem of concern to most Western educational systems. It selects young children who have the poorest performance in reading and writing and, in daily individual teaching sessions over 12–15 weeks, brings most of them to average levels of performance and teaches them how to improve their own reading and writing skills when they are no longer in the program.

Children are selected for the RR program by a diagnostic survey (Clay, 1985) administered by RR teachers and by consultation among the school staff. No child in ordinary classrooms is excluded for any reason—intelligence, limited English proficiency, possible learning disability, and so forth.

Children's rate and amount of progress in the program in New Zealand (where 3-year follow-up research yielded evidence of continued average achievement) is similar to that achieved in Bloom's one-to-one tutoring programs (Bloom, 1971, p. 60). With the exception of 1 to 2 percent of the entire age-class cohort who need more help than RR provides, pupils from the low end of the achievement distribution are moved into the average band of performance. In other words, a significantly different population becomes not statistically different from the average group.

In order to achieve such accelerated learning, attention of teacher and child must be on strategies or operations—mental activities initiated by the child to get messages from a text. If the teacher becomes involved in teaching items rather than strategies—particular letter-sound correspondences or sight vocabulary words, for example, rather than the strategy of checking a word that would make sense in the context against information in the print—the prospect of accelerated learning is seriously threatened. Letter-sound correspondences and spelling patterns are learned, but in the course of reading and writing meaningful text, especially writing. RR teachers praise children for generative strategies, not for items learned.

Figure 9.1. Relationships Among Multiple Sources of Information During Reading

Sense, Meaning
Does it make sense?

Visual Cues
Does that look right?

Letters/Sounds Expected
What would you expect to see?

Structure, Grammar
Can we say it that way?

The following activities, usually in this order, constitute the daily RR lesson:

1. Rereading of two or more familiar books

2. Independent reading of yesterday's new book while the teacher takes a running record

3. Letter identification (plastic letters on a magnetic board)

4. Writing a story the child has composed (including hearing sounds in words)

5. Reassembling cut-up story

6. Introducing a new book

7. Reading the new book

When a child no longer needs to work on letter identification, the third slot is deleted or used for other word-breaking or word-building work.

We will present a detailed analysis of reading activities 6 and 7 and writing activities 4 and 5. All examples are from videotapes of RR lessons in New Zealand and Ohio. The teachers, like all RR teachers (infant teachers in New Zealand, primary teachers in the United States) have received a year of training and practicum. Because of this training and subsequent monthly meetings while RR teachers are on the job, there is much less variation across teachers than in most program implementations. The children—Melanie, Larry, and Premala—are all from the lowest 10 percent in their school cohort.

Reading a New Book

During the first 2 weeks of a Reading Recovery program, the teacher does not try to teach the child anything new, but rather initiates activities that allow the child to use and explore further the repertoire of behaviors that he already controls. Teacher and child discover many things about each other during these 2 weeks. The teacher discovers what the child already knows; and the child learns how book-sharing will occur in the lessons to come. A format for book-sharing interaction between this child and this teacher is created.

Excerpts from Melanie's book introduction illustrate this (see Figure 9.2). Because the teacher takes the initiative in these early lessons, her moves are given on the left, categorized by kinds of help, with the child's responses on the right. Oral reading is transcribed in small capital letters.

The teacher's introduction of a new text

In RR, the child is not usually expected to sight-read novel text without preparation; that is more appropriate after children have learned how to read. A new book is both carefully selected and carefully introduced. What may seem like casual conversational exchanges between teacher and pupil are based on the teacher's deliberate teaching decisions for a particular child. These are based on her records, obtained from the daily individual teaching sessions, of each child's response repertoires—what Wood, Bruner, and Ross (1976) refer to as "performance characteristics" (p. 97), the observable aspects of

the child's reading and writing action system.

Setting the topic. The teacher has selected the new book to challenge the pupil in specific ways. She has previewed the story and its challenges. She sets the topic, title, and characters with minimal interaction; too much talk confuses. Titles are treated as labels; they often have tricks in them and tend to use language from which redundancy has been stripped. Discussion may relate to the conceptual context of the new story or to a related book the child has read.

Increasing accessibility. The teacher may sketch the plot, or the sequences in the text, up to any climax or surprise. Using new or unusual words in context, she introduces things which the child might not understand or language the child might not be able to anticipate. She may carefully enunciate unusual syntax (for example, when the text uses a full form, *cannot*, where the child might expect *can't*). Or she may use a sentence pattern two or three times to help the child hold it in his mind. If the child generates a relevant phrase, the teacher confirms it and alters it where necessary to match the text (as one teacher does when Melanie says "Eat it" in Figure 9.2 and another teacher does when Larry makes the same error in Figure 9.3 below).

In these ways, teacher and child rehearse what is novel in the story without the child actually hearing the text read. It is typical of all RR instruction that features of texts receive attention not in isolation but within the complexity of that text for this particular individual child.

Maintaining interactive ease. To repeat and amplify what the child says maintains interactive ease, but it also models for the child that discussion of the story is expected. It may create more conceptual context, add new information, or remove ambiguity and possible confusion.

Prompting the child to constructive activity. In general, the teacher urges the child to actively search for links: links within the story (by pausing for the child to generate the ending: "It's all _____" [gone] or guess *grandpa* and *baby* by analogy with *grandma*); links within the print (asking, "How did you know…?"); and links beyond the book into the child's experience ("Have you ever done that?" "How do you think X felt?").

Teachers may think that such questions are intended to arouse the child's interest and motivation,

---

Figure 9.2.   Melanie: Book Introduction During the First Week

Teacher	**Child**
Setting the topic	
THE CHOCOLATE CAKE.	
(*T reads the title for M*)	
Maintaining interaction	
Let's read this together.	
Increasing accessibility	
(*She provides a model*).	
('MM' and GRANDMA).	
Supporting performance	
	(*T and M complete the page together.*)
	'MM, MM' SAID GRANDMA.
Prompting constructive activity	
(*T pauses…*)	(*and M continues reading the next two pages.*)
	'MM, MM' SAID GRANDPA, 'MM.'
	SAID MA AND 'MM,' SAID BABY.
Working with necessary knowledge	
and what did they do?	Eat it.
That's right. They all ate it.	
(*T confirms M's response, while changing*	
the verb tense to match the text.)	
Providing a model and prompting completion	
And so they said, 'IT'S ALL…'	(M anticipates and generates)…GONE.
	(*Then she goes quickly to the next page and anticipates*
	and generates a relevant oral text.)
	We want more.
Accepting the partially correct response	
(*T accepts this, but revised it in her reply*	
to match the sentence in the text.)	
'MORE, MORE, MORE,' THEY SAID.	
Maintaining shared interaction	
(*Pointing to the page, T invites M.*)	
Calling for reflection or judgement	
about the story	(*T and M discuss what will happen—will another cake be baked?*
	This focuses M's attention on comprehension of the story as a whole.)

---

but they play a more instrumental role in beginning reading. Such questions both provide signals to the child that reading requires active interaction with texts and bring relevant experiences and knowledge to the child's "context in the mind."

Working with new knowledge. The teacher checks to see whether the child has relevant knowledge and ensures that it has been "brought to mind" and is accessible for use in reading the book. When the teacher suspects that the child does not have the ideas or word needed for

---

Figure 9.3. Larry: Introduction of a New Book in the Ninth Grade

Teacher	Child
Setting the topic, theme, and characters	
Let's look at our new book. This story was about a big turnip, wasn't it. (T knew L had heard the story somewhere but had not read it.) THE GREAT BIG ENORMOUS TURNIP. Let's see what happened. Here's a little old man and he's…	
Prompting constructive activity	
What's he doing?	He's telling it to grow.
Accepting the child's involvement	
That's right! He's telling it to grow. Good!	
Prompting constructive activity	
And then what's he trying to do?	Pull it out.
Pull it out. Can he pull it out?	(shakes his head)
No. Who does he ask to help him?	The little old woman.
And what do they do?	Pull it?
Did they do it?	(shakes his head)
No. Who do they ask next?	(no reply)
Working with new knowledge	
They're asking the granddaughter, aren't they?	
Prompting constructive activity	
And do they all pull? Does it come up?	No.
Who do they ask next?	The dog.
Accepting partially correct responses	
The black dog, that's right. And still it doesn't come up.	
Prompting constructive activity	
Who do they ask next?	The cat.
Playing with the climax effect	
And does it come up? Does it? I think it might, and they all… (turns the page) …Oh, no! Not yet.	
Prompting constructive activity	
Who do they have to ask?	The mouse.
The mouse, that's right. And they're all pulling, aren't they?	
And then what happened?	It came out.
It came out, and what did they all do?	Eat it.
Accepting partially correct responses	
That's right. They all ate it. You read it to me.	

a particular test, she may explain some part of the story, or contrast a feature of the story with something she knows the child knows in another book. For example, she may help the child discriminate between two things like a school desk and an adult-type writing desk. Such help may be either anticipatory or responsive to signals from the child. When teachers expect a word to be unfamiliar to a child, they first talk toward the meaning, describe some relevant object, setting, or use, and only last label or name the word; cognitive context is necessary in order for the child to "receive" the new word with understanding.

Because constructive activity is so important, the teacher gently pushes the child toward actively working with the new knowledge in some way—for example, by checking the new information with the pictures in the book.

Accepting partially correct responses. The teacher promotes emerging skill by accepting and reinforcing responses that are only partially correct. Rarely does the child's response come out of thin air; it is a response to some part of the text and/or some part of his understanding. If a response is correct in some respect, it is in the interests of both the child's economy in learning and his increasing self-confidence as a reader for the teacher to recognize this, and then help the child change where necessary. If the teacher cannot tell what strategy the child has used, her response will be deliberately general: "I liked the way you did that but did you notice…" At other times, she praises the use of a particular feature or type of information (such as attention to the first letter).

In this way the teacher creates a lesson format, a scaffold, within which she promotes emerging skill, allows for the child to work with the familiar, introduces the unfamiliar in a measured way, and deals constructively with slips and error. The teacher calls for the comprehension of texts and for the detection and repair of mismatches when they occur. She passes more and more control to the child and pushes the child, gently but consistently, into independent, constructive activity.

In Figure 9.3, Larry is introduced to a new book, *The Great Big Enormous Turnip,* in the ninth week of his daily lessons. Following this introduction shown in Figure 9.3, the teacher expects Larry to read the book for the first time by problem solving as independently as possible.

Teacher-child interaction during the first reading

Over the course of each child's RR program, there are shifts in how much control of the task he is able to take as a result of such introductions, and how independent his first reading of a text can be. In the early weeks, the child will generate an oral utterance, inventing and reconstructing a text from the introduction or memory of past readings, the pictures, and what little he knows about print. He will spend the next 12 to 15 weeks mapping oral language onto printed text. Through the child's constructive cognitive activity, visual perception of print, oral language, and world knowledge work together, with meaning as the goal and the teacher as monitor and guide.

Larry's first reading of *The Great Big Enormous Turnip*, immediately after the teacher's introduction, is shown

in Figure 9.4. On two occasions, the teacher directs his attention to the subword level of analysis—"sw-" [eet] and "str-" [ong], without losing the textual emphasis of the interchange. (Sometimes a first reading will contain more new teaching than this one does.) The teacher attends only to what she believes is critical for a correct reading of the text the next day; she decides not to work on some errors. Because the child now has the initiative, his reading is placed on the left in Figure 9.4, with the teacher's responses on the right.

A running record would be taken when the child reads the book independently the next day, and this teacher could be reasonably confident that the child will read it at or above 90 percent accuracy. When this does not happen, then the teacher's choice of book, or the way she introduced it, or her teaching around the first reading has not been appropriate.

After this first reading, each book is reread several times during the first activity in subsequent lessons. During these rereadings, there will be opportunities for the child to return to, and discover, more aspects of the text than he understood the first day.

Writing a Story

During each RR lesson, the child composes a "story" (usually just one sentence) and writes it, with help from the teacher, in an unlined notebook. Then a sentence-strip version of the same story, copied and cut up by the teacher, is given to the child to reassemble immediately and then take home to reassemble again "for Mum." Much of the child's learning of sound-letter relationships and spelling patterns

Figure 9.4.   Larry's First Reading of the New Book

Child	Teacher
Setting the topic, theme, and characters THE GREAT BIG ENORMOUS TURNIP ONCE AN OLD MAN PLANTED A TURNIP.	Good. (*T ignores the omission of "Once upon a time."*)
HE SAID, GROW, GROW LITTLE TURNIP, GROW… (*pauses at the next word*)	How does that word start? Can I help you start it off? How does it start? s… He tells it to grow sw…sweet. (*T could have anticipated this word in her introduction.*)
(The child does not re-read the prompted text but moves on.) GROW LITTLE TURNIP, GROW S… (pauses at another word)	How else does he want it to grow? He wants it to grow sweet and he wants it to grow str…
(*Child is now working at both the word and story level*) …STRONG AND THE TURNIP GREW UP SWEET AND STRONG AND…	Good boy, that's lovely. Grow strong. (*no attention to the omission of "big."*) What's the other word that begins with "e"? Enor…
ENORMOUS AND THEN… (*self-corrects*) THEN ONE DAY THE OLD MAN WENT TO PULL IT UP. HE…	Good. (*no attention to the self-correction, so as not to detract from meaning*) What's he doing?
PULL… AND PULLED AGAIN BUT HE CAN'T	That's right. (*Teacher ignores the uncorrected "pulled," and attending to the present problem solving, accepts the partially correct response.*) Nearly right. It starts like can't but he c…
COULDN'T COULD NOT PULL IT UP I can't HE… HE CALLED THE OLD WOMAN THE OLD WOMAN PULLED… THE OLD WOMAN PULLED THE OLD MAN	(models) could That's right. He could not pull it up. (*prompts story structure*) What did he do? Look! What is he doing, do you think? He… Right, he called the old woman. Good, I like the way you went back and did that again. (*confirming check*)
THE OLD MAN PULLED THE TURNIP AND THEY PULLED AND PULLED IT AGAIN BUT THEY COULD NOT PULL IT UP. SO THE OLD WOMAN CALLED HER GRANDDAUGHTER. THE GRANDDAUGHTER PULLED THE OLD WOMAN. THE OLD WOMAN PULLED THE OLD MAN, THE OLD MAN PULLED THE TURNIP AND THEY PULLED AND PULLED AGAIN BUT THEY COULD NOT PULL IT UP.	Well done. We got that word (*they*). Jolly good. Good boy! (*The teacher skips to the end. This is a timed session being recorded.*) Right! Let's find where they pulled it up…and it came out.
THEN THEY… …THEY PULLED AND PULLED AGAIN AND UP CAME THE TURNIP AT LAST.	(*steadying*) That's right. That's very good. Do you like that book? What would you like to do to finish off?

is prompted and practiced in these activities.

For one child, Premala, we have three videotapes taken near the beginning, middle, and end of her 15-week RR program (Premala, I, II, and III). Here are the stories she composes:

I. *A little girl is cuddling a cat.* (about a book)

II. *The little red hen made a cake.* (about a book)

III. *I am going swimming at school now.* (about a personal experience; New Zealand children do swim at school!)

Figure 9.5 shows how these three sentences got written down. What the child (C) wrote is on the top line; what the teacher (T) wrote is underneath. If the child wrote the letter, but only after some kind of help from the teacher, the letter appears on the child's line with a circle around it. The "boxes" around letters in *hen* and *made* are explained below. Premala's progress in transcribing her stories can be summarized in the increasing number of letters written correctly by the child, alone or with help, and the decreasing number written by the teacher (T), as shown in Table 9.1.

To achieve this progress, the teacher gives various kinds of writing help that are analogous in function to her help in reading:

• Calling attention to the sounds of words and spelling patterns in writing

I. "Do you know how to start writing *little?*"

Figure 9.5. How Premala's Sentence Got Written Down

III. [After Premala has written *s* for *swim*] "Let's listen to it. What can you hear?"

• Prompting visual memory of previous experience with written words.

II. "Something needs to go on the end [of *little*], doesn't it."

• Drawing boxes (Clay, 1985; adapted from Elkonin, 1973) to correspond to the sounds (phonemes, not letters) in the word, and showing the child how to push counters into the boxes, left to right, while saying the word slowly: h-e-n, m-a-d-e. When these boxes are first introduced, the teacher accepts letters in any order, as long as they are in the correct place. The numbers under the boxes show that Premala placed the letter for the final sounds in both words first. Later the teacher

will encourage the child to fill in the letters in left-to-right order and will draw the boxes to correspond to letters rather than sounds.

• Asking the child to develop and use her visual memory.

In II, the teacher asked Premala to write *red* several times, first with a model available to copy, then with the model covered, then to walk over and write it on the blackboard from memory, and finally to finish it after the teacher had erased the last two letters.

In III, there was similar practice for a harder word, *school.*

• Praising strategies, even if the result is only partially correct.

I. "That's a good guess, because *cuddling* sometimes sounds like that" [when Premala has written a *k*].

Table 9.1.   Premala's Progress in Writing, in Numbers of Letters

	C Alone	C with Help	T	(Total)
I	5	1	19	(25)
II	9	10	9	(28)
III	19	8	0	(27)

II.	"Good thinking. You remembered that!" [*e* on *little*]

III.	"I liked the way you checked it all through" [referring to the child's reassembly of her cut-up sentence].

IV.	"You don't need to look because you've got it inside your head, haven't you?" [referring to writing *school* from memory].

• Introducing new information

I.	"Let's have a look and I'll show you what else *cuddling* can sound like."

• Increasing the difficulty of the task

Because the child composes the sentence that is written during each RR lesson, the teacher cannot increase the challenge of the overall writing task as she does in selecting a new book. But she does increase the challenge of the reassembly of the child's sentence from sentence-strip pieces. Slash lines show her segmentation of the sentences for II and III. (There was no sentence strip in I):

II.	The / little / r/ed / hen / made / some / cakes. (Note the relationship between the segmentation of *red* and the writing Premala did from memory at the blackboard.)

III.	I / a/m / go/ing / swi/mm/ ing / a/t/school / now.

Although both sentences have seven words, the teacher increases the number of segments for Premala

to reassemble from 8 to 12. In both lessons, Premala succeeds, rereading and checking as she goes.

General Features of Reading Recovery

Generalizing from these examples of RR activities, we suggest features that distinguish RR from other reading programs and features that may apply to other curriculum areas.

For teachers in the United States, this program should be differentiated from both "whole language" and "phonics." It differs from most whole language programs in recognizing the need for temporary instructional detours in which the child's attention is called to particular cues available in speech or print. It differs from phonics in conceptualizing phonological awareness as an outcome of reading and writing rather than as their prerequisite, and in developing children's awareness of sounds in oral language rather than teaching letter-sound relationships. It differs from both in the frequent observation and recording of the reading and writing repertoire of the individual child as the basis for teacher initiative (as in choosing the next book) and response (in moment-to-moment decisions about when, and how, to help).

There are three reasons for these features. First, especially when children have limited strengths relevant to the task at hand, it is important to use those strengths. Five-year-old children have oral language resources; RR draws on those resources in developing the child's sound awareness that can then be used to check against

visual cues in print. Second, at-risk children who are taught letter-sound relationships often cannot use that information, because they cannot hear the sounds in words they say or read. So the harder skill must be taught, and the easier one seems to follow. The most pragmatic place to teach sound awareness is in writing, where segmentation is an essential part of the task.

Finally, in the case of vowels, teaching any one-to-one relationship between letters and sounds in English words must eventually be confusing to the child. Reading requires flexibility in handling such relationships, and writing provides rich practice. For example, children who learn to write five high- and medium-frequency words containing the vowel *a*—a, at, play, father, said—have implicitly learned a one-to-many letter-sound relationship (Clay & Watson, 1982, p. 24). The teacher helps the child use this knowledge, first learned in writing, during reading.

RR was designed specifically to teach reading and writing to children who are still low achievers after 1 year of school. In developing programs of problem solving with adult guidance for other low-achieving learners in our curriculum areas, six pedagogical premises may have wider significance:

1.	The teacher works with what she knows the children can do alone, or with assistance, and brings them by different paths to patterns of normal progress, with which she had extensive experience.

2.	The interactions occur daily for a substantial block

of time, and daily records ensure that at any one time the teacher knows exactly what the child can now do independently, and what he is currently learning to do with support.

3. The lessons address a wide range of subroutines and types of learning, all of which have been shown in research on normal children to play a role in the desired outcome behaviors, even though they may not be highly interdependent at this particular stage of learning. Most obvious is the example of reading and writing: Both occur in the daily lessons from the beginning, although their reciprocal value may not be utilized by teacher or child until later in the program.

4. At all times, the achievement of a task requires that the child see it as meaningful, because only then can the child control the task and detect errors when the message doesn't make sense.

5. The child is encouraged to work independently in some way from the first week of the program.

6. Because task difficulty is constantly being increased, the types of interactions between the child and teacher do not change greatly throughout the program, even the child assumes more control. What does change is the problem solving done by the child and the strategies that the child is called upon to use.

Vygotskian Interpretations

The teacher's role as scaffold

The metaphorical term "scaffold," though never used by Vygotsky, has come to be used for interactional support, often in the form of adult-child dialogue, that is structured by the adult to maximize the growth of the child's intrapsychological functioning. In their shared activity, the teacher is interacting with unseen processes — the in-the-head strategies used by the child to produce the overt responses of writing and oral reading. For any one child, the RR program as a whole is such a scaffold. On a more micro level, we have seen many examples of the child functioning independently, both in reading and writing, where earlier collaboration between teacher and child was necessary.

But it would be a mistake to think of the scaffold as simply being removed as the child's competence grows. Considering RR as a whole, that does happen, and the child becomes able to continue learning to read and write as a "self-improving system" within the regular classroom, without the finely turned support of the RR teacher. But within the program, because the teacher selects texts on an increasing gradient of difficulty, the scaffold of teacher support continues, always at the cutting edge of the child's competencies, in his continually shifting zone of proximal development.

Changes in the forms of mediation

According to Vygotsky, major turning points in development are connected with the appearance, or transformation, of new forms of mediation. Reading Recovery is designed to help the child accomplish just that: the integration of the semiotic codes of oral language and English orthography, plus world knowledge, into the complex operations of reading and writing. It includes the presence of stimuli created by the child (in the self-composed sentences) as well as those given to the child in teacher-selected texts. And it includes a shift from pointing as an external psychological tool (Wertsch, 1985) that the child is initially asked to use to focus his attention on each word in sequence, to later internalization when the teacher judges the child to be ready to "Try with just your eyes" (as she said in Premala III).

The special case of conscious realization

Wertsch (1985) discusses four criteria that Vygotsky used to distinguish higher mental functions: their social origins, the use of sign mediation, voluntary rather than environmental regulation, and the emergence of conscious realization of mental processes. The role of the last in learning to read (perhaps in learning any skill) is not a simple linear development toward increasing consciousness.

It is true that during RR, as the child becomes familiar with lesson procedures and text-solving processes, the teacher imposes demands for conscious realization by asking "How did you know…?" She needs to understand what information the child is using. And the child, by being prompted to talk briefly about text processing, learns that we can know about how we know and thereby control our mental processes more effectively.

> But for most children identified as low achievers after 1 year in school, time will bring an increasing gap between them and the rest of their age cohort, thus reinforcing their self-image as incompetent in important school skills. In short, many will learn—unnecessarily—to be "learning disabled" (Clay, 1987). With RR, instruction supports emergent development rather than waiting for it.

But there are two qualifications to the growth of conscious realization in the RR teaching procedures and their outcomes. First, while conscious manipulation of signs to mediate higher mental functions should be available when needed for problem solving, it should recede into automatic processing when the reader/writer is attending to text meaning, which is most of the time. (We do not drive in low gear when we do not need to.)

Second, certain behavior developed and checked initially at an explicit interpsychological level (such as directional behaviors and most visual perception learning of written language forms and formats) are properly run off as automatic subroutines without conscious attention. Most cognitive psychology models of reading capture the trend toward conscious manipulation in some form. What are often neglected are the perceptual, directional, sequential sign-processing operations that operate outside conscious awareness but must be learned, since they are specific to the script in use. Learning to read and write can be considered a prototypical example of what Rommetveit (1985) calls "the cultural development of attention" (p. 194).

Development, instruction, and diagnosis

Vygotsky applied the concept of a zone of proximal development to both instruction and diagnosis. In his well-known words, "the only good kind of instruction is that which marches ahead of development and leads it; it must be aimed not so much at the ripe as at the ripening function" (1962, p. 104).

Reading Recovery is designed for children younger than those in many "remedial" programs, and teachers may ask why children are placed in the program after only 1 year in school. Wouldn't some children "catch on" to reading and writing in the regular classroom in their own time? For a few, such development might happen. But for most children identified as low achievers after 1 year in school, time will bring an increasing gap between them and the rest of their age cohort, thus reinforcing their self-image as incompetent in important school skills. In short, many will learn—unnecessarily—to be "learning disabled" (Clay, 1987). With RR, instruction supports emergent development rather than waiting for it.

With respect to diagnosis, Vygotsky (and Soviet psychologists working with his ideas) used the concept of zone of proximal development to differentiate among a group of underachieving learners. While RR is most obviously and intentionally a program of instruction, it also can serve as a form of what Brown and Ferrara (1985) call "dynamic assessment."

According to the New Zealand experience, within the 10 percent of each 6-year-old cohorts who are assigned to RR, the effects of 15 weeks of instruction lead to the differentiation of two groups of children. One group, approximately 9 percent of the entire age group, benefits sufficiently from the program to progress as average learners in the regular classroom, at least for the 3-year period for which follow-up research has been done. The other group, less than 1 percent of the entire cohort, needs further specialist help. Although the two groups of children have similar levels of independent performance at the time of the 6-year diagnostic survey, their response to RR instruction is very different:

> Reading Recovery is a programme which should clear out of the remedial education system all the children who do not read for many event-produced reasons and all the children who have organizationally-based problems but who can be taught to achieve independent learning status in reading and writing despite this, leaving a small group of children requiring specialist attention. (Clay, 1987, p. 169)

In the United States, the percentage of children requiring specialist attention may be somewhat different than in New Zealand, but the benefits of making assessment decisions on the basis of each child's response to carefully designed instruction should be the same.

References

Bloom, B. (1971). Mastery learning. In J. H. Block (Ed.), *Mastery learning: Theory and practice* (pp. 47–63). New York: Holt, Rinehart & Winston.

Brown, R., & Ferrara, R. A. (1985). Diagnosing zones of proximal development. In J. V. Wertsch (Ed.), *Culture, communication, and cognition* (pp. 273–305). New York: Cambridge University Press.

Clay, M. M. (1985). *The early detection of reading difficulties* (3rd ed.). Portsmouth, NH: Heinemann.

Clay, M. M. (1987). Learning to be learning disabled. *New Zealand Journal of Educational Studies, 22*, 155–173.

Clay, M. M. (1991). *Becoming literate: The construction of inner control.* Portsmouth, NH: Heinemann.

Clay, M. M., & Watson, B. (1982). *The success of Maori children in the Reading Recovery programme.* Report prepared on research contract for the Director-General of Education, Department of Education, Wellington, New Zealand.

DeFord, D. E., Lyons, C. A., & Pinnell, G. S. (1991). *Bridges to literacy: Learning from Reading Recovery.* Portsmouth, NH: Heinemann.

Elkonin, D. B. (1973). USSR. In J. Downing (Ed.), *Comparative reading: Cross-national studies of behavior and processes in reading and writing* (pp. 551–579). New York: Macmillan.

Lyons, C. A. (1987). Reading Recovery: An effective intervention program for learning disabled first graders. (ED 284 170).

Pinnell, G. S. (1985, Spring). Helping teachers help children at risk: Insight from the Reading Recovery program. *Peabody Journal of Education*, pp. 70–85.

Rommetveit, R. (1985). Language acquisition as increasing linguistic structuring of experience and symbolic behavior control. In J. V. Wertsch (Ed.), *Culture, communication and cognition* (pp. 183–204). New York: Cambridge University Press.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21*, 360–406.

Vygotsky, L. S. (1962). *Thought and language.* Cambridge, MA: M.I.T. Press.

Wertsch, J. (1985). *Vygotsky and the social formation of mind.* Cambridge, MA: Harvard University Press.

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, 17*, 89–100.

Source

Clay, M. M., & Cazden, C. B. (1990). A Vygotskian interpretation of Reading Recovery. In L. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology* (pp. 206–222). New York: Cambridge University Press.

About the Cover

Look out world, Monica is coming for you! Monica is a 6-year-old Reading Recovery student whose recent favorite read was about colors in the city. She loves playing games at school and at home, her favorite being tag. When she grows up, she wants to be a reading teacher. We can't wait to see what you do next, Monica!