Special Feature by Marie Clay

Talking, Reading, and Writing

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Editor's Note: *We are pleased to feature the following article by Marie M. Clay. This paper was initially developed by Dr. Clay as a conference presentation for audiences of Reading Recovery professionals in international settings. We are honored that she has chosen to publish her discussion on this important topic in our journal.*

I want to encourage readers to think about the structures of language that children use as they talk, read, and write. In their early years children build a common syntactic base that serves all three activities, and this means that language use may be expanded as children read and as they write, as well as when they talk.

Last century, societies learned that a small number of children needed extra help with learning to talk, and the profession of speech therapy was developed. We solved oral language problems by training language specialists and delivering an early oral language intervention to individual children. Today's educators are still resisting the concept of providing short-term individual help for some when children begin literacy learning. Nevertheless, those teachers who work to prevent literacy learning difficulties know implicitly that there can be a big practical payoff in talking, writing, and reading if we understand how to strengthen children's control over the structures of the language they use. But that is not as simple as it sounds.

Andy Clark (2000), psychologist and philosopher, published a book called *Being There;* its subtitle is *Putting Brain, Body, and World Together Again.* He wrote about the human mind united in a complex dance of circular causation and computational activity. Children who are talking, writing, and reading could also be described as being involved in a complex dance of circular causation and computational activity. We call it the language arts and sometimes just English. Many teachers treat these three subjects as separate activities. This paper argues for putting Humpty Dumpty together again.

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Mothers talking with preschoolers go straight for the message. They ignore how the child is making the message or how the child is transmitting the message. They respond to what the child says.

> "I builded a fence," says the child.
> "You built a lovely fence," says the mother.
> "Yeah, I built a fence," says the child.

That is how the limited language of the preschool child becomes the more complex language of the high school graduate. How does the school entrant learn more about talking, begin to use his own language in his early writing, and allow both these activities to interact with early reading? A complex network of language acquisition underwrites so much of a child's future education.

The complexity of language does not scare either the 2-year-old talker or the 8-year-old reader who overnight moves from simple stories into chapter books. At each age children handle complexity well. It is researchers, scientists, linguists, and curriculum designers who develop theories about how fragments of language are learned and in what ways. Spurred by their enthusiasm for new discoveries, they encourage us to teach small snatches of language or single separated skills in planned sequences. They seldom go on to tell us how the pieces can be brought together. They have convinced educators to ana-

lyze the tasks to be learned by starting from their adult perspective and to cut the assignments into segments that exist in adult minds. Rarely do those educators stop to consider how the novice young learner might approach the task.

Why do we schedule the learning of reading, writing, or speaking separately? Does the complexity of language bewilder teachers who prefer to deliver neat sequences in unit packages? Or does language learning appear to happen so easily that we hardly give it much thought? Perhaps both realities are part of the explanation for this willingness to fragment language.

Across the world millions of children speak thousands of languages untaught! In their communities they hear different accents, different words, different grammars, and different dialects. They learn to name different objects and to describe different actions, and they learn what language to use with which people in particular settings. Before 7 years of age the child is a language genius who can learn two languages easily, keep them separate, and use different languages in different settings with two sets of grandparents. Listen to preschoolers carefully choosing their words to convey a particular message! You can hear them working on their confusions in ingenious ways. And it all happens without formal teaching.

In this new century, teachers face mandates to lift chil-

Babies babble, and by 6 months they are babbling away only in the phonemes of their family's language. Magical? No, that's what they hear!

dren's literacy performances to higher levels and produce better results sooner. In response, researchers frequently recommend that we add words to children's vocabulary or that we dive deeply into exercises that break words apart. However, such exercises do not ensure that a text is understood. Word knowledge is very important and phonemic information is invaluable, but both are insufficient. They are fragments of more complex activities. Likewise, more vocabulary, so often studied in isolation, will not raise comprehension scores, although it may help.

Oral Language: Children Under 3 Years

Babies babble and by 6 months they are babbling only in the phonemes of their family's language. Magical? No, that's what they hear! Then for a long period, one-word utterances flourish. Names are used (Goggie!), demands are made (Up!), action is reported (Gone!). But words are not combined. Then the two-word utterance appears, an untutored milestone. To my knowledge no one has ever been able to engineer that shift experimentally. The timing is highly variable and individual. My experience observing Spike's language performance is an example.

At 21 months Spike learned a new word, *beach.* He repeated it as a name, a report, and a command: "Beach! Beach! Beach!" When his mother passed him a known book, she said, "Owl babies" several times. Spike would only say, "Owl. Owl. Owl." Turning away, his mother and I chatted, and he began saying softly to himself, "Owl babies, owl babies, owl babies." We hailed the arrival of the two-word utterance. It was only 3 months later that he brought a message to the visitors who came to see his new baby sister. He said, "Harriet's awake now. Finally!"

Between 2 and 3 years of age, the preschooler uses unusual pronunciation, unusual grammar, and unusual reference. His speech is understood in the family, but it is hard for the outsider to understand. After 3 years most children can make themselves understood quite well. What is difficult for the 2-year-old? Many things, but one important thing is that children are taking their first steps into learning the grammar of the language. Between 2 and 3, children produce longer sentences, and they begin to use common grammatical features (e.g., *-ing, -ed, -s*) and those strange little auxiliary verbs (e.g., *can, do,* and *have;* for more discussion of the child's early grammar, I refer you to Steven Pinker's 1999 book, *Words and Rules: The Ingredients of Language*).

Ruth Weir (1962) studied this development of structure in talk in an unusual way. She noticed that her 2-year-old son talked himself to sleep at night, so she recorded his monologues. Her examples, such as the ones below, reveal the learner's construction of grammar. (The following set of comments is a subset of the child's 37 utterances. I begin with utterance 14.)

14. Good night
15. See tomorrow morning
16. Shoe fixed (4x)
17. Fix it (3x)
18. Shoe fixed
19. It took it
20. Bring it back
21. Took them
22. Took it down (4x)
23. He took it (2x)
24. I'm going
25. Yellow one
26. Another one (2x)
27. Take a book
28. Another book
29. A phone call
30. Phone call book
31. This phone call book (3x) (p. 131).

In every conversation you have with little children, you can hear the construction of grammar going on. It shows up in the questions they ask about a bedtime story and in the struggle they have trying out different versions of a statement until they have made themselves understood.

New language learning expands out of simple and easy-to-use utterances. Think of expanding any expandable part of any sentence. Think of increasing the variety of language alternatives. How much variation can you build with what you already know? Conversations create opportunities for language to be expanded—from "owl" to "owl babies" to "Harriet's awake, finally!" Learning language is not about adding more items; it is about building more access roads—or more networks across more neurons! Expanding language networks means having more alternatives from which to choose.

Written Language: Changes in Writing Over Time

Evidence of a child's evolving command of language structures is also found by noting changes observed in writing. I recommend reviewing the stories written by Paul and presented by Glenda Bissex (1980) in her book *GNYS AT WRK: A Child Learns to Write and Read* as a source of writing samples displaying a child's changes and growth in written language structures over time.

At age 2, Paul presented the following oral retelling of the story *Curious George.* He is using the pictures as prompts, and his retelling is limited by his language options.

He saw some pigs.
He saw some pigs. Saw some other pigs. (Turns the page)
They run out. (Turns another page)
But Curious George has gone—gone on a cow.
He had gone on a cow with a lawnmower. (Turns the page)
Can't find Curious George. (Turns the page)
Can't find Curious George. He had gone. (Turns the page)
They took him on a truck.

(Bissex, 1980, p. 120)

It is apparent that at 2 years of age, Paul is already a teller of stories with characters, plot, climax, and ending. His utterances are controlled by the grammar he can construct.

By 5 years of age his written stories are shorter, but they now have a beginning, middle, and end. Examples are

Once upon a time there was a bear
and the bear went away
and he never came back again.

Once upon a time there was a dog
and his name was Teddy
and he lived in Plainfield, Vermont.

(Bissex, 1980, p. 120)

In the following written messages, also from Bissex's *GNYS AT WRK,* notice how Paul plays with syntactic patterns demonstrating variety and control (e.g., control of the *if* clause).

I have gone to the store. (p. 16)
I HAVE GONE TO MATTHEWS. (p. 21)
I am going to Matthew's house. (p. 53)
IM. OUT 4.A.WALK. (p. 53)
IL. BE.BAK/E (p. 53)

Don't go near a beehive. (p. 10)

Don't go near a car. (p. 10)

If you don't be silly I will give you a present.
(p. 10)
If you can open cans I will give you a can opener.
(p. 11)
If you wash clothes I will give you a washing
machine. (p.11)
If you live in Third Street I will come to your
house. (p. 11)

SOME TIMS I HATE SCOLL
I HATE GETTING MY WORK RONG
I HATE GETTING IN TRUBLE
I HATE LOSEING MARBLE GAMES (p. 57)

Now let's look at the story Paul wrote about a magic car-
pet when he was 9 years old. This writing reveals his
changed control of language. (I begin in the middle of
his story.)

And then it started going what seemed like 100
miles an hour. And before I knew it I was in some
strange desert. Then I saw a man and when he saw
me he said "put him down put him down magic
carpet to the ground." The carpet stopped flying
and landed. I said "who are you." "I am the owner
of the carpet you are sitting on" was what he said. I
didn't know what to say. Then he said, "I could
teach you the magic words. Would you like that?"
"Yes I would". He taught me all the magic words
for up and down then I got on waved goodbye and
said, "Carpet rise carpet rise fly way up into the
skies." and the carpet started flying. I suppose you
want to know how to steer a magic carpet. Well if
you want to go right you lift up the front left cor-
ner and the opposite for going left. It was almost
suppertime so I flew home hid my magic carpet in
the storage and then I went in to eat my supper.
(Bissex, 1980, p. 77)

Paul's written stories demonstrate his growth and change
in the use of written language structures over time. It is
also important to note that the structures of language
that Paul used for talking and for writing would have also
been used when Paul was reading. Somehow the human
brain sent all those structural discoveries about language
to some single source where they were available, accessi-
ble, and on call for any language activity.

This accomplishment by the human brain results from
the child's experiences talking, reading, and writing, and
the resultant learning allows the learner to handle more
complex language with greater facility. In relation to writ-
ten language, the activity of composing clear messages
becomes easy for the proficient language user over time.

To provide examples of this accomplishment among high
school learners, I offer two samples of good teenage writ-
ing. These samples were rated as Editor's Choice articles
among those submitted to a national newspaper's compe-
tition for would-be journalists. The first, written by a 15-
year-old, is crisp and clear; the writer was effective in
constructing his sentences to carry his message.

It isn't easy to find every last little bulb of onion
weed on Little Barrier Island. But that is what con-
servation volunteers are trying to do. Onion weed
is a noxious plant and must be eradicated so the
island can remain in its natural state for future gen-
erations to enjoy.

I have selected a second example of similar length. This
16-year-old is making a plea for the simple life in the age
of technology. (Note the writer used 67 words writing
one sentence.)

Nowadays, if your car breaks down, you have to
ring up a tow truck, borrow someone else's car for a
week, take your's to the mechanic's to get it fixed,
which means waiting for a few days while the
mechanics stand around it having meaningful dis-
cussions, waiting for a few more days while the
mechanics actually repair it, and handling over sev-
eral hundred dollars for the service.

To summarize, the command of language structures
apparent in the learner's written expression, or written
language, is available for talking and reading as well. I
suggest that somewhere along the route to a good educa-
tion, talking, writing, and reading have drawn from and
have fed into a common pool of structural variations. I
argue that when we speak or listen to speech, we are con-
structing and composing; when we write any message, we
are constructing and composing; and when we read text,
we are again constructing and composing. The demands
of each of these three activities are slightly different but
each feeds into one pool of structural possibilities in the
language.

And So to Reading!

Authors write unusual sentences! Some can write more
simply than others for beginning readers. Teachers should

not avoid authors whose texts are hard to read. Rather, they should find ways to prepare their pupils ahead of time to work with new, unexpected, and unusual structures. Teachers should read aloud to students the language that is new to them. Get the new phrase or sentence

- to the ear   (listening)
- to the mouth   (saying)
- to the eye   (reading)
- to the written product   (creating text).

Displayed in Figure 1 is a very easy text for a 5- or 6-year-old to read and enjoy. The language sounds like 5-year-old language and so would be easy for a young child to construct. The title is *Number One* (Cowley, 1982).

The language of this book is about right for a child who has not yet built a complex control of language! Every verb is present tense; there is a consistent use of a verb phrase in the sentences. Also, the book provides a wonderful exercise in the ubiquitous locative phrase, that phrase which describes location that is so useful to the young child. For example, children can be heard to say *on chair, up dere, in bed, under dere.* Locative phrases tumble out repetitively in this Cowley book: *out of the house, out of the town, down the street, in a taxi.* The author makes repetitive use of a structure, and the reader has to make fewer linguistic choices about what kind of structural pattern might come next.

The direct speech is memorable too—*boo, hullo, help, he'll do,* and a *horrible, horrible* and *terrible, terrible* and then a *horrible, terrible* something. Yet the language is natural, carries a great story with plot and climax, and offers lots of room for teacher and child to engage in discussion.

At any particular age, children will be at very different places with their working grammar of the language, depending upon what they have tried to do in the past. So teachers will never be certain which bits of text will be structurally hard for a given child.

There will never be a set of rules for writing the continuous text of children's reading books; they must remain infinitely varied. A series of reading books cannot be written for local language usage, and if it were, it would still not match the grammar of some of the children. Inevitably some children will begin learning to read with more highly developed oral language than others.

FIGURE 1.

It is night.
The ghost comes
out of the cupboard,
out of his house,
And into the town.
"Who can I boo?" he says.
Look!
Here comes a man in a taxi.
"He'll do," says the ghost.
The taxi stops,
and the man jumps out.
"Boo!" says the ghost.
"Oooo! A horrible, horrible ghost!"
says the man,
and he runs away.
"Number one!" says the ghost.
Here comes the milkman.
The ghost jumps out.
"Boo! He says.
The milkman stops with a crash
and a splash.
It's a terrible, terrible ghost!"
And he runs away.
"Number two," says the ghost.
The ghost comes to an old house.
By the window
Is an old, old, woman
"Ha ha." says the ghost.
"She'll be number three."

"Boo!" says the ghost.
"Hullo, ghost," says the old woman.
"Help!" says the ghost.
"A witch!"
"A horrible, terrible witch!"

He runs out of the town,
back to his house,
and into his cupboard.
He shuts the door.
Number one!" says the witch.

Material from *Number One* reproduced by permission of the publishers Learning Media Limited, Wellington, NZ. Copyright © Joy Cowley 1982.

When a teacher chooses reading material for groups of children, she can ask the following questions:

- Will this particular group of children bring enough grammatical awareness to this text without prior preparation?
- Should I prepare them in some way for their first reading?

- How can I make it easier for these children to read more complex language than they use in their talking?

The third question is always an important one; it does not go away. Teachers must give ongoing attention to expanding children's language and enhancing their control over more complex language structures.

FIGURE 2

Seagull Is Clever	Simple Sentence Form	Simple Phrase Structure
Seagull is a big bird.	He is	N be +
He is hungry.	He is	N be +
He is looking for fish.	He is looking	N V +
Will Seagull get a fish?	He will get	N V N
No. Not today.		
He will not get a fish today	He will not get	N V N +
The waves are too big.	The waves are	N be +
Where is Seagull going?	He is going	N V +
He is going to get a shellfish	He is going	N V +
Is Seagull eating the shellfish?	He is eating	N V N
No. He is not.	He is not eating	N V
Up goes Seagull	Seagull goes	N V +
He goes up and up and up.	Seagull goes	N V + + +
Down comes the shellfish!		
Down, down, down, down.		
Seagull comes down, too.	Seagull comes	N V +
He looks at the shellfish	He looks	N V +
Good.		
The shell is broken	The shell is	N be +
Seagull is eating the shellfish.	Seagull is eating	N V +
He is a clever bird.	He is	

From *Seagull is Clever,* by B. Randell, 1994, Crystal Lake, IL: Rigby. Copyright 1996 by Rigby. Used with permission.

Looking at the Structure in Two Information Texts

Let's look at two information books to explore the idea of language expansion a little more. Think of children at 5 or 6 years of age who talk well for their age, who already try to write simple messages, or who have had many stories read to them. As you look at Figures 2 and 3, try to escape from the information they present, the words used, or the phonemes involved. Try to attend to the structures in the text that the reader must try to compose. The pictures provide a context, but the reader must construct the sequence of words needed for each line of print.

The second book in Figure 3 (see the next page) seems very similar to the first and is written by the same author, but the text is somewhat more challenging.

Logically it looks like a good progression; but in fact when we analyze the structure of the sentences, the difficulty level has been lifted exponentially. Comparison of the two texts shows that the reader is facing new grammar, many new ways of making sentences, and many variations in the second text. Specifically, there are

- new word meanings,
- new natural history information,
- more text per page,
- more return sweeps to control,
- expanded noun phrases (*eggs, two eggs, two big eggs, two big white eggs*),
- variations created by adding phrases at the beginning or one after the other,
- variety introduced by changing the order of verbs,
- interrupted direct speech with forms like *he said,* and
- changes in the layout designed to suit the look rather than the language!

The teacher's opportunity is this. The child will talk, write, and read using the language structures that he controls easily. In any of these activities the difficulty of the task will be increased if the child needs to go beyond the familiar and learn something new about structure. If the teacher knows what the learner controls, but wants the child to attend to unfamiliar usage, she has three possible ways to introduce the new learning: in talking, in writing, or in reading. Using the new turn of phrase in more than one of the three activities—that is, discovering it somewhere else—can be very helpful.

Further Thoughts

More variation each day is the rule. Readers who are constructing and composing have to be able to switch from the sentence they expected to the new language introduced by the author. Readers use what they know about the world, together with what they already know about the language, in order to select what might be the next word in a sentence. They often encounter usage they have not heard or seen before, such as a new way of putting things together, a slightly different meaning, a new reference, or a phonemic distinction they had not noticed. Discovering how to vary language, how to rearrange the bits, how to capture a new phrase and use it to the point of tedium are all part of language learning from the preschool years throughout life.

It would be unusual for authors or those who select reading books to consider progressions in structural complexity when preparing children's reading material. Yet teachers can recognize many of the hidden hurdles. Classroom teachers come to know the language usage of their local children, and Reading Recovery teachers come to know their individual children well because of their daily contacts. Both can be alert to the hidden challenges in texts for particular children. Teachers need to preview the texts they select to be read with this knowledge in mind.

All children have been expanding their language throughout their preschool years, but they have been doing this at different rates. At about 6 years (plus or minus 2) in most countries, they are introduced to writing and reading. Now they have to use a new code, one that does not reach the brain through the ears. It introduces language to the eyes.

Some children are delighted to explore something new. They fit easily into school activities; they make new links quickly; and their active brains get the hang of talking, writing, and reading so that they move forward after a brief period of slowing down to adjust to newness. New networks form in their active brains and the pace of learning picks up. For these learners, interactions occur across talking, writing, and reading.

Curricula and teaching practices tend to focus on breaking up language at least in the first 3 years of schooling. When this happens, the top third of the class does not suffer. These learners can quickly link the new and novel features to what they already do, and they enjoy discussing these novelties. Other children may experience difficulty and need more careful consideration. A few will

FIGURE 3

The Clever Penguins	Simple Sentence Form	Simple Phrase Structure
The penguins had a nest with two big white eggs in it.	The had X with…	N V N +
Mother penguin sat on the eggs day after day.	She sat…	N V + +
Father Penguin went fishing.	He went…	N V
One day Father Penguin came back	+ he came +	+ N V +
"Here I am," he said to Mother Penguin.	Here I am / he said…	Here be/N V +
You will be hungry.	You will be…	N be +
I will sit on the eggs, now.	I will…	N V + +
Off you go."	+ you go.	+ N V
Mother Penguin went down the hill and into the sea to eat fish.	She went…	N V + (+)+ +
Mother Penguin went out to sea.	She went…	N V +
She stayed out at sea for days, eating and eating and getting fat.	She stayed	N V + + + (+)+ (+)+
Father Penguin stayed on the eggs.	He stayed	N V +
Look out, Mother Penguin	Look…	V N
Look out for the hungry seal!	Look…	V +
Seals like to eat fat penguins.	They like…	N V N
But Mother Penguin saw the seal.	She saw…	N V N
She jumped out of the sea very fast.	She jumped…	N V + + +
Clever Mother Penguin.	(Label)	N
Mother Penguin walked back	She walked…	N V + +
up the hill. She went back to the eggs and the nest.	She went…	N V + + (+) +
She went home to Father Penguin.	She went	N V + +
"Where are my eggs?" she said	? Here be.	Q Here be N/ N V
"Where are they?"	? Here be	Q Here be N
"Look down here," he said.	Look + /he said	V + /NV
'Two baby chicks!"	(Label)	
said Mother Penguin.	she said	V N
'You are clever!"	You are.	N be +
"So are you,"	+ you are	+ be N
said Father Penguin	said he	V N

From *The Clever Penguins,* by B. Randell, 1994, Crystal Lake, IL: Rigby. Copyright 1996 by Rigby. Used with permission.

need an early intervention teacher and individual attention to get them on their way.

When schooling causes children to make the transition slowly by allowing them to take 3 years to get the circular exchange between all language activities working well, problems may result for some. In contrast to the success of most learners in getting the circular exchange between language activities functioning smoothly, a number of learners may experience years of ongoing confusion. They engage in constructing thousands of errors, false moves, and unhelpful attempts at problem solving. Daily, their brains work with error more often than with correct responses. In effect, during every school day for 3 years, their brains have striven unsuccessfully to solve language puzzles in each one of the three language activities. The result is enough practice of error and isolated practice of skill components to habituate a brain's pathways to perform poorly. Elsewhere I have called this *learning to be learning disabled* (Clay, 1987).

Education systems still work like this even when there are strong calls to pick up the pace of learning. I am encouraging teachers to understand that learning in one language area enriches the potential for learning in the other areas. Therefore, if we plan instruction that links oral language and literacy learning (writing and reading) from the start—so that writing and reading and oral language processing move forward together, linked and patterned from the start—that instruction will be more powerful (Clay, 2001).

There is yet another particular danger point to be aware of. When children make a shift from oral reading to silent reading (around the third year of school), a teacher's chance to mediate language development is reduced. Young children talk a lot, read aloud, mumble as they write, and reread their work aloud so teachers have opportunities to engage with language progress. Once learners begin to read silently and write in hushed environments, a teacher will have fewer opportunities to influence children's oral use of structure. This means that at the very time when children face many new stylistic complications in their reading, especially in the content areas, they will have less help with language from their teachers. We must prepare them well (in terms of language development) and do this ahead of that shift to silent reading.

If teachers can recognize the current control over what is simple as a starting point, invite young brains into texts of increasing complexity, and move each speaker towards more flexible variations, they can ensure that these activities provide opportunities for new rules and deep structures to be generated.

Simple networks of connections somewhere in the human brain provide the resources that control how we structure language, and these service talking, writing, and reading. That leads me to plead for Humpty Dumpty's restoration, at least as an overarching idea. Few people consider how a reading book challenges a child's spoken grammar or how the silent reading of Dickens or Mark Twain might enlarge one's syntactic options, but after my exploration can you honestly say it doesn't matter?

Beware of deferring the opportunities for working with complexity until later, like the teacher who said, "In our reading program the child has a chance to learn his letters, and his phonics and words; after that he can learn to deal flexibly with complex silent reading like a 9-year-old." I do not think so; 2- and 3-year-olds do not learn language in that way! Teachers can be more helpful than that; they need to be ahead of the game showing the way and fostering development, reluctant to dally too long emphasizing subskill components in separate subjects.

It begins to look as if those early years of school should be planned to include more than memorizing in isolated activities. The foundations of many future language variations could be laid down at this time creating the possibility of future grammatical prowess.

One word for attending to structure is *parsing*. When listening to speech we (unwittingly) parse the sounds of language (singly, in words, or in phrases) from beginning to end. When reading and writing, we parse the language in print from left to right if we are reading English. From what has already been said, we can judge what is not allowable in the next snatch of language. Language is too variable and flexible to allow a reader to predict a particular word. But the mind is alerted to several probable routes (access roads) that the sentence might now take. (This is the computational activity referred to in the beginning of this article.) How might the text so far continue? The answer to that depends entirely on the reader's prior experience with the structures of language.

So What Can Teachers Do?

What are the implications of knowing how young children increase their control over language structure for teachers who work individually with children to prevent literacy learning difficulties? I offer the following.

1. **Create a rich context for language learning.** Four questions can help teachers describe the language learning opportunities that are provided for a child.
   - Who talks to whom? [Competent with less competent]
   - What do they talk about? [Shared activity]
   - Do they listen and repeat? [No, they exchange language]
   - How often? [Throughout the waking hours]

2. **Increase language learning opportunities.** When young children go from homes to sit in classrooms, their oral language learning opportunities during school hours are inevitably reduced by the shift from individual to group learning. Schools have to design experiences to maximize opportunities for children to compose and construct language.

3. **Understand that children learn language easily through conversation.** A young learner's control over language must expand. Families improve the quality of language learning through the conversations they have with children. Teachers can
   - arrange for a joint focus on an activity,
   - extend wait time,
   - negotiate meanings,
   - uncover confusions,
   - encourage children to negotiate their meanings,
   - personalize the conversation for the particular child, and
   - ground explanations in shared experiences.

   In what ways does your program create conversations with children that allow these things to happen?

4. **Consider what things make a child reluctant to speak.** A short list would include
   - encountering new or strange situations,
   - interacting with a new person,
   - experiencing shyness,
   - feeling a sense of inadequacy,
   - experiencing a fear of failure,
   - coping with negative past experiences,
   - having limited language control.

   Even adults talk of having stage fright, being tongue-tied, mumbling in confusion, or being at a loss for words. It is important to avoid getting children into those states.

5. **Recognize the importance of reading aloud to children.** Let children hear text structures that expose them to language beyond their own control. Reading aloud to children of any age will sketch for them a landscape of features into which their own language usage may expand.

   Hearing a stretch of new language in a rereading or a different context will give access to new features of text language. Repeating it in a drama or a refrain might sow seeds that lead to an alternative rule emerging in a child's grammar.

6. **Create the need to produce language.** Tempt children to have something to say. This happens naturally in shared activities that call for the exchange of language. A command to listen does not push one's current construction power to new limits.

7. **Arrange for sources of new language.** It is the language of the people with whom he talks that provides the young learner with new building blocks. (Or it is the language of the author he reads.) He needs to interact frequently with good models, or speakers, who are good with language. The question is not What will I teach tomorrow? but rather Could I arrange for this child to get more conversations about shared activities?

8. **Realize that repeating language has severe limitations; it is not enough.** If we simply ask children to repeat things, their responses may be like the following presented by Cazden (1972) and reported by Pinker (1999):

   Child: My teacher holded the baby rabbits and we patted them.
   Adult: Did you say your teacher held the baby rabbits?
   Child: Yes.
   Adult: What did you say she did?
   Child: She holded the baby rabbits and we patted them.
   Adult: Did you say she held them tightly?
   Child: No. She holded them loosely (p. 218).

   This child has constructed a temporary access road

that he will use only for a short period of time. Grammatical possibilities will change daily for the young language learner, but not because you told him to listen more carefully to what you are saying.

9. **Think about which language structures are easier to learn.** The things you hear preschool children say early in language development are easy to learn. Children say x earlier than you hear them say y. Here are three examples.

- Auxiliary verbs like *can* and *could, has* and *had, do* and *did,* and *will* and *might* are hard to work into the structure of sentences, so they are learned quite slowly and somewhat later.
- Adjectives in the noun phrase come later in language acquisition because they are harder than many other things. *The dog was sick* and *the dog was old* are easy; *the sick old dog* is much harder. So quit forcing this structure on children. It will become easy after a while. It is a long time before children can collapse several simple sentences into one powerful statement like *the wet, trembling black dog shook himself and collapsed.*
- There is a steep gradient of difficulty among question words in English. *Where, what, who,* and *whose* are easy. *Why* and *how* are most difficult, and *when, what kind of, what if,* and *where from* are understood later. One of the problems with comprehension tests is that children can fail the task because they did not grasp the grammar of the question, although they could read and understand the passage! (Researchers reported this in the 1970s.)

10. **Understand how children discover new rules and find when to use them.** Children discover regularities. They make the irregular regular, as in *breaked* and *eated,* and *broked* and *ated.* We also hear plural errors like *mans, foots, tooths,* and *mouses.* These are examples of rule-governed errors. In like fashion, children apply general rules to exceptions in verb forms. For example, in English there is an obligatory *s* ending on the third-person singular verb (*I come, you come,* but *she comes*), but three common verbs do not take the obligatory *s* (*have, do,* and *to be*). We

Young children talk a lot, read aloud, mumble as they write, and reread their work aloud so teachers have opportunities to engage with language progress.

hear children applying the general rule to all three exceptions in saying

He just haves a cold.
She doos what her mother tells her.
No, she be's bad, then she be's good, OK?
(Pinker, 1999, p. 212)

Similarly, young children may struggle with comparatives and superlatives, saying words like *specialer* and *powerfullest,* and perhaps you have had to pause over the construction of an odd superlative.

Children's speech errors make engaging anecdotes in poetry, novels, television features, and Web sites for parents. But we may have a lot more to learn about such errors. Steven Pinker (1999) discussed how children's errors may help us to untangle one of the thickest knots in the science of nature and nurture.

When a child says it *bleeded* and it *singed,* the fingerprints of learning are all over the sentence. Every bit of every word has been learned, including the past-tense suffix -ed. The very existence of the error comes from a process of learning that is as yet incomplete: the mastery of the irregular forms *bled* and *sang* (p. 233).

Pinker's theoretical argument is not about how to get the child to inflect words correctly; it is more important than that. He claims that human brains, including preschoolers' brains, work in two ways with lan-

guage. One way is to work on patterns. When the learner hears or sees an irregular word the brain captures it and stores it with similar patterns. Then, for special instances of irregularity the brain creates special categories (Pinker, 1999).

The second way the learner works on language is to store the regular examples together and simply make a rule to cover that regularity. There is great economy in this. The speaker can apply the new rule to a wide range of words or sentences. The rule will begin to fit with others in the existing grammatical system. The speaker will operate on the rule and will not have to remember all the individual items. He must simply apply the rule when a likely word turns up. (See Pinker, 1999, pp. 214–234 for a more detailed discussion.)

Children need to use a few regular forms in order to create the rule; after that, the rule seems to go in search of new instances. I have seen teaching plans that devote hours of learning time to exercises that teach every example. According to Pinker, you do not have to direct little brains to handle the regularities of language. The brain constructs regular forms from rules and uses memory for the irregular forms. Irregular forms are relics of linguistic history. They were originally generated by rules, but the rules died long ago.

Teachers can improve the quality of language learning by personalizing the conversation with a particular child. Reading Recovery teacher Cindy Gregory talks with Consuelo Lopez during a Reading Recovery lesson at North Franklin Elementary, South-Western City Schools in Ohio.

The human brain might be thought of as fiendishly generating rules and probabilities in counterespionage against all those educators who are busily driving towards segregated, component skills. Children's brains know how to handle rules. Is it therefore necessary to devote extensive instructional time to establishing the concept of word families? I suspect that the human brain integrates language activities in ways that overcome the problems of our fractionated teaching.

If the learner is being schooled in a second language, think of the host of make-up opportunities he will need to create the rule-governed base of language that the mother-tongue child already has. What is causing the limitations of that child's progress? Does he learn slowly or is he deprived of the appropriate opportunities to form regular rules?

11. **Understand how children learn the order of words and structures in English.** How do you put ideas into the right order in a sentence? Listen to this construction of a complicated message and how a child struggles with the sequence of events. He had been playing outside with his brother Mark and came into the house to get a ball.
    Adult: You're covered with mud. What happened?
    Child: Falled me.
    Markie me.
    Markie me pushed.
    Markie pushed me…falled me.
The example reminds us that in speaking, reading, and writing, we construct our sentences.

12. **Appreciate how children learn to say the same thing in different ways.** Here is an example of powerful and flexible constructing by a 3-year-old in a life-and-death situation. It comes from a newspaper report. Jameson knew exactly what to do when his mother started choking on a cough drop: he dialed 911 for emergency services. Listen to how well he composed his message three times, using different words and structures.
    "My mommy's not breathing."
    "My mommy can't talk now."
    "My mommy's choking."
Jameson could transmit his message in more than one way. He did particularly well, even if he couldn't give his address to the operator.

13. Encourage the use of alternative constructions.
Three ways of varying the wording are selected for illustrations of how flexible we can be with our language constructions.

Expanding the phrases. When a sentence begins with the subject of the sentence, (a noun phrase), putting *he* into the slot is simple and *my mommy* is almost as easy. Sentence openers can be ranked in order of difficulty in pass-fail repetition tasks with 5- to 7-year-olds. Many of the following examples come from my language research from 1971–1983. This is the research that led to *Record of Oral Language* (Clay, Gill, Glynn, McNaughton, & Salmon, 1983).

> The train
> The old man
> My next picture
> All our family
> That lady teacher
> Mum, Dad, and I
> Some of the boys
> A teeny, weeny little old man
> The not very pretty doll's dress

Moving things around. We can do more than expand phrases. We can also add phrases and clauses to sentences, and we can move phrases and clauses around. We do this, paying very little attention to what we are doing.

> Dad will be home tomorrow night.
> Tomorrow night Dad will be home.
>
> We will go after dinner.
> After dinner we will go.
>
> We will be sad if it rains.
> If it rains we will be sad.

Transforming simple statements. We can alter simple statements for different purposes as easily as an accompanist transposes music into another key and plays the same piece in two different styles. When you can say something simply, you learn to elaborate it in a variety of ways. Controlling a few simple oral sentence forms provides scaffolds out of which more complex sentences can develop.

> Declarative: I will hide the money.
> Imperative: Hide that money!
> Question: Where will I hide the money?

> Negative: I didn't hide the money.
> Passive: The money was hidden by me.

Such flexibility is learned from family talk, teacher talk, peer talk, stories told and stories read, messages written, and stories composed. Children steadily increase the flexibility with which they explore all these kinds of alternatives. Teachers must find ways to help this.

14. Consider the impact of overloading the child's grammar. As one example, I offer the following description of a kindergarten child's language recorded by Viviane Paley (1981). This girl is a second-language learner who asked for a part in the play that her class was going to perform. She was willing to risk her emerging control of grammar by inquiring, "If I be this?" while pointing to the picture. Her teacher said, "Can I be the fox?" The pupil then tried to adjust her grammar and vocabulary at the same time, made two changes, and got to "If I can be fox?" She has more work to do to learn how to transform "I want to be this one" from a statement into a question. It will take a little longer to adjust her grammar. (This reminds us of the "holded the rabbits" example where the child speaking was using her mother tongue.)

Change in grammar takes time, and I doubt if we know why. The child reads easy grammars well, reads more, and has more exposure to alternative ways of varying the construction of sentences. Talking and writing alone may not introduce enough exposure to literary variations of language use. One suspects that the 15-year-old who wrote the Editor's Choice example was exposed somewhere to the clear, crisp prose he had learned to produce in his conservation article.

When the child's grammar is overloaded, something else happens. Children delete things from sentences that are too complex for them to repeat, and they show surprising skill in doing so. They do this easily, fast, with great assurance, and phrase by phrase. (Specific examples are reported in more detail in Clay, 1971.)

When a child is asked to repeat a sentence longer than his short-term memory span, he could do this by clustering words in an easy, well-known grammatical structure and remember the clusters easily. Adults can usually recall seven digits, seven words, or seven

Children will be spread out like runners in a marathon as they gain control over language.

chunks of words in a sentence (Miller, 1968), but 5-year-olds hover around four or five. When we ask children to repeat a sentence like "Some of the children were not riding on the bus," we might get "Kids not ride the bus." If the sentence were "All our family likes to get fresh pipis from the sea," we might get "We like pipis." Some children will reach up to the more complex grammar just beyond their present control, but what happens in a busy classroom where opportunities for individual interactions with the teacher are limited?

Some of the children	Kids
were not riding	not ride
on the bus	the bus.
All our family	We
like to get	like
fresh pipis	pipis.
from the sea.	

Perhaps some reluctant speakers do this reducing every time they hear a sentence that seems too big to them, time after time after time. I do not think a researcher has ever asked that question!

The Record of Oral Language assessment allows teachers to group children on three levels of complexity in sentence construction: those operating on simple structure, those working on average for age structures, and those roaring ahead with complex literary structures. Knowing which of those three levels a child typically uses in constructing his sentences is something classroom teachers find useful.

In Closing

Children will be spread out like runners in a marathon as they gain control over language. Here is an easy way to make a rough observation of a child's changing control of language structure. Listen for the longest, well-formed utterance or the most complex example the child constructs. Capture peak performance like "Harriet's awake

now, finally" or "My mommy's choking" or "two phone call books" or "every last little bulb of onion weed." You can be sure the speaker or writer was capable of constructing it.

Children's control of language when talking, writing, or reading expands outwards in flexible ways from the current structures they already control. Specifically,

- they use their range of language options for talking, writing, or reading;
- they need to explore how to vary language, notice how authors and speakers use language, and develop an ear for a new turn of phrase; and
- they need to increase their speed of making decisions when composing language.

Control over new language structures is acquired throughout schooling. The brain is the clever instrument that does the calculations, works out the probabilities, links and integrates as much as it can, and forms rules. The brain learns to work on simple language first and expands its ability to handle more variations at faster speeds like the successive models of computers that I have owned over the last 20 years. This accomplishment by the human brain results from the child's experiences talking, writing, and reading with teachers who are knowledgeable and supportive.

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Letter to the Editor

This snapshot, sent by a North Carolina teacher, captured posters to illustrate the letter Aa *by two children, Marie and Clay.*

February 20, 2004

Dear Editor,

Early this school year a kindergarten class in my school displayed their work with the letter *Aa* in the hall. One of the first-grade teachers drew my attention to the juxtaposition of names. I probably had walked past this two or three dozen times without noticing; that's how proficient I am with visual cues sometimes! Thought it was interesting though.

Sharon Velten
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