Breaking the Code
The New Science of Beginning Reading and Writing

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HEINEMANN
Portsmouth, NH
To Bonnie Wright Gentry,

my beloved mother and my first grade teacher
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Introduction

In 1982 Marie Clay gave us *Observing Young Readers*, a brilliant synthesis of the previous twenty years of reading research in developmental psychology along with her own powerful research from careful observation in natural classroom settings. This work along with her other volumes helped pave the way for progress in the next twenty-five years in reading education, underpinning powerful movements such as Reading Recovery, guided reading (Fountas and Pinnell 1996, 2001), comprehensive balanced reading (Routman 2000), and designing research-based programs (Allington 2001). In *Observing Young Readers*, Clay predicted the potential of early writing to complement the early reading program while pointing out that very little had been written about early writing up to that time. She ended *Observing Young Readers* by imploring educators to "go far beyond" her brief review of the developmental aspects of early writing, inviting educators to find the writing/reading connection. Marie Clay was right, as were her eminent reading educator predecessors such as Donald Durrel, whom she quoted “We have known for years the child’s first urge is to write and not to read, we haven’t taken advantage of this fact” (in Graves 1978 quoted in Clay 1982).

This book is my own thirty-year synthesis of what I have learned about the importance of early writing for teaching reading. It stands on the shoulders of many with whom I have worked and others who came before me. It adds to fine ongoing work—good research-based teaching such as Reading Recovery and excellent comprehensive balanced reading—and it responds to the invitation Marie Clay issued over twenty years ago calling for new tools for capitalizing on the reciprocity of early writing and reading. My intent is to help add the missing component that Marie Clay invited educators to search for in 1982, when she had wisdom and foresight to recognize the powerful connection between early writing and learning to read.

There is now a new understanding of the reading process, a new blueprint, and new tools for reading teachers based on the reciprocity of writing and reading and how these systems work together. This book will provide the blueprint for beginning reading and new tools for teaching it. Most importantly, it will show exactly when and what type of instructional intervention is needed in the beginning phases of breaking the code. The new tools and blueprint for teaching beginning readers make it easier to implement the research-based practices
in beginning reading instruction that find support in the most current understandings of the reading process.

I believe one problem in reading education is that even though we have many garden-variety reading teachers working successfully with children who already know how to read, too many of our teachers are not prepared to deal with the exigencies of beginning reading instruction. This book addresses the important differences in beginning and skilled reading and provides special tools for teaching beginners or children who struggle with breaking the code.

I have met many beginning-reading teachers who are frustrated as I would be if I were required to do something like plumbing or dentistry for my living. I don’t fully understand how plumbing and dentistry work, and I don’t know how to use the tools to get the job done.

Let’s think a moment about plumbing. Like reading problems, every plumbing problem is different. I can detect the leak easily enough, but I’m not very good at analyzing the problem and coming up with a solution. Just as the master plumber must understand how the system works, carry along a tool kit with the right tools, and know which tools work best to get the job done, the teacher of beginning reading must have a kit of fine precision tools and be able to pull out the right tool at the right time.

Let me give you an example of a child who was left behind because her teachers had neither a good tool kit nor an understanding of how to use the proper tools at the right time. I began working with a second grade struggling reader whose parents were paying for an expensive tutor at a private summer reading clinic, hoping to give their daughter the boost she needed to read well enough to succeed the following year in third grade. They weren’t getting good results. This nine-year-old had not become an accomplished reader who loves books, and the parents and child were distraught. It was the summer before third grade and she was still reading at beginning first-grade level. When I first met her she lacked self-esteem and confidence and she felt defeated because she couldn’t read as well as her classmates. I did an assessment and easily discovered her problem—she hadn’t broken the complex English alphabetic code or made the move from beginning to skilled reading. If she saw the word feet, she called it foot. She was very bright and engaging and the main reason she was struggling with reading and fluency was that she had not discovered how English orthography works. She didn’t recognize common spelling patterns and sight words—an aspect of code breaking. She was still trying to read words by cueing on beginning and ending letters to sound words out and had no concept of how English letters may be chunked into spelling patterns. If she saw the unknown word, interesting, she tried to decode it by attaching a sound to a few prominent letters with no understanding of how to chunk these letters into inter-est-ing.

Furthermore, she hadn’t experienced the volume of reading with appropriate easy books to develop the necessary fluency to become a proficient reader. For over a year she had been “instructed” as if she were a skilled reader in
materials that were far too difficult for someone who read at her level. The expectations at school were that she be a reader, but with little understanding of how English spelling patterns map to words, she was unable to recognize a large repertoire of words automatically, a prerequisite for skilled and fluent reading. The kind of work she needed was no longer being taught in second grade and the next year could be even worse.

The mother showed me the work that was underway at the summer reading clinic and it was unsettling: the tutor was drilling the child on using context clues. Working on context clues is a great technique for readers who may not be using syntactic cues as a backup for the information one needs to process during reading, but this child’s problem was that she saw feet, bat, and mail both in and out of context and said “foot,” “but,” and “meal,” respectively. She didn’t automatically process that –eet, -at, and –ail are common chunks of letters in the English spelling system that make it easy to decode meet, beet, and feet; bat, hat, and cat; nail, mail, and sail; or meetinghouse, combative, and unassailable.

The good news is that as a child breaks the alphabetic code, consolidates an understanding of how the code works with the other processes for reading, and has enough reading practice with easy material so that many words and patterns are recognized automatically, the child will combine this decoding ability with her perfectly good phonological, syntactic, and meaning-processing circuitry to read English easily. At the time, however, this child simply hadn’t broken the code and her tutor didn’t realize it. I could tell what she needed not only by observing her reading but also by looking at her writing. It was right there in front of me. The work to be done that summer should not have focused on context clues—she was already overdependent on them. It should have focused on automatic recognition of common spelling patterns and analogizing—something achieving second graders do easily with the patterns in meet, bat, and mail. The work should have focused on rereading easy and engaging material until these patterns could be read fluently. To read skillfully and fluently (and to write with confidence), this child had to learn to recognize spelling patterns and many one-syllable words automatically (and to produce an abundance of these patterns when she wrote). Along with recognizing the patterns, she had to practice them over and over in fairly easy text until specialized parts of her brain could take over the job of analyzing and recognizing the spelling and word patterns automatically. Then she could get in the flow of reading and the words on the page would sound in her mind like a symphony, harmonizing with the prosody, phonology, and syntax of spoken language into one meaningful voice. She would have become a skilled reader.

After extensive interviews with the child and her parents, I learned that this child’s former teachers apparently had too few tools for working with emerging readers and no blueprint for a real understanding of what should be happening as a child advances from nonreading, to beginning reading, to skilled reading. Skilled reading is achieved once the child’s brain activates the same critical regions of the brain that you are activating at this very moment. (A beginning
reader’s brain activation would look different from yours at this moment with fMRI [functional magnetic resonance imaging] because different specialized areas are activated. A skilled reader who is reading second-grade-level material would produce a brain scan that probably looks a lot like yours as you are reading this page.

Regrettably, this particular child had floundered for three years in school—no reading instruction to speak of in kindergarten and two years of misplacement in one-size-fits-all scripted reading programs, lockstep in implementation but out of sync with what she needed, through no fault of her own. By the time I first met the child, the summer tutor was awkwardly trying to fix the problem using the wrong tools. She was using a hammer to unscrew the gooseneck from the pipe. Context clues may have had some effect on this reader’s processing, just as one might very well bang on the pipe with the hammer a couple of times before attempting to unscrew it, but the real work of unscrewing the pipe should be done with a pipe wrench. The reading tutor just didn’t know which tool to use to do the job.

The new tools in this book have been selected based on new understandings of what is needed for children to be successful in learning to read (and write), including brain imagery studies, which are allowing researchers to see what’s going on inside the brain at the same time teachers observe what goes on outside the brain with beginning and struggling readers. More importantly, the tools go far beyond what many teachers currently do to take advantage of writing and reading reciprocity, which Marie Clay predicted we needed over twenty-five years ago. This book is designed to provide a tool kit to help teachers work with confidence and precision. It will show you exactly what tool to use at the right time, what you are trying to accomplish with the tool, and why it’s important for the beginning reader. The selection of the tools and the guidelines for using them is predicated by the most up-to-date theories of how learning to read works. We now know what signals to look for when a beginning reader is falling behind, and we know what kind of instructional intervention can help them.

Part of the exciting message of this book is that with the right tools at the right time, most brains can learn to read English, which is harder to read than other alphabetic languages. Even more encouraging is that, with early intervention, brains that initially struggle simply may have a glitch in the reading circuitry in a specialized area of the brain for automatic word reading, and with the tools highlighted in this book, the glitch can be fixed.

In the chapters that follow, I use plain language to show you what the latest theory and research tell us is needed to teach reading successfully. We will follow a plan of assessment-driven instruction, guiding children through four phases of beginning reading by selecting the best tools in each phase for moving them to the next higher level. To assure your success with assessment-driven instruction, I provide a blueprint to enable you to connect teaching writing and spelling with teaching reading in ways that aren’t predicated by convention.
Beginning writing and reading share commonalities that haven’t been highlighted in teacher training or the teaching-reading literature. Many well-trained, veteran reading teachers who read this book will see the spelling/writing/reading connection explicated clearly for the very first time. You’ll learn why highlighting the spelling component not only makes sense for emerging readers but also revolutionizes assessment-based instruction. We will highlight early writing and reading reciprocity and show how kindergarten writing is a means for ensuring reading success. Emerging readers who are guided through phases of writing using invented spelling can use their writing knowledge for learning to read because both systems share the same underlying knowledge base. Early writers use knowledge about sounds, letters, syllables, words, word parts like onsets and rimes, and phonics patterns, so early writing advances reading. But we haven’t taken full advantage of it. Too often early reading and writing are not connected; they are treated separately. Teachers are doing things with phonemic awareness, not understanding when certain phonemic awareness work is needed or how it fits in the whole process of becoming a reader. Phonemic awareness has become an isolated objective, not a part of the natural development of early reading, spelling, and writing. Regrettably, writing and spelling are not even taught in some kindergarten classrooms. Very specific techniques used concomitantly for teaching beginning reading and writing at particular phases in early development greatly assist the child’s move toward the goal of skilled reading. Many teachers still do not realize that beginning reading and writing are almost the same thing, identical processes unfolding in four identical phases in what for some children is a two-year journey in kindergarten and first grade on the road to skilled reading—a two-year journey to breaking the code.

While beginning reading and writing phases are identical, assessing writing phases has a value-added component: writing phases are easier to detect. It is often easier to nudge children forward in literacy development teaching into their writing than focusing only on guided reading instruction or separate phonemic awareness instruction. Working with beginning writing is like fixing the drainpipe under the sink and all of a sudden the dishwasher works because, like the sink and the dishwasher, reading and writing are hooked up to the same system. And while things unrelated to drain pipes can go wrong with the dishwasher, it makes sense to check out the basic systems first.

A huge advantage of tracking the writing phases instead of relying solely on reading levels is that writing is right there on the paper, marvelously explicit and easier to see than the reading phases. That’s important because assessment-driven instruction based on the reciprocity of beginning writing and reading not only makes the work of the reading teacher a lot easier, it allows you to add a few precision power tools to your toolbox to replace some of the crude instruments you may have used in the past.

The research base in this book provides new understanding of what it takes for a child to become a reader by focusing on differences between beginning reading and skilled reading. You’ll find a contemporary model for reading
and a synthesis of phase theory of sight-word reading and stages of developmental spelling remarkably corroborated by brain scan research to support a newfound emphasis on the spelling/writing/reading connection during this important time in development. You’ll see how all three sciences point to the same fact: the child becomes a skilled reader after a protracted process of breaking the letter code.

A major goal of this book is to expand our understanding of what it means to “break the code” by clearly mapping out the important role of the spelling/writing/reading connection for beginning reading. Deciphering the English spelling system and understanding how the printed symbols of the alphabet—namely, letters or chunks of letter combinations and patterns—combine to represent comprehensible, meaningful, pronounceable words and subword parts, are at the fulcrum of beginning reading (and writing). Once this chunking breakthrough is accomplished, the brain can activate circuitry for recognizing words automatically and read with much more proficiency, precision, and independence. (We will see that early independent reading, which is much more dependent on repetition and memorization of easy material, may be an entirely different process and activate different brain circuitry than later skilled independent reading.) It may surprise you that it normally takes some children two years to break the code. (And too many never really break it!)

Chapter 1 surveys a model of reading many psychologists believe to be the best current psychological perspective on how reading works. Whether you think it’s the best model or not, it’s one worth thinking about because it does provide new perspectives on beginning reading. After surveying the model I provide my own five propositions to help rethink the requirements of teaching beginning reading, which may lead one to retool by taking advantage of writing and reading reciprocity.

Chapter 2 leads us inside the brain to reveal stunning new findings from brain scan research and the neurobiology of reading. You’ll find evidence of two separate pathways for reading that define beginning versus skilled reading. You’ll better understand the critical role spelling plays in the beginning reading and beginning writing process, and why studies show that writing is “the context in which word analysis most often took place, typically as using phonological analysis in the service of ‘figuring out’ the spelling of words” (reported in Snow, Burns, and Griffin 1998, 187). We’ll also see why spelling instruction may play a role in overcoming some reading disabilities.

Chapter 3 presents a new perspective from which to retool assessment-driven instruction, adding assessment of a child’s advancement in “figuring out” words or breaking the code from no letter use, to pre-alphabetic, partial alphabetic, full alphabetic and consolidated alphabetic levels of beginning reading and writing to support and foster the child’s reading efforts. Looking from outside the brain, we’ll see differences in early phases versus eventual skilled and automatic reading. At each phase we will be learning specific strategies to establish and stabilize the level of word analysis the child is capable of and then
move them to the next level. We’ll see how observations by phase theorists for word learning and developmental spelling research outside the brain corroborate what neuroscientists see happening inside the brain. In Chapter 3, we focus on research in the development of phase theory for sight-word learning and begin to lay the foundation for both an instructional and an intervention blueprint.

In Chapter 4, the blueprint becomes more tangible by showing the child’s advancement through clearly apparent phases of writing and spelling development. You will learn that the writing phases and the reading phases are directly connected, and so provide a clear research base for reading and writing reciprocity. Taken together, findings in these two chapters lead to a clearer understanding of what happens in the brain to allow for skilled and automatic reading and spotlight early intervention as a key to successful reading instruction.

Chapter 5 begins by showing how children are prepared for success with literacy before entering kindergarten. You will learn why it’s important to capitalize on the child’s first urge to write. You’ll find a discussion of the reading wars and an attempt to stretch our understanding and perhaps bring two warring camps closer together in ideology by highlighting reading and writing reciprocity. We begin to look at how and why to intervene during the early phases of beginning literacy.

Chapter 6 is a blueprint for intervention—essentially the when, why, and how to intervene with beginning readers and writers who are straying off course. Capitalizing on reading and writing reciprocity and the compelling writing connection to reading, the easy intervention procedures needed during the “tadpole” phases of beginning literacy are clearly presented. Beginning with a mission statement and a set of values that all teachers of beginning and struggling reading will be eager to embrace, the Intervention Blueprint will help delineate each of the phases of development and show when and how to intervene with the right kind of instruction at the right time. You’ll learn to use a new set of tools to build what is needed and to fix what goes wrong. And in so doing, you’ll discover a powerful new paradigm for ensuring that all beginners and struggling readers break the code and read automatically.

Chapters 6 and 7 are the centerpiece of this book. If you are short on time, you may go directly to Chapters 6 and 7 for detailed information on when and how to intervene and instruct beginners, as well as dozens of specific strategies for supporting developing readers and writers. You’ll see the tools in action moving the child level by level toward breaking the code. You’ll glean nuances that will sharpen your observation and instructional skills, enabling you to guide beginners and those who struggle toward successful code breaking. You’ll see how instruction can be crafted to be individualized, age-appropriate, and engaging at all levels and you’ll learn how to be a responder to a child’s specific needs for breaking the code.

Chapter 8 shows how to set up a kindergarten writing program that is as important for learning to read as reading instruction itself. You’ll hear the voices
of the best kindergarten teachers in the nation as they invite you into their classrooms to visit powerful learning environments for literacy learning and to see how to teach reading through writing. They’ll share their favorite literacy techniques and strategies. The chapter includes schedules that show times for teaching writing explicitly and also times for creating play-based instruction to increase not only oral language but written language as well.

In Chapter 9 you will journey deep into the dark side of reading disability. In a case study of a struggling reader and explications of the cases of three children with probable neurologically based reading and spelling disabilities, you will see how missteps in reading instruction, a lack of early intervention, and bad advice can be devastating, not only to children but to the adults who surround them.

Finally, Chapter 10 is an amazing story of one recovered reader; and in a Postscript you’ll learn how the work you do leaves a legacy.

I hope to take you on a remarkable journey deep into the world of teaching beginning readers and writers—we may go farther than you can imagine. If you are a reading teacher, our journey may change your teaching.
The Intervention Blueprint

What if you knew exactly when a beginning reader or writer is off track for learning literacy? What if you knew exactly what to do about it? While the Intervention Blueprint may seem overly simplistic, this profoundly insightful plan for early intervention with beginners will revolutionize and energize the teaching of any teacher who is not already seeing these phases as he or she works with beginning or struggling readers and writers.

The Intervention Blueprint Helps You Achieve Your Mission of Teaching Literacy

Success in the workplace can be spearheaded by a mission and values statement (Welch and Welch 2005). Let’s consider a mission statement and values or behaviors that support our goals for teaching literacy:

A KINDERGARTEN AND FIRST GRADE TEACHER’S MISSION AND VALUES STATEMENT

I must teach each writer and reader in my classroom to break the English code. I accept this defining mission of every kindergarten and first grade teacher. I will be accountable for this mission and I will explain exactly why any learner is not following the expected path for breaking the code. If a child is off track, I will intervene early. I realize that the learner who does not read and write (decode and encode) by the end of first grade is at risk for a rocky academic future. Without learning to read and write in kindergarten and first grade, future academic growth may not happen.
With a clear mission focused on breaking the code, you are now able to establish what decoding-related behaviors you value and wish to see in the children you teach. The values are the behaviors that will accomplish your mission (Welch and Welch 2005). The Intervention Blueprint will help you establish straightforward values for code breaking by articulating the values needed at each of the phases of development due to reading and writing reciprocity. These values or behaviors must be applied to each child at each of the phases of writing and they will carry over into the child’s reading development. Here are four behaviors you must value if you are a kindergarten or first grade teacher:

WHAT BEHAVIORS DO YOU VALUE AT A PARTICULAR PHASE OF WRITING?

1. Seeing a writer’s phase of development.
2. Knowing when this level of functioning is expected.
3. Intervening to provide support when the child is falling behind.
4. Choosing the right tools to move the child forward.

Seeing a Writer’s Phase of Development

Remarkably, you can see a child’s phase of development by asking five easy questions about the invented spelling you see in a beginner’s writing:

Question 1: Is this child using letters? If only scribbles, wavy writing, or loopy writing is used and no letters are present, it’s Phase 0.

Question 2: Is this child using letters but not matching any of the letters to sounds? If letters are used but no sounds are represented, it’s Phase 1.

Question 3: Is this child using letters and getting mostly beginning and ending sounds? If mostly beginning and ending sounds are represented but some sounds are missing, it’s Phase 2.

Question 4: Is this child supplying a letter for each sound? If you can finger spell the invented words and get results similar to what you see in the child’s invented spelling, it’s Level 3.

Question 5: Does this child usually spell in chunks of phonics patterns? If you can see that the child is spelling in chunks of familiar phonics patterns, it’s Level 4.

Knowing When Each Phase Is Expected

The Intervention Blueprint is based on minimal expected competency benchmarks that should be reached at five critical sign posts of beginning reading and writing development: (1) Pre-kindergarten and beginning kindergarten, (2) middle kindergarten, (3) end of kindergarten, (4) middle first grade, and (5) end of first grade. Your decision to intervene is always a child-based
decision. You will base your intervention on what you observe the child doing as a writer and a reader. The observation methods are easily conducted in the regular day-to-day activity in classroom with very little outside testing. Additionally, the Intervention Blueprint is easy to follow and criteria for determining whether a child is on or off track is straightforward.

Here are the guideposts for when early intervention should occur:

**MINIMAL COMPETENCY EXPECTANCY LEVELS**

<table>
<thead>
<tr>
<th>PHASE</th>
<th>COMPETENCY IS EXPECTED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 0—No letters</td>
<td>Pre-kindergarten/Beginning kindergarten</td>
</tr>
<tr>
<td>Phase 1—Letters without sound representation</td>
<td>Middle kindergarten</td>
</tr>
<tr>
<td>Phase 2—Beginning and ending sounds are represented</td>
<td>End of kindergarten</td>
</tr>
<tr>
<td>Phase 3—Finger spelling/A letter for a sound</td>
<td>Middle first grade</td>
</tr>
<tr>
<td>Phase 4—Spelling in chunks of phonics patterns</td>
<td>End of first grade</td>
</tr>
</tbody>
</table>

When half of the invented spelling in a volume of writing (or half of the spellings of a particular level of the Monster Test on pages 161, 166, 171, and 177) fits one of these five phases, you have identified the child’s level of functioning. If a child is not functioning in the phase by the minimal expected competency level, you will be able to follow the Intervention Blueprint to provide precisely the type of instruction that will help move this child forward.

**Intervening Early**

Intervening Early

There is a reason to intervene early. Neuroscientists tell us that from 5 percent to 17 percent of children may be prewired for reading failure (Shaywitz and Shaywitz 2001). These children may have a neonatal glitch in the brain circuitry that keeps a specialized area of the brain associated with automatic word reading from activating normally (Shaywitz 2003). The right kind of early intervention may enable these children to overcome this biological obstacle to decoding. Preliminary studies of beginning readers using new brain scan technology indicate that with early intervention during kindergarten and beginning first grade, when the child’s brain is plastic and malleable, the faulty wiring can be fixed. It is critical to intervene early because the younger the brain, the greater the propensity for more adaptability. Some neurologists say that with early intervention, dyslexia may even be prevented (Shaywitz 2003). The same kind of intervention needed to prevent dyslexia is the kind of instruction that normally developing children need for breaking the code. So in addition to preventing
dyslexia, this instruction, and early intervention, may keep children who have no neurological problems with reading from falling through the cracks for nonbiological reasons.

Choosing the Right Tools

Many of the tools needed to “fix” the brain are easily used in the context of teaching beginning writing. Due to writing and reading reciprocity, these same tools help “fix” a struggling reader’s problems with reading if the struggling reader is functioning in the tadpole phases. These tools for writing likely activate the same brain circuitry used for reading and help the beginner or struggler develop the same underlying knowledge that beginning readers use. You simply need to use certain tools during certain phases of development, and the Intervention Blueprint shows when to use the right tool.

Instructional Intervention for Phase 0 Writers

Let’s start with seeing Phase 0. Level 0 writing is demonstrated in Figure 6.1. Notice that the writer is using no letters and is unable to write his or her name. If children are not using letters by the beginning of kindergarten, early intervention is necessary. The instructional measures recommended in the Intervention Blueprint are also appropriate for any normally functioning Level 0 writer (in prekindergarten).

Perhaps Level 0 is the easiest level to detect and the easiest to address when development is falling behind what is expected. If a child is not able to write her name when she enters kindergarten, teach her to write her name. Teach him to read his name (from memory or logographically) at the same time you are teaching him to write it. Recognize that the meaningful whole and the parts occur simultaneously.

Major intervention strategies for level 0

**Name Writing.** Teach the child how to hold the pencil (see Figure 6.2). Next show the child how to place the paper for writing as demonstrated in Figure 6.3. These early demonstrations of proper handgrip for the pencil and proper placement for the paper build confidence and get kids off to a good start fairly easily. Now the child is ready to trace the letters in his or her name. Write the child’s name with a yellow highlighter and show him or her how to trace over each letter. This process should be repeated frequently. Remember, the brain loves repetition (but not repetitious nonsense such as...
eighteen worksheets stacked on the child’s desk for completion during the day!). Teachers should be modeling letter formation in group, interactive, and individual contexts. Teaching letter writing in kindergarten is hands-on and interactive.

**Teach the Letters.** Letters are the building blocks of alphabetic reading and writing. By learning to write the letters in one’s name, the child makes a giant
cognitive and psychological leap toward real literacy. Many teachers begin by having the child trace the letters in his or her name on a red highlight model from left to right. Show the child the proper letter strokes from the beginning as illustrated in Figure 6.4.

**Begin Teaching the Alphabet.** All beginning readers and writers should work with all twenty-six uppercase and lowercase letters of the alphabet from the outset of kindergarten. Remember, in every kindergarten classroom, children must read and write their names from the very first day. Since classrooms have children whose names range from Antonio to Zachary with every name in between, kindergarten children who are reading and writing their names use all the letters of the alphabet from the moment they walk into the classroom and pin on their nametags. It's fine to target a letter per week (Gentry 2004b), but targeting a letter doesn't mean all letters aren't in use! It simply means that a particular letter or sound is being highlighted for refinement—not being taught for the first time. The first letters to be taught are whatever letters appear in a child's name.

If you are a kindergarten teacher, don't ever think that you don't teach a particular letter until November, when it is the focus of the lesson in the spelling book. You teach every letter contained in each child's name from the very first day of kindergarten.

**Teach the Alphabet Song.** Singing the alphabet song is one of the easiest ways to learn the twenty-six letter names by providing needed repetition and pattern recognition. (Don't forget that it's not unusual for a kindergartner to think that El-em-en-o-pee is one letter name!)

For children, learning twenty-six new letter names is much what it's like for a person who cannot speak Hungarian to walk into a roomful of twenty-six Hungarians with names like Gyöngyi (unless you speak Hungarian), and all of a sudden you are expected to know everyone. You begin reacting to some of the new faces and interact with some more than others. The ones you interact with are the ones you are likely to learn first. Remembering W or “double-u” initially may be just as complex for a kindergartner as remembering one of twenty-six Hungarian names and matching it with a face. It's not so easy! Learning the twenty-six uppercase and lowercase letters takes time. Sometimes children move from writing levels 0 to 2 before they have learned all the letters. This process may take weeks and even months.

Pair a child who knows the letter names and recognizes the forms that match them with a buddy who is learning the letters for the first time. Some teachers have team competitions and “letter name spelling bees” to see which
teams can “spell” or say the name of the letter. Remember that intervention does not always have to be one-on-one and that children learn lots of literacy in joyful and playful interaction with each other.

**Begin Teaching Sounds.** Some sounds as word parts are easier to perceive than others, or in the words of researchers, are “psychologically more perceptible” (Goswami 1996). Shouting out the rhyming word in a nursery rhyme, as in “Jack and Jill went up the HILL,” is fairly easy for many children, especially when the activity is done in unison in a whole group as a choral response. It’s much easier for children to respond in unison than individually. Clapping syllables (An-to-ni-o/four claps) is easier than hand spelling onsets and rimes (/J/ with thumb up, /-ack/ with handshake position). Working with onsets and rimes is easier than working with phonemes (Goswami 1996). Start with rhyming words and syllables and work toward more sophisticated sound/word parts.

Remember that phonemic awareness is not natural and is perceptibly challenging even for some adults. It is also important to recognize that when we exaggerate or stretch out sounds, we sometimes change them. For example, technically, stop consonants like /b/ can’t be said in isolation because the consonant sound, made by a particular placement of the lips, is only realized when the following vowel rushes air through the articulatory structures of the mouth. Without the following vowel, or rush of air, there is no sound. The point is that when the teacher models the /b/ sound at the beginning of boy, he or she is actually saying /b/ followed by a short vowel. Care must be taken so that the sound is modeled as /b/ and not /buh/ (Wilde 1992).

**Use Materialization Techniques.** Materialization techniques (Bodrova and Leong 1998; Gentry 2004) such as clapping syllables, hand spelling, and finger spelling make it easier for children to perceive the targeted sound or word part. A materialization technique is any technique that uses a tangible object (the hand, fingers, stretchable fabric) and a physical action to represent a mental construct such as a sound or word part (Bodrova and Leong 1998; Galperin 1969; Gentry 2004). Materialization techniques grew out of Vygotskian theory and research (Bodrova and Leong 1998, Vygotsky 1978). Seven resourceful materialization techniques especially useful for working with tadpole readers and writers are shouting and “high-fiving” rhyming words, clapping syllables, hand spelling, stretching out the sounds in words with stretchable fabric, finger spelling, using sound and letter boxes, and word sorting with cards. To provide continuity and to help you see how to move progressively from easier to harder sound awareness, all seven materialization techniques are presented here in order from least to most sophisticated (easiest to hardest for children) with designation of what phase generally best matches with a particular materialization technique. Generally, only the first three are used with Level 0 writers and readers.
1. **Shouting Out the Rhyming Word with a High-Five.** Have children shout out the rhyming word in a nursery rhyme as they give a buddy the high-five when it’s time to shout the word.

   Jack and Jill went up the HILL.
   (Kids shout out *hill* and give their buddy the high-five.)

   Jack fell down and broke his CROWN.
   (Kids shout out *crown* and give their buddy the high-five.)

   Use this materialization technique with Phase 0 and 1 readers and writers.

2. **Clapping Out Syllables** (syllabic awareness—an aspect of phonological awareness). Start out by modeling until pupils can clap out the syllables in names or target words in nursery rhymes or poems.

   Bill (one clap)
   Lo-is (two claps)
   An-to-ni-o (four claps)

   Use this materialization technique liberally with Phase 0 through 2, but keep in mind that syllables may be extremely important through Phase 4 and even beyond for skilled readers when they try to figure out an unknown word. The way skilled readers store representations in memory may relate to ability to analyze words into their graphosyllabic constituents (e.g., *in-ter-est-ing*). In order to form complete connections between letters and sounds in words, syllable units such as *in-ter-est-ing* may be extremely important for analogizing and decoding new words. Skilled readers (i.e., “frog readers”) use the strategy of analyzing words into their graphosyllabic constituents. And while skilled readers use backup systems so that ultimately they can read text fairly easily even when the words are misspelled, readers who can decode these scrambled letters are *already skilled readers* who have learned to use the redundancy of the system. At the moment you were reading the scrambled spellings, you were aware that the spellings were incorrect. You were aware that they did not match the dictionary in your head even though you were able to read them. As a skilled reader you have developed a complex backup system for using syntactic information and for making sense so that you can read the scrambled letters. However, it’s very unlikely that a beginning reader could learn to read using a scrambled letter system. For example, research shows that students who try to read making only partial connections between letters and sounds often are not very successful (Bhattacharya and Ehri 2004).

   Some research studies call to question the reality of some of the conventional rules for syllable division at the end of lines of text and accept different ways of dividing words into syllables as long as each syllable contains one and only one vowel sound (e.g., *fin-ish* or *fi-nish*) and as long as the student’s division forms a legal pronunciation (e.g., *sim-ple* or *simp-le* but not *si-mple*) (Bhattacharya and Ehri 2004, 337). I agree with this...
practice for instructional purposes for beginning reading. For example, while rabbit by conventional rule must be divided as rab-bit at the end of a line of text when syllable division might be required, children may perceive rabbit as ra-bit or rab-it to rhyme with habit. Use common sense and refrain from making the “divide between the double b’s” distinction or trying to teach syllable juncture (a third-grade concept) to beginners. Rab-bit, rab-it, and ra-bit all demonstrate phonological awareness and developmentally appropriate knowledge of syllables for an early tadpole phase. When the teacher models how to break the word into chunks, of course one would model correct syllabication. For rabbit, one might say “the first syllable or word part is rab which works like nab, cab, lab, and tab. The next syllable or word part is bit, which works like hit, kit, sit, and pit.” The point is that close approximations are desirable and appropriate in the early stages. It would not be appropriate to correct a child who was clapping and saying ra-bit or rab-it for rabbit, to insist upon rab-bit. That is too much complexity for a tadpole level of functioning. Teaching the intricacies of syllable juncture will come much later. Likewise, at Phase 4, RABIT is an acceptable invented spelling for rabbit. First-grade writers should not be expected to have mastered the intricacies of syllable juncture for spelling. Clapping out syllables may be used at all levels.

3. Using Hand Spelling to Help Children Recognize the Onset or Beginning Sound. I invented hand spelling for onsets and rimes modeled after finger spelling, a higher-level technique, that originated with Orton-Gillingham and consists of putting the consecutive phonemes of a word “on one’s fingers” and then grabbing the word (Gentry 2004a; Orton 1964). Hand spelling, shown in Figure 6.5, begins with the pronunciation of a word such as rat represented by the hand held in a balled-up fist position (i.e., say rat and put out your fist). Next pronounce the onset, the sound that comes before the vowel, and hold up the thumb (i.e., say /r/ and stick up your thumb). Now pronounce the rest of the word—the vowel and everything that follows, which is called the rime—and extend the hand into a handshake position. Finally, pronounce the whole word again returning to the fist position symbolically pulling the onset and rime word parts back into the whole word.

Model this procedure with easy rhyming words such as rat, cat, bat, fat, and mat. The procedure is modeled for children and then done with and by them. Once children have learned the procedure, it’s a wonderful technique for highlighting a targeted beginning sound such as hand spelling h words: /h/ in /h/-/-ouse/, house; /h/-/-ill/, hill; /h/-/-ive/, hive; /h/-/-ole/, hole; /h/-/-ut/, hut.

Hand spelling is particularly useful with Level 0 through 2 learners to help them conceptualize beginning sounds. It may also be useful at Levels 3 and 4 to designate the rimes in words or to draw attention to spelling
Higher-level materialization techniques include stretching out the sounds in words with stretchable fabric, finger spelling, using sound and letter boxes, and word sorting with cards. All materialization techniques appropriate for all phases of tadpole development are described in this section so that you can clearly see the progression of working from easier to perceive sounds, moving toward the conceptually more difficult to perceive sounds and word parts.
4. **Stretching Out the Sounds in Words with Stretchable Fabric.** Using stretchable fabric (or anything that stretches), have the child hold the fabric in front of himself or herself at book-reading level and slowly stretch out the fabric as both you and the child pronounce the word slowly exaggerating each phoneme. The idea is to help the child perceive the constituent sounds in the word as entities. Once the sounds in the word have been stretched out, allow the fabric to shrink back to its original position and pronounce the word normally to show that the word in its normal state is the same as the stretched-out word.

Stretching out sounds is particularly useful for Levels 0–3.

5. **Finger Spelling.** Master teachers Judy Farley and Penny Jamaison taught me to do finger spelling, which they learned in Orton-Gillingham training (Orton 1964). Beginning with the thumb, each consecutive phoneme in a word is "put on a finger" in the order of thumb (first sound), index finger (second sound), third finger (third sound), and so forth. Keep in mind that finger spelling represents the number of sounds in a word, not the number of letters: *Bee* (/b/ + /e/) is spelled with two fingers; *eight* (/a/ + /t/) is also spelled with two fingers. Finger spelling designates the number of phonemes in a word as in the finger spelling *rat*: Put up the thumb for the /r/, the index finger for the short vowel sound /a/, and the third finger for the /t/. This materialization technique helps the child identify all the phonemes in a word and is particularly useful in helping a child move from Level 2 to Level 3. Children who finger spell successfully have full phonemic awareness.

6. **Using Sound and Letter Boxes.** Sound and letter boxes (also called Elkonin boxes) are borrowed from Reading Recovery training with an adaptation for writing a letter in each box for a sound. As shown in Figure 6.6, sound and letter boxes are drawn so that the child sees a box for each of the sounds in a word. The writer then spells each sound by placing a letter in the appropriate box, proceeding box by box until the constituent sounds in the word are spelled (Clay 1993; Gentry 2005). This technique works best to move Level 2 writers to Level 3 from partial to full alphabetic representation by showing the child how to put a letter in the box for each sound in the word being spelled. Sound and letter boxes are often useful with Level 2 children who get beginning sounds and ending sounds but leave out the middle sounds in the word being spelled. Some teachers have Level 4 writers use sound and letter boxes showing them how some sounds may be represented by letter combinations. I generally encourage teachers to dispense with the use of sound and letter boxes.
boxes once children are functioning at Level 3, and instead of spelling words sound-by-sound in boxes, help children move to attempts at spelling unknown words syllable-by-syllable, analogizing with chunks of phonics patterns while attending to graphosyllabic constituents. For many words, syllable-by-syllable processing is likely psychologically more real than letter-by-letter processing for skilled reading (Ehri 1997).

When modeling with children, use the materialization techniques 4, 5, and 6 together. Start by having the child stretch out the sounds in a word. Next have the child finder spell to determine how many boxes are needed. Make the sound and letter boxes to accommodate the appropriate number of sounds represented on the fingers. Then finger spell the word again, placing a letter in the appropriate box to match the sound designated for each finger immediately after the child says that sound. The sequence is (1) stretch out the sound, (2) finger spell, (3) draw the sound letter box for the number of fingers used, (4) supply a letter for each sound as you finger spell again.

7. **Word Sorting with Word Cards.** Sorting word cards into columns based on spelling patterns is conceptual, hands-on, collaborative, student-friendly, theoretically based, and supported by empirical research (Bear et al. 2000; Brown and Morris 2005; Gentry 2004; Zutell 1992a, 1992b). This instructional approach intended to develop automatic pattern recognition and improve analogizing and correct spelling, in my opinion, is one of the best brain-based strategies for developing word-specific knowledge for both reading and writing. Word sorting capitalizes on the brain’s search for patterns and its propensity to respond to repetition. Sorting words on word cards is a wonderful hands-on instructional activity with a plethora of sorting options to keep the repetition interesting, including teacher-led sorts, individual sorts, buddy sorts, and speed sorts. A complete description of the word-sorting technique is provided in Chapter 7.

Now you are ready to consider three additional techniques that may be used effectively with Phase 0 learners, which also become important routines for writers at Levels 1 and 2: use of scaffolded writing, use of private speech, and adult underwriting. These techniques become the backbone of the beginning writer’s writing workshop. They give tadpole writers early independence and directly connect writing and reading. In my view, scaffolded writing, private speech, and adult underwriting are key components of writer’s workshop for Level 0–2 beginners.

**Use of Scaffolded Writing.** Bodrova and Leong (1998) define scaffolding as types of assistance “that make it possible for learners to function at higher levels” (4–5) and attribute the term *scaffolding* to Bruner (Wood, Bruner, and Ross 1976). The scaffold is a support necessary for the learner to complete a task at a level higher than the child’s independent level of functioning. Once the student is
able to complete the task independently, the scaffold is removed. Scaffolding resonates with the Vygotskian concept that what the learner can do today with assistance, he or she can do tomorrow independently (Vygotsky 1987).

Bodrova and Leong outline a five-step scaffolding technique for beginners:

1. The child chooses a topic and draws a picture. He or she selects words that go with the picture or tell a related story.

2. The child draws lines for each word in the message with a highlighter. Longer stories may be planned in sections with the child writing one sentence or phrase at a time. Often lines are longer for “longer words” containing more phonemes. For example, *elephant* gets a longer line than *bee*.

3. The child uses private speech: he or she rehearses the phrase or sentence to be written, matching each highlighted line with a word in the sentence by saying the sentence out loud and pointing to the line where the word will be written.

4. The child says the word that corresponds to a line in the message and then writes it on the line at whatever level he or she is able (i.e., using no letters, random letters, beginning and ending letters, a letter for each sound, or using chunks of phonics patterns). Sometimes the child needs to go back and rehearse the message to figure out what word comes next in the sequence.

5. If the message has more than one sentence or phrase, the child highlights and writes one sentence or phrase at a time. Eventually the child will discontinue the use of the highlighted line and write independently without the scaffold. (1998, 9–10, reported in Gentry 2005, 123–24)

At Level 0 the writing scaffold may consist of a line for a one-word label or two or three lines for a two- or three-word phrase. The child draws the scaffold (e.g., three lines drawn with a yellow marker) and rehearses the message to be written, “reading” the words to be put down on the lines using private speech.

**Use of Private Speech.** Bodrova and Leong (1998) describe use of private speech as self-directed regulatory speech used by the learner to give himself or herself auditory directions to support the development of new mental actions, and they attribute the technique to Galperin (1969, 1992). Private speech serves as a temporary mechanism and is dropped once the process is internalized. One use of private speech by beginners is to internalize the correct spelling of a high-frequency word. For example, they are often observed to say something like: “Oh, I know that one, it’s the, t-h-e, the.” Private speech is also in use when the child repeats the words to be written in the scaffold over and over until they are internalized. Once a child has decided to write *my truck goes fast*, he draws four lines for the scaffold and points to the line that matches each word as he repeats “My truck goes fast.” He might repeat the private speech pointing to the appropriate line for each word several times—“My truck goes fast. My truck goes fast”—until the intended message is internalized and the child knows the line for the word’s
appropriate placement in the scaffold. Sometimes the child begins writing, for example writing the first two words, *My truck,* and then uses private speech to rehearse—"My truck goes"—to determine which word comes next in his writing. I have found modeling the use of private speech to be extremely helpful in giving very early writers a sense of independence (Gentry 2005).

**Adult Underwriting.** Adult underwriting is a variation of an instructional reading technique called *language experience approach* originally developed by Russell Stauffer (1969, 1980) and R. Van Allen and Van Allen (1966). In a wonderful teacher's guide for teaching writing in kindergarten entitled *Kid Writing* (1999), Eileen Feldgus and Isabell Cardonick adapted aspects of language experience approach specifically for kindergarten writing workshop and labeled the technique “adult underwriting.” Adult underwriting is the corrected version of the child’s writing, but as Eileen Feldgus would say, it's done “in a praise mode.” I recommend writing the adult version at the bottom of the page below the full version of the child’s writing as opposed to writing the adult version directly under each child’s word, to keep the integrity of the child’s version intact. Adult underwriting is not a “correction” of the child's piece but a readable adult version appearing on the page with the child's writing, which is important because many Level 1 and 2 samples of children’s writing cannot be read, even by the writer, after a period of time. The teacher's version should have the same words on each line that the child used to make it easy for the child to do the voice to print match and to make it easier for the child to reread the adult version from memorization. In a shared-reading format, the teacher and child practice reading both the kid writing and the adult underwriting alternately with the teacher first prompting by saying, “Read the kid writing.” Then the teacher prompts by saying, “Now try the adult writing” and offers encouragement such as "Wow, you are such a good reader!" Eventually most of the reading is from the adult version, which excites the child because he or she is reading from the "harder" version. The teacher encourages this behavior with prompts such as “My goodness! You can read the adult writing!” This process connects writing directly with beginning reading instruction. Often the level of text in the adult underwritten copy of the child's writing is a close match for the child's guided reading level. For example, a Level 1 or 2 writer might be placed in a guided reading Level A book such as *The Pancake* by Roderick Hunt. Characteristics of level A books are that there are usually three to five words on a page, a clear print to picture match, often a repeated sentence stem, and the topic is an age-appropriate concept that children are familiar with, in this instance, “pancakes.” These are exactly the same characteristics of typical samples of adult underwriting of children’s writing samples at the early stages of writing, so the adult underwriting is excellent age-appropriate reading material for the child. Three examples of adult underwriting for samples of Level 0, Level 1 and Level 2 writing are presented in Figure 6.7.
When teachers use the terms *kid writing* and *adult writing* sensitively, they convey to children that children aren’t expected to write like adults and give them confidence to do productions in “kid spelling.” It is an affirmation of their work. Notice the agreement with this terminology and the brain research that suggests that there are two systems, or two distinct modulations in learning to read—first *beginning reading* (and writing) and later *skilled reading* (and writing). In the first “beginning readers must analyze a word”; in the second, “skilled readers identify a word instantaneously” (Shaywitz 2003, 78). Notice that the notion of “kid writing” versus “adult writing” is in perfect agreement with my tadpole versus frog metaphor for reading and writing, which is precisely why I think the Feldgus and Cardonic work was groundbreaking on a practical level in making the reading and writing connection in the classroom. In the first
instance, beginning, the child activates slow and analytical circuitry. In the later instance, skilled, the child likely activates an area of the brain that accommodates automatic recognition. I believe activation of the automatic “word form” area coincides with the occurrence of breaking the code when a child is able to recognize many sight words and phonics or spelling patterns. Only then can the brain see the regularity in print by recognizing chunks of phonics patterns as well as over one hundred one-syllable, high-frequency “sight words,” which also serve as models for analogues and syllable chunks in polysyllabic words. This theory is a good fit with neuroscientists’ reports of activation of an area of the brain that reacts to whole words and patterns, an area that Shaywitz calls the “express pathway to reading” (Shaywitz 2003).

At beginning levels, it makes perfect sense for teachers to mediate children’s writing by supplying the “skilled version” or adult written version of the child’s written message for children who are writing at Levels 0–2 as a “reading” scaffold. When this is done, the child is able to read the adult underwriting over and over, ultimately being able to read what they wrote—in adult writing—from memory.

**Instructional Intervention for Phase 1 Writers**

As with the previous level, let’s start by seeing Phase 1. Level 1 writing is demonstrated in Figure 6.8. Notice that the writer is using what seems to be random letters and that the letters do not match the sounds in the words being written. If children are not functioning as Level 1 writers by the middle of kindergarten, early intervention is necessary. The instructional measures recommended in the Intervention Blueprint are also appropriate for any normally functioning Level 1 writer in kindergarten.

Level 1 is important because the child now uses the building blocks of reading and writing, namely, letters. The critical aspect of your instruction is to show the child how letters in alphabetic languages represent sounds.

**Major intervention strategies for level 1**

Depending on the Level 1 writer’s level of sophistication, all of the intervention techniques recommended for Level 0 that have not been exhausted may further develop the Level 1 writer. So glance back at the Level 0 list and note any intervention strategies that seem appropriate to move the Level 1 student forward. Many of the techniques such as the materialization techniques extend through several phases. Major Level 1 intervention strategies include a continuation of teaching letters, sounds, and more sophisticated scaffolding and adult
underwriting. It is important to increase the volume of writing and to provide for independent reading of adult underwriting.

*Continue Assessing Letter Knowledge and Teaching the Letters.* Level 1 writers exhibit varying degrees of alphabetic knowledge. One of my all-time favorite examples of Level 1 writing is a grocery list, written by Dan in precommunicative spelling presented in Figure 6.9. Dan started his list using environmental print he knew from memory—7-Up. Sometimes I ask teachers to guess what he listed in the remainder of the list (see Figure 6.9). Often they guess eggs, fish, and if they are clever they may think the fourth word in the list is mousse, a product Dan might purchase at the grocery store for his hair. Of course, none of these guesses are correct because Dan is at Level 1 and does not yet match letters to sounds. In actuality, Dan’s Level 1 grocery list says 7-Up, milk, Raisin Bran, and doughnuts. Dan didn’t know all of the sixteen letters needed to make his grocery list: u, p, m, i, l, k, r, a, s, n, b, d, o, g, h, and t. (More importantly, he didn’t know how to match letters to sounds.) He did know how to make O’s, S’s, E’s and I’s and he demonstrated a preference for uppercase lettering, which is typical of beginning writers. The uppercase letters are easier to form with fewer configurations such as dots or crosses, and uppercase letters are much more frequently seen in the child’s world of environmental print. Adult underwriting would have exposed Dan to some new letters and would be an appropriate contextual teaching opportunity in a short writing conference. Once the teacher did the adult underwriting, in addition to having Dan read the list, she might query, “Dan, how many of the letters that we have used in the grocery list can you name? I’ll get you started, here’s a U and a P in 7-Up. Let’s see how many letters you know in both the kid writing and in the adult writing.”

*Continue Teaching Sounds and Sound Parts of Words.* At Level 1 work continues with rhyming words and syllable clapping, but emphasis may be placed on beginning sounds for which hand spelling is particularly useful (see the Use Materialization Techniques section for Level 0 on page 53). Once a child can say several words that rhyme with a particular easy, high frequency spelling pattern such as cat: bat, fat, hat, mat, pat, rat, sat—have the child contrast the beginning sounds of these words by finger spelling them. First pronounce cat with the hand held in a balled-up fist position, then hold up the thumb and say the beginning sound /k/—the onset. Extend the hand into the handshake position for
the rime, /-at/. Then reach out and grab the sounds and bring them back into the word as you say “cat” again. Repeat this hand spelling procedure with the other -at words drawing the child’s attention to the changes in the beginning sounds of bat, fat, hat, mat, pat, rat, and sat, for the letters b, f, h, m, p, r, and s, respectively, pronouncing each beginning sound with the thumb held up. Once the child is successful hand spelling words in the same word family, try hand spelling targeted sounds such as the sounds in “h” words as in house, hill, hive, hole, hand, and hut.

**Word Sorting with Word Cards.** Sorting picture cards into columns based on beginning sounds is an excellent instructional and intervention strategy for Level 1 learners. Figure 6.10 shows a picture sort of word cards used to contrast the beginning h and the beginning u sound, which was presented contextually with the learning of the nursery rhyme “Jack and Jill.”

**Scaffolding Writing, Using Private Speech, and Adult Underwriting.** Of course scaffolded writing, private speech, and adult underwriting are indispensable tools for intervention with Level 1 writers. Figure 6.11 shows a Level 1 writer’s work with which these techniques have been employed. Chapter 7 will provide a full explanation of how these techniques are used with a Level 1 learner.

### Instructional Intervention for Phase 2 Writers

As with the previous level, let’s start by seeing Phase 2. Level 2 writing is demonstrated in Figure 6.12. The giant cognitive leap achieved by Level 2 writers is that they begin to match some letters to sounds in their invented spelling. In essence, this is their first actual use of the code as an alphabetic system: it’s the first time they are matching letters to sounds. Most of their initial attempts to write and spell in this phase involve getting the beginning and sometimes ending sounds or other “prominent” sounds but they do not get all of the sounds. The harder middle sounds are often missing, which is to be expected because often these are vowel sounds that are represented by complex patterns—sail or sale, for example. Representing this kind of patterning is very sophisticated and comes later.
Sometimes correct letter-sound correspondences at Level 2 are interspersed with random letters as the child transitions out of Phase 1 into Phase 2, so BCFYT might spell *boat*. In Figure 6.12, Michael demonstrates that he knows the correct spelling for *my*, but it is the invented spelling that guides us to understand what he is able to do with the alphabetic system as a Level 2 writer. He represents the compound word *motorboat* as two words: *motor* and *boat*. I might tend to go with his notion of treating them as two words in the adult underwriting (usually adult writing is presented conventionally), simply because teaching compound words seems over his head at this point, or beyond his zone of proximal development (Vygotsky 1978). Notice that he gets the beginning and prominent /m/ and /t/ sounds in *motor* and the beginning and ending /b/ and /t/ sounds of *boat*. This is a fine example of Level 2 writing. If children are not functioning as Level 2 writers by the end of kindergarten, early intervention is needed. The instructional measures recommended in the Intervention Blueprint are appropriate for any normally functioning Level 2 writer.

Level 2 is important because the child matches letters to sounds in partial alphabetic representations. The critical aspect of your instruction is to show the child how to make full alphabetic representations. The move is from partial phonemic awareness to full phonemic awareness, which signals the move into Level 3.

**Major intervention strategies for level 2**

Many of the instructional and intervention techniques used at previous levels are extended into Level 2. You will find occasions to teach unknown letters, unknown letter-to-sound correspondences, occasions to highlight rhyming words or in some instances syllables, and you may sometimes start out with hand spelling to highlight onsets and rimes with Level 2 writers. But your main coding instruction and intervention will be to move the Level 2 writer to represent all the sounds in a word. You will be nudging the child to produce a letter-for-a-sound invented spellings. The move will be from MT BT to MOTR BOT. The most useful techniques for making this critical move with Level 2 writers is to stretch out sounds in words, finger spell, and use sound and letter boxes. You
will also be moving to greatly increase the volume of writing if you aren’t already getting good volume, because the more the child writes, the more he or she engages the brain circuitry in the critical brain areas for literacy. In this context, you will continue to use scaffolded writing and adult underwriting to great advantage.

**Stretching Out the Sounds in Words with Stretchable Fabric.** Look again at Figure 6.12. Suppose you want to nudge Michael to move from BT for *boat* to BOT—from partial to full alphabetic spelling. Start by having him hold the fabric in front of himself at book-reading level and slowly stretch out the fabric as both you and he pronounce *boat* slowly exaggerating each phoneme: /b/ (stretch), /ɔ/ (stretch some more), /t/ (fabric is fully extended). Then say “boat” and allow the fabric to go back to the original position signifying that the stretched out word is the same as the normal pronunciation of *boat*. Then you might ask Michael how many sounds he heard. If he says “three,” you would say, “Great, now let’s finger spell *boat* on three fingers.” If he gives you an incorrect response say “Let’s try it again: /b/ is the first sound, /ɔ/ is the second sound, and /t/ makes the third sound.” While stretching the fabric again and exaggerating the three sounds the teacher would say, “/b/, /ɔ/, /t/—one, two, three!”

**Finger Spelling.** To finger spell *boat*, put each sound “on a finger” by holding a finger up each time the sound is spoken starting with the thumb. “Boat. OK, Michael, what’s the first sound?” /b/—hold up the thumb. “What’s the next sound?” /ɔ/—stick out the index finger. “What’s the next sound?” /t/—put out the third finger. “Now reach out and grab the sounds!” “Boat!” Now you are ready for sound and letter boxes.

**Sound and Letter Boxes.** Figure 6.13 shows the completed sound and letter boxes for the spelling of *boat*.

Here are the procedures and commentary:

**Teacher:** Michael, since we used three fingers to finger spell *boat*, let’s make three boxes for our spelling. It looks like this. (She draws three contiguous empty boxes.)

**Teacher:** Let’s finger spell *boat* again, only this time we will choose a letter to place into the appropriate box to spell each sound. OK, hold up your thumb. What’s the first sound?

**Michael:** /b/

**Teacher:** How do you spell /b/?

**Michael:** With a b.

**Teacher:** OK. Put a b in the first box.
Teacher: What’s the next sound?
Michael: /ɔ/ (He holds out his index finger as he says /ɔ/.)
Teacher: How do you spell /ɔ/?
Michael: With an o!
Teacher: OK. Put an o in the next box.
Teacher: What’s the last sound?
Michael: /t/ (He holds out his third finger as he says /t/.)
Teacher: How do you spell /t/?
Michael: With a t.
Teacher: Great. Put a t in the last box. Say Michael, that’s a great kid spelling for boat. You got all the sounds! You are really a good kid speller!

Scaffolded Writing and Adult Underwriting. Scaffolded writing, private speech and adult underwriting continue to be indispensable tools for intervention with Level 2 writers. Figure 6.14 shows Michael’s Level 2 sample after these techniques have been employed. Chapter 7 will provide a full explanation of how these techniques are used with a Level 2 learner.

Instructional Intervention for Phase 3 Writers

As with the previous level, let’s start by seeing Phase 3. Level 3 writing is demonstrated in Figure 6.15. The Level 3 writer crosses the threshold into full phonemic awareness using a new strategy for inventing a spelling by supplying a letter for each sound in the word. By this time in development, it is not unusual for many words in the child’s writing to be correctly spelled, as is the case in the three little pigs story in Figure 6.15. But most of the invented spellings are spelled by supplying a letter for a sound, as you see in the sample: MUTHR for mother, OT for out, WOD’S for woods, LITL for little, BUNDL for bundle, UV for of, CTRO for straw, SED for said, and GIV for give. Of course, English orthography, for the most part, works in chunks—not a-letter-for-a-sound. So the major instructional goal for coding instruction at Level 3 is to help the child recognize chunks of phonics patterns. You must move him or her to spell to use chunks, to spell by analogy to known spellings,
and to recognize and correctly spell lots of high-frequency one-syllable sight words, which are often used as phonics chunks in polysyllabic words.

**Major intervention strategies for level 3**

Word walls, hand spelling the rime, and word sorting with word cards are particularly useful instructional and intervention techniques for Level 3 writers. At the same time you will be dropping the writing scaffold and dropping the adult underwriting, but continuing to increase the volume of writing. Using a comprehensive research-based spelling book to provide a curriculum for word-specific knowledge to the rest of the literacy program is also paramount to assessing the Level 3 learner’s literacy growth.

**Word Walls.** Word walls are opportunities to highlight high-frequency words using materialization strategies such as clapping and chanting the spellings to commit the words to memory. I view the word wall as a big classroom dictionary and its function is to expose children to the words often enough through repetition to transfer these words into automatic sight recognition in the dictionary in their brain. The goal is accurate, automatic word recognition. Word wall work begins in kindergarten (see Chapter 8) generally with about two words being added each week, and becomes a prominent part of the first-grade curriculum stepping up to five words per week. Typically, many children are at Level 3 at the end of kindergarten and during the first half of first grade. At the end of thirty weeks, theoretically, first graders would have had repetition and exposure to word wall words to the extent that they recognized over 150 words on sight (five words per week multiplied by thirty weeks). I believe recognition of over one hundred words on sight is a huge factor in breaking the code and activating the word form area or Area C (occipito-temporal area) of the brain.

Pat Cunningham has written extensively about word walls in *Phonics They Use* (1995) and she collaborated with Richard Allington on the topic in a wonderful book entitled *Classrooms that Work* (Cunningham and Allington 1994). I did a synthesis on word walls in *The Literacy Map: Guiding Children to Where They Need to Be (K–3)* (Gentry 2000b). Each of these sources may extend the overview provided here.

Select a wall in the classroom with space for displaying the letters of the alphabet in alphabetical order including space under the letter for displaying high-frequency words alphabetically by first letter in columns. (See Figure 8.3.) Some teachers like for word walls to be low enough for children to detach the words and always large enough so that they may be seen easily seen from anywhere in the room.

Each week new high-frequency words for reading and writing are gleaned from the literacy activities the children engage in—generally two words per week in kindergarten and five words per week in first grade. The teacher focuses attention on these words using materialization techniques such as write, clap, and chant to help the children commit the words to memory. The word wall
grows throughout the year and children constantly refer to it. While the major intent and easier challenge for children is to learn to read the words automatically, the word wall also serves as the child's first dictionary for writing. Many children learn to spell many of the word wall words perfectly. The teacher conducts word wall practice daily following certain routines.

1. Pronounce the word distinctly.
2. Present the word in context.
3. Have children say the word and clap and chant the spelling.
4. Conduct ten-minute practice sessions.

Various practice strategies are used for about ten minutes each day such as the following:

**Clap, Chant, and Write.** After the teacher calls out a word a student finds it on the wall. Then everyone pronounces the word, and claps and chants the spelling. “Cat, c-a-t, cat.” It’s a version of the ancient ABC method of learning to read that was practiced in the American colonies!

**Letter and Rhyme.** “Write the word that rhymes with fig and begins with p.”

**Guess the Missing Word.** The teacher holds up prepared sentence strips and uses cloze procedure to have the children write the missing word in sentences such as “Little pig, little, pig ________ me come in!” Sometimes he/she gives a sound or letter cue.

**Word Wall Sentences.** After about forty-five words are on the wall, the teacher can dictate short sentences made up of word wall words such as “this little pig went home.”

**Read My Mind.** Children number a sheet of paper from one to five. The teacher selects a secret word and gives appropriate clues highlighting beginning letters, chunks, vowel patterns, rhymes, or semantic and syntactic clues. After five clues everyone should have guessed the word. (Adapted from Cunningham and Allington 1994)

In my view, word wall work is certainly a brain-based activity allowing for the kind of repetition and engagement that leads to automatic word recognition, and along with pattern work (working with phonics chunks) eventually plays an important role in helping children break the code.

**Hand Spelling the Rime.** This is a variation of the hand spelling activity described on page 53 adapted for more advanced learners who are being nudged to pay attention to the chunking patterns in rimes. The activity begins by focusing on the rime in the handshake position and having children spell the rime chunk in words such as /d/ /-ay/, day; /bl/ /-ake/, bake; and /n/ /-ail/, nail; in this instance, drawing attention to three chunking patterns for the long a sound.
Word Sorting with Word Cards. Level 3 learners start with easy first-grade level patterns such as high-frequency word families, short vowels, and eventually perhaps a few short vowel and e-marker contrasting pairs. The word study sheet in Figure 6.16 is an example of a second-grade-level pattern sort appropriate for Level 4.

FIGURE 6.16 Word Study Sheet for a Second-Grade-Level Long a Sort
Sorting activities include a pretest to determine if the child knows the pattern being studied, teaching the sort by calling attention to the attributes of the pattern (teacher-led sort), and practicing the sort.

In the word study sheet in Figure 6.16, the teacher would first call out the sixteen words in a pretest, before the child sees the word study sheet. If he or she spells a high percentage of the words correctly, he or she knows the pattern. The target or instructional level is about 50 percent correct. (This only works if you are working from a researched-based word study sheet for which the words have been selected based on word frequency and word use studies.) If the child scores a low percentage on the pretest the sort is too difficult and a lower-level sort would be chosen.

The word study sheet will be cut into sixteen words for sorting. Much like the *to*, *with*, and *by* shared reading technique developed by Don Holdaway (1979) in which the reading is modeled *to* the children, then done *with* the children, then done *by* the children, the word sorting procedure works the same way. The sorting is modeled *to* the children, then done *with* the children, then done *by* the children. The teacher-led sort is an opportunity to teach the pattern, to show how the pattern might contrast with another pattern, and to model how the sort is done. In the second-grade-level sort to be conducted from the word study sheet presented in Figure 6.16, the teacher might begin by hand spelling the words to focus on the chunk that has a pattern for spelling long *a*:

- **Bay** /*b/, /*-ay*/ (hand spelling). What pattern makes the /ä/ sound in *bay*?  
  **Answer:** -ay

- **Mail** /*m/, /*-ail*/ (hand spelling). What pattern makes the /ä/ sound in *mail*?  
  **Answer:** -ai (VV) (two vowels together)

- **Flame** /*fl/, /*-ame*/ (hand spelling). What pattern makes the /ä/ sound in *flame*?  
  **Answer:** VCe (vowel consonant silent e)

Once the teacher points out the patterns explicitly, the group shares in the sorting of the words under the direction of the teacher so that he or she may draw attention to important pattern elements. Words are sorted into the four columns, words like *able*, words like *flame*, words like *bay*, and words like *mail*.

When the children understand the concept for the patterning in the sort, they are ready to cut the word study sheet into sixteen word cards and sort on their own. They may conduct individual sorts, buddy sorts, and speed sorts with one partner doing the timing. Word sorts are written in column formation in the pupil’s individual spelling journal to keep a record of which sorts have been studied and to provide practice writing the pattern in column formation. The
second-grade-level sort modeled in Figure 7.16 on page 87 would be appropriate for a Level 4 writer.

If children are not functioning as Level 3 writers by the middle of first grade, early intervention is necessary. The instructional measures recommended in the Intervention Blueprint are appropriate for any normally functioning Level 3 writer.

Level 3 is important because the child matches letters to sounds in full alphabetic representations and its signature is that Level 3 readers and writers have moved to full phonemic awareness. The critical aspect of instruction at Level 3 is to show the child how to make the move to reading and spelling in chunks of phonics patterns so that instruction should move them to full phonemic awareness and eventually to chunking, which signals the move into Level 4.

**Instructional Intervention for Phase 4 Writers**

As with the previous level, let’s start by seeing Phase 4. Level 4 writing is demonstrated in Figure 6.17. The giant cognitive leap achieved by Level 4 writers is that they abandon the letter-for-a-sound strategy and begin to spell in chunks of phonics patterns. This is the final giant step toward breaking the code. It’s the first time they are matching sound parts of words to chunks of English spelling patterns. The move is from a spelling such as UNITD for *united*, to YOU-NIGHTED. The spelling of *boat* might move from BOT to BOTE, analogizing with *note*. The move is from full phonemic awareness to recognizing that the regular patterns in English print are a complex system of chunks of letters that correspond to sound parts of words. Note the following chunking exemplars and other examples of word-specific knowledge in the Level 4 sample in Figure 6.17:

<table>
<thead>
<tr>
<th>Good THING to Eat</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like STRALBARES and I like ORRANGE.</td>
</tr>
<tr>
<td>I like tomato SUPE and I like PECHIS.</td>
</tr>
<tr>
<td>I like apples and I like BROCLE.</td>
</tr>
<tr>
<td>I like COLEFLAWARE TO, you know.</td>
</tr>
<tr>
<td>I like corn and I like green BENES.</td>
</tr>
<tr>
<td>I like FRIDE CEKEN and I like BARBO Q CEKEN TO.</td>
</tr>
<tr>
<td>But most of all I like HO MAED SPOGATE.</td>
</tr>
<tr>
<td>THOSS things are good for you.</td>
</tr>
<tr>
<td>That’s why I put them down.</td>
</tr>
</tbody>
</table>

**FIGURE 6.17** Level 4 Writing
Many first-grade-level words are correctly spelled automatically.
A number of sophisticated spelling patterns—oo in good, ea in eat, -ike in like, kn in know, or in corn, ow in down, are correctly spelled.

The contraction, that’s is correctly spelled.

Some polysyllabic words such as tomato, and apples are correctly spelled.

Liberal use of chunks of acceptable phonics patterns appear in invented spellings: STRAL-BAR-ES (perhaps dialect influenced), OR-RANGE, PE-CHIS, BRO-CLE (perhaps reduced to two syllables in her dialect), CO-LE-FLAWORE, and SPO-GA-TE.

The CVCe long vowel pattern is amply used in invented spellings such as SUPE for soup, WORE for the last syllable of cauliflower, BENES for beans, and FRIDE for fried.

**Major intervention strategies for level 4**

All of the instructional and intervention techniques used at Level 3 are extended into Level 4 with increased emphasis on word sorting and explicit spelling instruction. The idea is to expand the child’s word-specific knowledge once the child is recognizing patterns and analogizing. Your main coding instruction and intervention will be to move the Level 4 writer to increase the number of phonics patterns and high-frequency words in his or her repertoire and to begin to recognize which of the phonetically acceptable patterns in English are conventional, correct spellings. The move might be from MI MOTR BOT (Level 3) to MY MOTUR BOTE, consolidating the correct spelling of a high-frequency word such as my, analogizing, and spelling polysyllabic words in syllables with chunks of acceptable phonics patterns. The most useful techniques for making this critical move with Level 4 writers are to engage in a number of spelling and chunking exercises such as word sorting, making and writing words, chunking columns, chunking drills, and of course, explicit spelling instruction. You will also continue to move to greatly increase the volume of writings and reading, because the more the child writes and reads, the more he or she engages the brain circuitry in the critical brain areas for literacy.

**Word Sorting.** The word sort presented in Figure 6.16 is actually a Level 4 sort. Word sorting extends the Level 3 levels of sorting by broadening the patterns and moving up a degree in sophistication. While a Level 3 sort might contrast the CVC words with different short vowels working with words such as cap, hat, pet, hen, bit, rip, hop, got, and cut or pup. The Level 4 sort might move to contrasting these patterns with the comparable e-marker long-vowel pattern such as cap and cape, pet and Pete, bit and bite, hop and hope, and cut and cute. Word knowledge grows by degrees and at each grade level the patterns being sorted will grow in sophistication.
**Chunking Columns** (a version of making and writing words). I made up a game called “chunking columns” tailored somewhat after *Making Words* (Cunningham and Cunningham 1992) and *Making and Writing Words* (Rasinski and Oswald 2005). Chunking columns focuses on important patterns in words that come out of the books or writing that is happening in class. I start with easily recognized patterns but move to very sophisticated use of the same pattern in much more sophisticated polysyllabic words. It goes something like this:

**Teacher:** If you can write *ho, ho, ho*, you can write *so*! (Student writes *so.*)
If you can write *so*, you can write *no*. (Student writes *no.*)
If you can write *so*, you can write *so long*. (Student writes *so long.*)
If you can write *no*, you can write *no-tice*. (Student writes *notice.*)
If you can write *so* you can write *so-lu-tion*. I help the student with the chunks such as *-tion* in *solution* if a chunk other than the target chunk is unknown. Then we practice reading the list in column formation until the student reads the words quickly and accurately:

- ho, ho, ho
- so
- no
- so long
- notice (no-tice)
- solution (so-lu-tion)

Here’s another example of what a final chunking column might look like:

- ton
- money (mon-ey)
- Monday (Mon-day)
- son
- person (per-son)
- personal (per-son-al)
- personality (per-son-al-i-ty)

I find that Level 4 writers love this activity and that it gives them great confidence as readers and writers along with a feeling of accomplishment with really big, mature words.

**Column Drills.** I find that sometimes when students and I encounter words in reading or writing, it’s great to decontextualize the word at the end of the authentic reading or writing activity to practice a chunk that might have been misidentified. For example, the following column drill grew out of a reading in
which the student miscued on the words *bit* (CVC) versus *bite* (CVCe) and is based on the respective short- and long-vowel patterns.

hop hope  
at ate  
pet Pete  
bite

Sometimes I have the student write the words and sometimes I write them. Then we drill until we can read them quickly and with accuracy.

*Explicit Spelling Instruction.* I have written extensively about the need for explicit spelling instruction in *The Science of Spelling: The Explicit Specifics That Make Great Readers and Writers (and Spellers!)*. Spelling instruction is to frogs as coding instruction is to tadpoles; that is, it’s just as imperative to teach spelling to “frogs” as it is to teach phonemic awareness and phonics to “tadpole” readers and writers. In effect, explicit spelling instruction is the natural continuation of coding instruction. Teaching spelling is complex, multifaceted, and important. It is grossly underrated in most American schools and many of the resources teachers receive for teaching spelling are inadequate. Correct spelling is something all teachers must teach. Once writers reach Level 4, the importance of teaching spelling explicitly becomes exceedingly apparent. If we don’t teach correct spelling and expect children to grow in degrees of word specific knowledge throughout elementary school, THAY MAE STEEL BEE RIGHTING LIEK THAY ROTE WHIN THAY FERST MOOVED TO LEVEL 4.
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