

# Early Writing: An Exploration of Literacy Opportunities

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## Abstract

Early writing experiences provide children with instances in which they may learn the processes and concepts involved in getting meaningful messages into print. This study examined the opportunities low-progress first-grade children had in learning to use strategies while writing a brief message in daily interaction with a Reading Recovery teacher. Specifically, three strategies for writing words were investigated: (a) writing known words, (b) analyzing new words by hearing and recording sounds in words, and (c) analyzing new words through analogy with known words. Eighty-two Reading Recovery children from eight states were the subjects for this study. Data were collected from the children's writing books, writing vocabulary charts, records of text reading, and the teachers' daily lesson records. Analyses demonstrated that low-progress children acquire a considerable amount of knowledge about words, about letters/letter clusters and their sounds, and about the orthography of the language in a relatively short period of time. Limitations and implications of this study are discussed.

Writing involves a complex series of actions. Children have to think of a message and hold it in the mind. Then they have to think of the first word and how to start it, remember each letter form and its features, and manually reproduce the word letter by letter. Having written that first word (or an approximation), the child must go back to the whole message, retrieve it, and think of the next word. Through writing, children are manipulating and using symbols, and in the process learning how written language works. (Fountas & Pinnell, 1996, p. 14-15)

Few would challenge the importance of writing in early literacy development (Clay, 1975, 1982, 1991, 1993, 1998; Dyson, 1982, 1984; Ferreiro & Teberosky, 1982; Harste, Woodward, & Burke, 1984; Read, 1986; Teale & Sulzby, 1986; Treiman, 1993). The reciprocity between reading and writing is also acknowledged in the literature (Clay, 1982, 1998; DeFord, 1994; Irwin & Doyle, 1992; Morrow,

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1997; Shanahan & Lomax, 1986; Teale & Sulzby, 1986; Tierney & Pearson, 1983; Tierney & Shanahan, 1991).

Young children approach the task of writing a message with communicative intent. The central process that underlies all aspects of writing is meaning. Yet to communicate a message requires development in the conventions of writing (Hiebert & Raphael, 1998). Children already compose messages in conversation. Teachers, then, can help children to compose and write stories by going from ideas to spoken words to printed messages (Clay, 1998).

While the essence of writing is the construction of meaningful messages, in early writing experiences children also learn a host of things about the processes and concepts involved in getting these messages on paper. For example, the daily writing of a story produces a wealth of opportunities to explore the printed form of the written language. Gibson and Levin (1975) listed eight graphic or design characteristics of writing. These design characteristics describe what children learn about the graphic display of the spoken language:

1. Language is formed by tracings on a surface.
2. Writing is rectilinear.
3. Writing is unidirectional.
4. Writing has a fixed orientation.
5. Writing is patterned.
6. Writing has gaps (or spaces) in the graphic display.
7. Written units are roughly equal in size.
8. Writing has various forms that are not usually mixed.

(pp. 165-167)

Through their daily writing experiences, children not only have frequent opportunities to explore these design characteristics of our written language, they also are required to engage in many complex processes related to print. For example, Clay (1998) asserts that while creating a story in print, a child must do some of the following:

- attend closely to the features of letters
- learn about letters, distinguishing one from another
- access this letter knowledge in several different ways
- work with letter clusters, as sequences or chunks
- work with words, constructing them from letters, letter clusters, or patterns
- work with syntactic knowledge of what is likely to occur in the language and what does not happen
- use their knowledge of the world to compose the message and anticipate upcoming content
- direct attention to page placement of text, directional rules, serial order, and spaces
- work with some sense of the sequence rules and probability status of any part of the print
- break down the task to its smallest segments while at the same time synthesizing them into words and sentences (pp. 130-131)

Within the task of writing continuous text, children have opportunities to learn about the many concepts that dictate the way in which language is written down (i.e., conventions of print). Children use a variety of strategies as they produce written texts, and three strategies for writing words are the focus for this study: (a) writing known words, (b) analyzing new words by hearing and recording sounds in words (phonology and orthography), and (c) analyzing new words through analogy with known words (Bissex, 1980; Clay & Watson, 1982; Ehri, 1979; Elkonin, 1973; Goswami, 1986; Goswami & Bryant, 1990; Henderson, 1982; Henderson, 1986; Juel, Griffith, & Gough, 1986; Read, 1971, 1975, 1986; Teale & Sulzby, 1986; Treiman, 1993). Reading Recovery teachers engage first-grade children in opportunities to gain control of these three strategies for writing words in daily writing interactions as part of this early intervention literacy program.

The purpose of this study was to explore the opportunities low-progress first graders have for learning to use these strategies while writing a brief message in a daily interaction with a teacher, in this case a Reading Recovery teacher. The following questions guided the study:

- What opportunities for acquiring and using a writing vocabulary of known words are evident in the writing activities of low-progress first-graders in a Reading Recovery setting?
- What opportunities for learning about and using phonological and orthographic principles are evident in the writing samples of low-progress first graders in a Reading Recovery setting?

## Writing in Reading Recovery

Reading Recovery (Clay, 1991, 1993) is an early intervention program for first-graders, delivered by one teacher to one child, that provides a cognitive apprenticeship setting for children who are the lowest performing in their classrooms on literacy tasks. In each Reading Recovery lesson, following a brief conversation with the teacher, the child constructs a short story, usually one or two sentences, based on personal experience or on a book recently read. The writing of the child's orally composed messages is initially shared by the teacher and child. The child writes all that he or she can independently, but the teacher provides assistance as needed until the child takes more control of the task and little teacher help is required.

An unlined book is used for writing these stories. The child's story is written on the bottom page while the top page has working space for problem-solving with the teacher's guidance. The work space is used for the child to engage in strategic processing behaviors such as hearing and recording sounds in words, rehearsing known and almost known frequently used words, and attending to possible analogous relationships.

In Reading Recovery lessons, the interactive framework is a process of scaffolded learning (Clay & Cazden, 1990; Hobsbaum, Peters, & Sylva, 1996). During the writing portion of the lesson, the teacher provides enough support to help the child accomplish tasks that will lead to new learning. The teacher structures the situations so that the child grows into increasingly more complex actions and

becomes independent in using these actions in future situations. The highly scaffolded interactions in Reading Recovery, then, help to facilitate a child's learning of 'how to learn' in new settings (Lyons, Pinnell, & DeFord, 1993).

The data presented in this study were gleaned from Reading Recovery lessons because this setting allowed for examination of daily writing samples across a series of lessons. The study is not about Reading Recovery itself, but rather about opportunities for young children to learn about printed language during a brief daily interaction with a teacher. Implications for classrooms follow from the impact of engaging young children in the written construction of the language. Following are explanations of the three strategies comprising the focus of this study: writing known words, hearing and recording sounds in words, and analyzing new words through analogy.

### Writing Known Words

Children need to know that sometimes you simply have to know how to write or spell a particular word. There are at least two important reasons for children to acquire a core of words that they know how to write in every detail.

First, as the frequently used words of the language become known, they require less attention and free the writer to attend to other challenges of producing written text. Learning to write frequently used words fluently "helps the child to practise producing the sequence of letters needed for that word and to do this with a minimum of attention. . . like having a little movement programme for producing that word" (Clay, 1993, p. 30). Furthermore, children seem to make sense of the hierarchical relationship of letters to words as they begin to acquire a writing vocabulary.

The frequency principle which applies to all features of all languages must influence opportunities to learn in both reading and writing (Clay, 1998; Clay & Watson, 1982; Gibson & Levin, 1975; Treiman, 1992). Frequency "usually ensures repeated exposure and thus repeated encounters.... Usage continues to be confirmed until mastered, or known in every respect, or until the response is (almost) automatic. Such (almost) automatic learning supports and provides context for new learning" (Clay, 1998, p. 154).

Wilde (1989) argued that beginning at a relative early age, ownership (such as writing words without having to stop and think about them) is probably the most common spelling strategy. She suggested that this spelling strategy involves knowing how to spell a word and knowing that one knows.

The second reason for acquiring a writing vocabulary is that known words can be used to analyze new words through analogy. Children can see similarities in words, and the "ways words work" become more obvious as children construct words in writing (Clay, 1991; 1993). The importance of analogy is discussed later in this section.

In Reading Recovery, teacher assistance for building a writing vocabulary involves opportunities for children to practice writing newly acquired frequently-used words fast, fluently, and flexibly. Additional opportunities over several days bring the word to a point of writing it with a minimum of attention. The teacher then expects the child to initiate the writing of known words in stories indepen-

dently. The learner not only comes to control more and more high-frequency words, but also shifts from laborious writing of those known words to fluent production (Clay, 1993).

### Hearing and Recording the Sounds in Words

Writing is more potent than reading in forcing children to come to grips with the alphabetic principle (Treiman, 1993). Goswami and Bryant (1990) concluded that although it is difficult to find a connection between phonological awareness and children's reading, there is a strong connection between phonological awareness and children's spelling in writing. They argued that there is abundant evidence that children depend on a phonological code when they are working out how to spell words. Ferreiro and Teberosky (1982) and Harste, Woodward, and Burke (1984) have also shown that writing provides opportunities for children to develop their understandings about how the sounds of language are mapped onto written letters. Treiman (1993) offered support for writing's contribution to sound-letter relationships:

For first graders, the many benefits of independent writing outweigh the costs. Writing requires children to think about the sounds and meanings of spoken words, to observe the characteristics of printed words, and to form hypotheses about the relations between sounds and letters. All of these activities are of great value in helping children grasp the alphabetic nature of the English writing system. (p. 289)

When writing new words, a useful strategy is to say the word slowly, hearing its sound sequence and attempting to record the appropriate letters for the sounds. Elkonin (1973) wrote that "...it is very important to use a method from the beginning that will provide the child with a correct orientation to the role of the sounds in language and acquaint him with the correct sound form and structure of words" (p. 556). He defined sound analysis as "...the operation of arranging the succession of sounds in a spoken word. In the process of accomplishing such an operation, the child discovers the basic principle of constructing the sound form of words" (p. 559).

Clay (1977) called for a close look at Elkonin's goals. "He uses the word's sound form. He says that sound analysis is the operation of arranging the succession of sounds in a spoken word. This is not the same as determining the separate sounds contained in a word" (p. 11). Sounds of a word are altered by surrounding sounds and have different qualities from the same sounds spoken in isolation. The "attributes of each phoneme spill over into that which precedes and that which follows" (Adams, 1990, p. 69). In speech, information about two or more successive phoneme segments is carried on the same piece of sound (Liberman, 1974).

Goswami and Bryant (1990) suggested that "phonological awareness" is a blanket term, representing different ways in which words and syllables can be divided into smaller units of sound. They cited syllables, phonemes, and intra-syllabic units such as onset and rime as types of phonological awareness.

Writing supports phonological awareness, but it also forces children to experiment with the orthography of the language. In addition to learning the graphemic representations of sounds, children learn to cope with English irregularities, the

morphological basis of the English writing system, the use of digraphs, and the consonant clusters in the spoken language (Treiman, 1993). Both the phonology and the orthography of English are related to constructing written text from the beginning of writing experiences.

Gibson and Levin (1975) suggested that in writing, orthographic rules govern what sequence of letters and groups of letters may be put together to form words. They reported that in English orthography, there are two separable issues that are often confused: the orthographic rule system (legal letter sequences) and the relationships between these written sequences and the spoken language. The early English writing system abandoned regular letter/sound correspondences to reflect linguistic functions such as word origins, inflectional and morphological units, and differences in word meanings.

Because English has only 26 letters that map on to more than 36 phonemes, the orthographic cipher of English is very complex (Gough, Juel, & Griffith, 1992). Byrne (1992) described the orthographic stage of reading as reached “when the child uses letter groups to identify words, ideally by correspondence to morphemic units, and when the route from print to the lexicon is not necessarily via phonology” (p. 5). Similarly, Gentry (1977) argued that English orthography is a complex, abstract system representing deeper levels of language than the surface sound continuum.

It appears impossible to separate the phonology and the orthography of the language for young readers and writers. Orthographic classification schemes are not sufficient to explain first graders’ spellings; Treiman (1993) suggested that it is also important to consider the words’ sounds:

Even first graders seem to have a fairly sophisticated knowledge of the relations between phonemes and graphemes in English. They know that many phonemes have more than one possible spelling. They know that some spellings of a particular phoneme are more common than others. Moreover, children know that the spelling of a phoneme may depend on the phoneme’s context. (p. 279)

In Reading Recovery, teacher assistance for hearing and recording sounds in words is based on an adaptation of Elkonin’s (1973) work. Elkonin suggested a five-step teaching sequence based on Russian pedagogy: establishing the concept of the task; mastering the operation with objects; mastering the operation at the level of overt speech; mastering the operation with objects; transferring the operation to the mental level; and operating entirely at the mental level. Clay’s (1993) procedures for hearing and recording sounds in words are modified from Elkonin, with the sequence determined by finding the problem and searching for a solution. Procedural choices include articulating and, if necessary, using a mirror in order to hear the sounds; using boxes for each sound to be written; attending to spelling using boxes for letters; and working without boxes.

### Analyzing New Words Through Analogy

In addition to an awareness of the phonology of the spoken language and the orthography that controls the written form, children also need to understand that they can use their knowledge about phonology and orthography to get to new

words by analogy (Bruck & Treiman, 1992; Ehri & Robbins, 1992; Goswami & Bryant, 1990). While some children tend to use analogy easily in writing, others seem to benefit from explicit attention to phonological and orthographic links.

“As the core of known words builds in writing, and the high-frequency words become known, these provide a series from which other words can be composed taking familiar bits from known words and getting to new words by analogy” (Clay, 1991, p. 244). In addition, she said:

Knowing forty to fifty words will cover almost all the letters, many high frequency words, many common-letter clusters, and some orthographic or spelling patterns useful for getting to other words by analogy, in either reading or writing. This small writing vocabulary plays host to almost all letter knowledge and quite a variety of the letter-cluster knowledge. The words can be constructed or remembered, or taken apart and used in analogies. (Clay, 1998, p. 149)

Children can use their known words to solve new words. For example, the known word sock can be used to analyze new words such as block, and the known word and can be used to analyze new words such as landed. The knowledge of the word going may help children in analyzing other words that end with ing.

When children understand that words that have sounds in common also frequently share spelling sequences as well, they have a powerful way to figure out how to read and write new words. “They can use the spelling pattern in one word to work out the sound of another word with the same spelling sequence, and to decide how to spell a word which rhymes with a word that they know how to spell already” (Goswami & Bryant, 1990, p. 78).

Although some may argue that analogy is a sophisticated strategy used by older children, Goswami and Bryant (1992) suggested that younger children “may be perfectly capable of using analogies in reading if they know the words on which analogies are meant to be based” (p. 57). Baron (1977) suggested that analogy is a strategy used naturally even by kindergartners. It is a general cognitive strategy used by young children in much categorizing behavior.

A study by Ehri and Robbins (1992) supported Goswami’s (1986) claim that reading unfamiliar words by making analogies to known words is easier for beginners than reading unfamiliar words by phonologically recoding the words. However, their findings also indicated that in order for beginners to read words by analogy, they must have phonological recoding skills. The acquisition of the orthographic cipher gives children the ability to generate spellings — when they have been seen the word before and when they have not.

Reading Recovery teachers assist children in generating from what they know to what is new. They point out similarities in words and letter sequences as children construct words in written text. They make explicit links to phonological and orthographic knowledge that the child already controls. Observed changes across time generally reveal that children first use what they know in response to the teacher’s prompt; then they see relationships between something they need to write and something they know; finally they initiate the use of what they know about letters and words to get to a new word (Clay, 1993). Selected recorded examples of

links made by a teacher or child during Reading Recovery writing lessons are shown in Table 1.

Teachers also explicitly demonstrate that there are alternative ways of getting to new words by providing children with many opportunities to apply alternatives flexibly. These opportunities include problem-solving new words through sound analysis and through multiple experiences with the use of analogy in applying orthographic features and patterns. Adams (1990) commended the Reading Recovery program for explicitly recognizing the importance of phonological and linguistic awareness.

In summary, in the writing of continuous text, children have opportunities to engage in these strategies (writing known words, hearing and recording sounds in words, and analyzing new words through analogy) and it was the purpose of this study to explore them.

## Method

### Subjects

Children served in Reading Recovery are first graders who are identified as the lowest achieving in the class on literacy measures. They work with a specially trained teacher in a one-to-one setting for 30 minutes daily in reading and writing texts. The goal of this short-term early intervention is to enable these children to use reading and writing strategies effectively and independently so that they can function successfully in average settings within the regular classroom.

Subjects for this study were 82 Reading Recovery children from eight states (Arizona, Illinois, Louisiana, Massachusetts, Nebraska, Ohio, Texas, and West Virginia). Of the 82 children, 56 were male and 26 were female. Forty-one children were Anglo, 19 were African-American, 6 were Hispanic, and two were Asian. No ethnicity was recorded for 14 children.

**Table 1.** Selected Examples of Links Made During Writing in Reading Recovery Lessons

Lesson Number	Word to Be Written	Links to Known
3	dog my	Teacher linked beginning to known word <u>dad</u> . "It starts like <u>dad</u> ." Teacher linked beginning to known word <u>mom</u> . "It starts like <u>mom</u> ."
18	spooky	Teacher linked to known word <u>too</u> .
20	carnival	Child wrote known word <u>car</u> then moved on to analyze the rest.
21	win	Teacher linked to known word <u>in</u> .
25	farm	Teacher asked, "What do you know that starts like that?" Child wrote <u>far</u> then added the <u>m</u> .
26	flying	Teacher linked known word <u>my</u> to get to <u>fly</u> .
27	his	Child linked known word <u>is</u> to get to <u>his</u> .
29	candy	Child linked to known word <u>can</u> and teacher linked to <u>baby</u> .
43	stay	After writing <u>stay</u> , child says, "Look, it's like <u>day</u> and <u>play</u> !"

The Reading Recovery teachers of these children represented 37 different training sites and had a wide range of experience in the program: 18 were in their training year, 36 had one to three years of experience, and 21 had more than three years in Reading Recovery.

### Data Sources

Major sources of data included each child's writing book, writing vocabulary chart, record of text reading, and the teacher's daily lesson record. A Reading Recovery child's writing book includes the stories written daily as well as all work completed on a practice page, indicating how the teacher supported the writing. Daily lesson records include information about teacher decisions during the writing portion of the lesson and about the child's contributions to the production of the text. The writing vocabulary chart is a weekly record of each child's known writing vocabulary as it is acquired across the program. The record of text reading level is a weekly account of the texts that were read, including accuracy and self-correction indicators. These records are routinely completed by Reading Recovery teachers during daily lessons or weekly charting of progress.

### Procedures and Analyses

All Reading Recovery observational records for 100 Reading Recovery children were collected from across 8 states representing 37 districts/sites. Training sites were asked to send complete folders for children who began Reading Recovery service at the beginning of their first-grade school year and who successfully completed the program. These two criteria were established in order to maintain a common standard for describing the sample population: children who began first grade among the lowest in a class cohort and whose accelerated progress returned them to an average setting in their classrooms. Complete records were available for 82 children.

In order to limit redundancy, procedures and analyses are described concurrently with specific findings in the following section.

## Findings

### Writing Vocabulary

Three interesting findings emerged from the analysis of children's writing vocabulary opportunities and were related to frequency, change over time, and the relationship between words children were writing and those appearing in books they were reading.

First, all of the words used in all daily stories written by 82 children were listed and analyzed for frequency distribution. There was no natural break in the frequency ranking, so an arbitrary decision was made to consider 24 words for further analysis as the most frequently written words. There was a dramatic range in frequencies across these 24 words — from 1944 occurrences for the most frequently written word I to 167 for the word you. There were 10 words that appeared 300 or more times and 14 words that appeared between 167 and 299 times. Collectively,



**Table 3.** Sample Stories from One Child During First Quartile and Fourth Quartile of the Reading Recovery Program

First Quartile	<ul style="list-style-type: none"> <li>I like the panda bear.</li> <li>I put up a toy train.</li> <li>A turtle can swim.</li> <li>Dad was at work all night.</li> </ul>
Fourth Quartile	<ul style="list-style-type: none"> <li>The giant roared at the people to get some food. The giant was going to hit the people with his bommyknocker.</li> <li>The little critter didn't want to clean his room but he did.</li> <li>What has an eye but can't see? What goes up when the rain comes down?</li> <li>It's my brother's birthday today and a lot of people will come.</li> </ul>

**Table 4.** Changes in Control of Writing Vocabulary for One Child Across Time

Entry	End of Program			
Words written correctly before entry into Reading Recovery: Writing Vocabulary Test	Words written correctly and independently during brief daily writing experiences across Reading Recovery lessons			
a	about	did	like	thing
go	Alex	digging	look	this
lan	all	do	man	to
me	am	door	mess	Travis
mom	and	eat	milk	tree
no	are	eye	Mr.	two
on	as	fall	Mrs.	turning
	ask	fast	my	uncle
	at	fire	not	until
	ate	for	of	up
	be	fun	off	us
	bee	funny	old	wash
	bell	get	one	we
	big	going	or	Wesley
	boo	good	pan	wet
	book	got	people	what
	boy	grammar	pig	will
	but	he	red	win
	by	here	sad	wind
	can	hi	see	with
	can't	him	she	wonder
	car	horse	so	work
	come	I	ten	yes
	cow	I'll	the	yesterday
	cut	is	them	you
	dad	it	then	your
	date	joy	they	zoo
				zoom

fication of high frequency words in reading was accomplished by analyzing reading texts used by 20 randomly selected children. Weekly records of text reading were used to select the texts. One book per week was analyzed. All of the words from all of the texts were analyzed for frequency of occurrence.

Of the 24 most frequently occurring words in reading texts and the 24 most frequently occurring words in the children's writing, 15 words appeared on both lists. The words children wrote were often of a personal nature, including ones such as I, my, me, we, and mom, along with verbs accompanying personal actions such as like, got, went, can, was, said, and going. High frequency reading words not appearing on the writing list included pronouns such as he, they, and she, and story-specific words such as little, and old.

### Evidence of Opportunities to Explore Phonological and Orthographic Principles

Children's writing books, teachers' lesson records, and writing vocabulary charts were used to explore linguistic opportunities in the writing samples. The first analysis involved an examination of all words that children had an opportunity to write (the total corpus of words used) for linguistic features including initial consonants, initial consonant blends, consonant clusters, vowel combinations, rimes, inflectional and derivational endings, etc.

Three explanations are needed. First, no one child experienced all of the opportunities described; data were aggregated across all subjects. However, the aggregated data indicate the breadth of possibilities. Second, because all stories were comprised of words children wanted to write, there was no predetermined sequence. Opportunities were possible because no control was placed on what the children could explore while recording their messages. Third, all of the stories were written with the support of a teacher who was able to provide scaffolds for the child to learn about a multitude of conventions of written messages.

Analyses of opportunities revealed multiple exposures to consonants. For example, the letter m appeared in the children's writing an average of 27 times per child in the initial position alone. As shown in Table 4, the child had known words to serve as exemplars for most initial consonants (all consonants except k, q, v, and x).

Collectively, children's writing showed opportunities to write more than 25 different initial consonant blends, as well as numerous consonant digraphs and clusters (see Table 5). Children used at least 25 different vowel combinations in their writing, representing multiple sounds (see Table 6). Most inflectional endings were represented, as well as more than 25 different morphological derivational endings (see Table 7). More than 200 different rimes were represented in the combined writing samples of these low-progress children. In addition, writing samples included abbreviations, compound words, contractions, possessives, silent letters (e, b, k, gh, etc.), and more than 4,764 multi-syllable words.

As with the acquisition of a writing vocabulary, opportunities for acquiring linguistic understandings differed among individual children. Unique individual profiles revealed no sequence for acquisition of patterns across all children. Each had laid a personal foundation for more understanding of linguistic features. Opportunities provided by this simple teaching interaction were rich, as shown in

**Table 5.** Consonant Blends, Digraphs, and Clusters Represented in Children's Writing

Initial Consonant Blends				Consonant Digraphs and Clusters (Initial and Final)		
bl	gl	sk	squ	ch (chick)	ph (f)	th (hard)
br	gr	sl	st	chr (Chris)	ng	th (soft)
cl	pl	sm	str	ck	qu	thr
cr	pr	sn	sw	gh (ghost)	sh	wh
dl	sc	sp	tr	gh (silent)	ch	
fl	scr	spr	tw	ght		
fr				(double consonants as ss, ll, etc.)		

N = 82

**Table 6.** Vowel Combinations Represented in Children's Writing

ai	ei	oo (book)	ow (brown)
ar	eigh	oo (door)	ow (grow)
au	er	oo (food)	oy
aw	ew	or (motor)	ue
ay	ey (alley)	or (for)	ui (build)
ea (bear)	ey (Breyers)	ou (could)	ui (juice)
ea (ear)	ey (they)	ou (country)	ur
ea (earth)	ie	ou (coupon)	
ea (spread)	ir	ou (course)	
eau (beauty)	oa	ou (house)	
ee	oi	ou (ought)	

N = 82

**Table 7.** Endings Represented in Children's Writing

Inflectional Morphemes			Derivational Morphemes			
-d	ed,	ied	-able	-ence	-ful	-ly
-ing			-al	-ent	-ible	-ment
-s,	-es,	-ies	-ate	-er	-ie	-or
(third person singular verb)			-ator	-ery	-ier	-ous
-s,	-es	, -ies	-el	-ess	-ious	-tion
(plural)			-en	-est	-le	-y

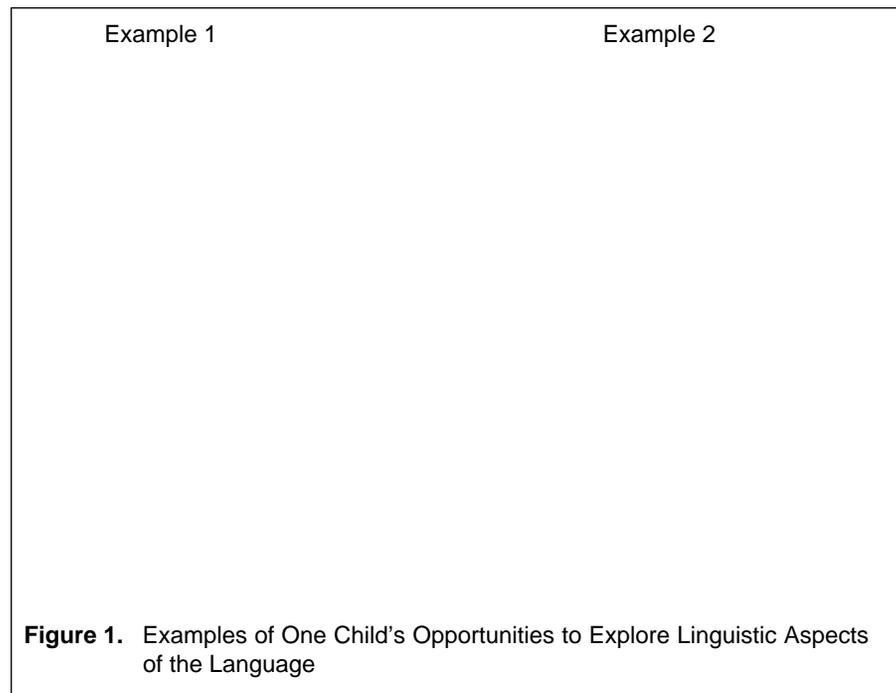
N = 82

Figure 1 which illustrates two examples of one child's opportunities to explore linguistic aspects of the language.

In example one, the child was working in sound boxes (one box for each sound). Teaching interactions provided the child opportunities to explore sounds and the letter(s) representing those sounds. Particular opportunities to explore sound analysis are shown in the sound boxes on the practice page: ow in the word down, sh in the word shot, and er in the word Joker.

In example two, the child was working in letter boxes (one box for each letter). This framework assisted the child to attend to the mismatch between the sounds of the language and the way in which we spell words. In this single writing episode, the child had an opportunity to deal with spelling patterns in tooth (oo and th), ee in sleep, wh in when, and the silent e in gave. In addition, the child had to attend to the double letter in dollar in writing his story.

A final analysis focused on changes in children's independent use of letter-sound relationships in their writing. There was evidence of increased control of phoneme-grapheme correspondence within continuous text across time. At the beginning of the intervention, 38% of the phonemes in the children's stories were represented by the correct grapheme without teacher assistance. By the end of the intervention, more than 80% of the phonemes were correctly and independently represented by the children.



The children in this study were in classrooms representing a variety of environments for writing opportunities. It is acknowledged that the classroom literacy experiences of these children were not controlled nor are they reported here. However, this study does provide compelling evidence that a brief negotiation of a written sentence or two each day between a teacher and a low-progress first grader yields numerous opportunities for the child to learn many things about how their language is written down.

This study was about opportunities. Within the task of writing continuous text, with teacher assistance, a child has opportunities: (a) to learn about the conventional features of written language; (b) to explore the phonology and orthography of the English language; (c) to acquire a writing vocabulary representing words known in every detail; and (d) to use this core of known words representing a wide range of linguistic features and patterns to generate new learning through analogy. Based on data gathered in this study and the current knowledge about early writing behaviors, we can support the importance of early writing in developing these strategies that were the focus of the study and substantiate that control can shift from teacher-assisted performance to self-regulated performance across time even with low-progress first graders. In the following sections each of these strategies is discussed briefly.

### Acquiring and Using a Writing Vocabulary

Findings in this study revealed that in both writing and reading, very few words are high frequency words when viewed as aggregated data. At this early stage, “known words” involve a unique set of words known to the individual learner. While much attention was given in this study to the most frequently written words across the programs of 82 children, it is important to note that all children had control of many words other than those identified as high frequency words. This finding is consistent with Ehri’s (1992) suggestion that “sight” words in reading are not limited to high frequency words and irregularly spelled words, but include all words read often enough to initiate the formation of connections into memory. For reading and writing, then, it could be said that a frequency principle operates uniquely for individual learners.

It is important to remember that the teachers did not set out to “teach” these particular words to children. Children composed messages and in the process of writing these messages gained control over high frequency words in situations in which they initiated the task. Teachers then supported the child in rehearsing the words so that they became (almost) automatic.

It would be unfortunate if the list of high frequency words identified in this study were used as a teaching list for classrooms or were thought of as a suggested sequence for teaching. “The important insight . . . is that a frequency principle operates in these early attempts to write and that easy words are controlled early and provide (a) opportunities to practise these words [and] (b) opportunities to attend to new words” (Clay & Watson, 1982, p. 20).

These data also support the notion that children demonstrate individual profiles in acquisition of writing vocabulary. Children acquired different words at different rates across their programs, providing a compelling argument for including opportunities for children to write their own messages with assistance from a supportive teacher. There appears to be a unique power when children learn from the construction of their own messages.

### Learning About and Using the Phonology and Orthography of English

The present study offers evidence that daily writing experiences provide children with multiple opportunities to explore the code that governs the sounds of the language and their graphic representations. When writing, children have multiple opportunities to learn about letters and the sounds they make, including even the production of letters. In this study, the 24 high frequency writing words alone provided massive practice in producing 19 of the 26 letters: a, c, d, e, f, g, h, i, k, l, m, n, o, r, s, t, u, w, y.

In the writing component of Reading Recovery, children are encouraged to hear and record sounds as they analyze new words. They progressively move through a series of procedures adapted from the work of Elkonin (1973). Therefore, the opportunities in this setting that served as the context for the study included both the writing activity itself and the teacher support in doing a phonemic analysis. Massive opportunities were provided through the daily writing of sentences for children to hear and record sounds including vowels and vowel combinations representing multiple sounds, to learn about consonant frameworks, and to gain understandings about the spelling processes involved in representing these sounds. The teacher support included sharing the writing of the difficult parts specific to each child.

To demonstrate such opportunities, the words analyzed on the practice page by one child with the teacher’s support were recorded. Samples of words analyzed in sound boxes (i.e., a box for each sound) across this child’s program included the following: like, nice, sand, stand, top, him, bike, cross, got, boy, drove, can, miss, pool, broke, down, she’s, home, her, bed, cold, head, call, and, crashed, wing, joker, shot, drove, jump, climbed, hill, with, him, flew, space, landed, will, old, want, threw, gang, out, his, gun, apples, hugs, then, took, floor, teacher, when, and fell. This child also had the opportunity to analyze words in letter boxes (i.e., a box for each letter) such as the following: tooth, lost, sleep, when, gave, dollar, show, moon, will, wash, mud, wish, just, house, drove, penguin, second, first, little, would, most, made, spell, turned, boat, water, them, start, had, goalie, kept, pucks, always, stuff, and throw.

When writing words, as in reading them, there are regular words, exception words, and ambiguous words (Goswami & Bryant, 1990). Regular words are those that are sounded and spelled the same way (e.g., dish). Exception words violate the predictable spelling of the rime (e.g., said would be expected to end with ed). Ambiguous words are those for which there are several possible ways to spell the sounds (e.g., beef).

The present study demonstrates how children in a daily writing activity have opportunities to explore all three categories. For example, the child represented

earlier in Table 4 worked with multiple examples of regular words (e.g., fast, big), exception words (e.g., come, to), and ambiguous words (e.g., be, bee, eat). Writing opportunities present “the vagaries of written language to the child in a more valid form than most sequenced reading and writing curricula, and yet it is an approach in which the poorest performers of the age group succeeded” (Clay & Watson, 1982, p. 30). The child develops a sense of the possibilities that exist in language in a context that is not distorted by an over-emphasis on the regularities.

The 24 most frequently written words from this study alone provided exposure to alternative sounds of vowels within words, introducing children to the flexibility needed in handling letter-sound relationships in English. For example, alternative sounds for the letter o were represented in the frequently written words to, on, got, for, you, and going.

Irregularity of the English writing system is a source of difficulty for children learning to spell in English, but it is not the only problem. Other difficulties include the morphological basis of the English writing system, the use of digraphs, the consonant clusters in the spoken language, and the reality that English letter names are not always a helpful guide to spelling (Treiman, 1993). In this study, children had multiple opportunities (see Tables 5-7) to deal with all of these challenges in a supportive instructional environment.

Writing provides children with multiple opportunities to use a variety of linguistic features and patterns. Their writing also affords opportunities to experiment with abbreviations, compound words, contractions, possessives, silent letters, and multi-syllable words. Table 8 illustrates the opportunities experienced by one Reading Recovery child in his written stories.

### Developing the Potential for Using Analogy to Write New Words

As young children acquire a writing vocabulary and have opportunities for learning about the phonological and orthographic principles of written language, they also have the opportunity to apply these understandings to the generation of new words by analogy. With this knowledge, some children will solve new problems by analogy easily in writing, while others may require a teacher’s explicit attention to phonological and orthographic links.

Sources of data for this study were restricted to written records. There was no consistent account of verbal interactions between children and teachers, making it

**Table 8.** Additional Opportunities Within One Child’s Written Stories

Exemplars From KNOWN Words	Opportunities From All Stories Written
<ul style="list-style-type: none"> <li>• 4 proper names</li> <li>• 15 multisyllable words</li> <li>• 2 abbreviations</li> <li>• 2 contractions</li> <li>• 10 vowel combinations representing different sounds</li> <li>• 3 different r-controlled vowels</li> </ul>	<ul style="list-style-type: none"> <li>• 7 contractions</li> <li>• 5 possessives</li> <li>• 7 compound sentences</li> <li>• 7 complex sentences</li> <li>• 30 inflectional endings</li> <li>• 97 multisyllable words</li> <li>• 17 proper names</li> <li>• punctuation (period, question mark, exclamation mark, apostrophe, hyphen)</li> </ul>

difficult to document the use of analogy. Daily lesson records often revealed evidence that attention was given to the process of using what was known to get to something new, but these notations could not be considered all-inclusive. It was also difficult to determine who initiated the link from the known to the unknown.

What we do know is that when a child has an independent strategy for working out new words by using knowledge he already possesses, he has the power to push his own knowledge further and to gain more independence in the writing task. The child is then learning how to analyze words and how to become an observer of how words work in his language (Clay & Watson, 1982).

Knowing many different words enhances a child’s opportunities for getting to new words he needs to write. Writing opportunities in which children compose their own messages encourage them to attempt to construct a wide range of words, allowing them to begin to sense something about the rules and the vagaries of the way English is written down (Clay, 1998). The words (exemplars) controlled by children in this study included both the regularities and the irregularities of the language. The wide range of exemplars should contribute to flexibility and fluency in using analogy to solve new problems when writing continuous text.

### Some Final Observations

Findings from this study reveal that low-progress children can acquire considerable knowledge about words, about letters/letter clusters and their sounds, and about the orthography of the language in a relatively short period of time. In addition to classroom writing opportunities, children composed and wrote a message with a Reading Recovery teacher for approximately 10 minutes daily for an average of 17 weeks during the first half of first grade.

This study also contributes to the growing evidence that children take unique, individual paths in their acquisition of written language. There is clearly no identified sequence emerging with implications for instruction.

“When teaching supports self-initiated writing, more child-generated learning results. Like children learning to speak, writers who wish to be understood learn to put messages on the page in ways that comply with the adult reader’s assumptions about written messages” (Clay, 1998, p. 133). Therefore, opportunities for individual exploration permit learning opportunities that will lead children by different paths to common outcomes.

Another implication arising from this study relates to the role of teacher assistance. The type and amount of teacher assistance was not readily available in analyzing the data for this study. However, in the context of Reading Recovery, children’s opportunities and actions were combined with supportive teacher interactions. There is support for such assistance in the literature. For example, Cazden (1992) suggested there are three points on a continuum of social assistance between teachers and children: discovery without a teacher’s help, revealing, and telling. She cited Reading Recovery’s writing component as one that helps children attend to sounds in their own speech. She used the Reading Recovery procedure adapted from Elkonin’s (1973) work to illustrate the concept of “revealing:”

For learners, the activity of having to slow pronunciation in order to match the finger action makes possible a new kind of attention to the sounds of their own speech. The teacher's language is directed to involving the child in the activity, in which the child will come to attend in a new way. Thus a teaching technique has been developed that successfully teaches phonemic awareness by revealing the sound structure to the child without explicitly telling the child linguistic labels or orthographic rules. (Cazden, 1992, p. 307)

Cazden suggested there are at least two reasons that revealing can be more helpful than telling for young learners. First, information gained from telling is often not available for later use. Second, telling about how written language works may risk oversimplifying complex reality.

Gibson and Levin (1975) also cited the importance of teacher assistance. They argued that while the learner himself must search for and discover patterns for transfer of a high level of abstraction to occur, specific help is also a crucial element:

But it was clearly better to have attention directed to search for invariant features in the stimulus array, and finding them seemed to lead to repetition of the successful strategy and thus to consistently accelerated performance. This is perceptual learning, not just remembering something. Learning to abstract spelling patterns involves active participation by the scholar, not memorizing a verbal rule or simply being shown. (p. 301)

Clay (1998) offers the following teaching moves that could be used to support children's writing:

- bringing the topic into the conversation
- maintaining interactive ease
- prompting constructive activity
- accepting partially correct responses
- playing with anticipation
- asking the child to "learn" something
- lifting the difficulty level
- increasing accessibility of the ideas
- supporting performance
- asking the child to work with new knowledge
- accepting child involvement
- developing attention . . .
- praising strategic behavior
- revisiting the familiar (p. 155)

This study also demonstrates that opportunities to learn when writing have some relationship to opportunities for learning when reading. While the relationship between reading and spelling is not perfect, the store of knowledge that children use for spelling words is similar to the store of knowledge they use for reading (Treiman, 1993). For example, writing requires the child to deal with the distinctive features of letters, to learn about words and how they work, to acknowledge the importance of letter order and spatial concepts, and to learn about con-

ventions such as punctuation and capitalization. Therefore, much learning and many operations needed in early reading are practiced in another form in writing.

Clay (1991) suggests that the processes of reading and writing provide opportunities for children to learn important concepts: (a) links between messages in oral language and messages in printed language; (b) aspects of print to which they must attend; (c) strategies for maintaining fluency, exploring detail, increasing understanding, and correcting errors; (d) feedback mechanisms that keep productions on track; (e) feed-forward mechanisms that keep processing behaviors efficient; and (f) strategies for relating new information to what is already known. While writing knowledge serves as a resource that can help the reader, the reciprocity does not occur spontaneously (Clay, 1993). Again, the teacher's role is important in directing the child to use what he knows in reading when he is writing and vice versa.

While many questions remain, this study of opportunities makes a case for the importance of writing for first graders who are taking their first steps into literacy learning. There is evidence that the lowest-achieving children at the beginning of first grade benefit from opportunities to construct and produce a short story with the supporting guidance of a teacher. Children move toward self-regulated behaviors in writing stories independently, incorporating strategic processes that include hearing and recording sounds in words, acquiring a core of known words, and having opportunities to use known words and features of words to generate new learnings through analogy.

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