

Don Potter's Alphabet  
Writing and Identification  
Fluency Materials

*The Precursor to  
Accurate and Fluent  
Reading and Spelling*

Teaching “Total Recall of the Alphabet”

Prepared by Donald L. Potter  
Odessa, TX

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**TAP THE ALPHABET**  
**MANUSCRIPT LOWERCASE**

a b c d  
e f g  
h i j k  
l m n o p  
q r s  
t u v  
w x y z

**TAP THE ALPHABET**  
**MANUSCRIPT UPPERCASE**

**A B C D**

**E F G**

**H I J K**

**L M N O P**

**Q R S**

**T U V**

**W X Y Z**

**TAP THE ALPHABET**  
**CURSIVE LOWERCASE**

*a*      *b*      *c*      *d*

*e*      *f*      *g*

*h*      *i*      *j*      *k*

*l*      *m*      *n*      *o*      *p*

*q*      *r*      *s*

*t*      *u*      *v*

*w*      *x*      *y*      *z*

**TAP THE ALPHABET**  
**CURSIVE UPPERCASE**

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

## Alphabet Tapping Exercise

a      b      c      d

e      f      g

h      i      j      k

l      m      n      o      p

q      r      s

t      u      v

w      x      y      z

### Instructions

1. Have the students use their index finger to physically tap each letter in in ABC order while saying the names of the letters. They can use the alphabet song to help them, but make sure they are tapping the correct letter that goes with the name.
2. Once they can tap each letter in sync with the alphabet song, have them tap the letters from left to right starting with different rows.
3. Next, have them name the letters tapping from top to bottom, bottom to top, and right to left.
4. Finally, have them identify the letters by randomly pointing at the letters.

Note: The **purpose** of this exercise is to make sure that students are **completely focused** on learning each letter and not mindlessly singing the alphabet song. Mere master of the song is not a sure sign of mastery of the alphabet, nor is it much of an aid in learning since it can be memorizes long before the student can identify any of the letters. This is an amazingly powerful method for forming a strong association (bond, connection) the letterform to the letter name.

## Alphabet Mastery Exercises

a b c b b c c a b b c a c b a c c a

c a c c b c d e f e f d f e d f e f f

e d f f d e e f f d f g h i g g i i g

k i g h h h i h i g g g i g i h h g g

j k l j j k l l j l k l l j k k j j j k l

k l j m n o m o m o n n n o m n m

o o m o o o n o n m p q r r p q q q

p q p q r r p r p r p r p p s t u

s u s t s u t u t t s s s t s u t s u u

u s v w x y z z v w x x w w y z x

w y w y z x y z v v y z y x v x z x

y x w w z x y v.

## Alphabet Mastery Exercises

A B C B B C C A B B C A C B A C C A

C A C C B C D E F E F D F E D F E F F

E D F F D E E F F D F G H I G G I I G

K I G H H H I H I G G G I G I H H G G

J K L J J K L L J L K L L J K K J J J K

L K L J M N O M O M O N N N O M N

M O O M O O O N O N M P Q R R P Q

Q Q P Q P Q R R P R P R P R P P S

T U S U S T S U T U T T S S S T S U T

S U U U S V W X Y Z Z V W X X W W

Y Z X W Y W Y Z X Y Z V V Y Z Y X

V X Z X Y X W W Z X Y V.



# Don Potter's Alphabet Flashcards for *Developing Instant Recall of the Alphabet*

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These Flashcards are designed to help teachers and parents teach the youth of today the high-level reading skills of an effective phonics-first method.

There are only two basic ways to teach reading: from the "sounds" or from the "meaning." A student that learns to read from the "sounds" using phonics-first, with no admixture of sight-words or whole word guessing, develops high level, dyslexia-free reading abilities. Visit [www.blendphonics.org](http://www.blendphonics.org) and [www.donptter.net](http://www.donptter.net) for phonics programs to use with these flashcards.

The **first step in reading** is to know the alphabet well.

These flashcards are presented to you free from Donald L. Potter's [www.donpotter.net](http://www.donpotter.net) web site. These cards may be reproduced and used freely for non-commercial educational purposes. (Revised 9/2/08, 11/12/10, 8/12/11)

A B C D

E F G

H I J K

L M N O P

Q R S

T U V

W X Y Z

a b c d

e f g

h i j k

l m n o p

q r s

t u v

w x y z

THE ALPHABET

a b c d  
e f g  
h i j k  
l m n o p  
q r s  
t u v  
w x y z

THE ALPHABET

A B C D  
E F G  
H I J K  
L M N O P  
Q R S  
T U V  
W X Y Z

A a A a

Card 1: ā

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B b B b

Card 2: bē

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C c C c

Card 3: cē

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D d *D* *d*

Card 4: *dē*

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E e *E* *e*

Card 5: *ē*

F f

F f

Card 6: ěf

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G g

G g

Card 7: ġē (Note the single-dot ġ represents the /j/ sound)

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H h H h

Card 8: aych

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I i I i

Card 9: ī

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J j J j

Card 10: *jā*

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K k K k

Card 11: *kā*

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L l L l

Card 12: ěl

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M m M m

Card 13: ěm

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N n N n

Card 14: ěn

O o O o

Card 15: õ

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P p

P p

Card 16: pē

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Q q

Q q

Card 17: cū

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R r R r

Card 18: ř

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S s S s

Card 19: š

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T t T t

Card 20: tē

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U u U u

Card 21: ū = /yoo/

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V v V v

Card 22: vē

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W w W w

Card 23: double-ū

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X x X x

Card 24: ěks

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Y y Y y

Card 25: wī

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Z z Z z

Card 26: zē

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# Alphabet Letter Recognition Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_

School \_\_\_\_\_ Uppercase LPM \_\_\_\_\_ Lowercase LPM \_\_\_\_\_

## Upper Case Manuscript

I E A Z W S O K G C X

T P L H D U Q M Y V R

N J F B

## Lower Case Manuscript

u q m y v r n j f b x

t p i d l e a z w s o

k g c h



# Alphabet Letter Recognition Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_

School \_\_\_\_\_ Uppercase LPM \_\_\_\_\_ Lowercase LPM \_\_\_\_\_

## Upper Case Cursive

U L M Y V R J

F B X I P L H

D L E A Z W S

O K G C N

## Lower Case Cursive

i e a z w s

o k g c x t

p l h d u q

m y v r n j

f b

## INSTRUCTIONS FOR GIVING THE ALPHABET FLUENCY TEST

There are two parts to the Alphabet Fluency Test:

1. **Alphabet Recognition Fluency.** Ask the student to say the names of the letters as quickly as he or she can. To find the speed in letters per minute, (LPM) divide 1560 by the number of second it took them to identify the letters. (The factor 1560 comes from multiplying 26 by 60.).
2. **Alphabet Writing Fluency.** Ask the student to write the alphabet from *a* to *z* as fast as they can. The timing is the same as for the Alphabet Recognition Fluency. Notice pencil grip, letter formation, legibility, reversals, stress, seating posture, tendency to correct letters, etc.

Kindergarten students should be able to write the alphabet from *a* to *z* at 40 letters per minute. Each grade level thereafter should increase about 10 letters per minute by the end of the next year.

Alphabet fluency is a good predictor of later reading success. My experience giving this simple assessment has changed my ideas of the importance of having “total recall of the alphabet.” Many older students with reading difficulties will score low on both parts of the assessment. This is a clear indication that they did not receive adequate instruction in alphabet fluency and need remedial work in letter writing and identification.

A foggy (blurred) knowledge of the alphabet leads to a foggy (insecure, inaccurate) recognition of words in their serial spelling aspects and difficulties in recall.

Most reading problems could be prevented by teaching student to write and spell in fluent, legible hand all the words in a comprehensive developmental phonics program like Hazel Loring’s *Reading Made Easy with Blend Phonics for First Grade*.

Remember to teach the student that we spell with the letter names, and we read with the letter sounds. This distinction should always be kept in mind. The letter names should be taught before and separate from the letter sounds.

By Donald L. Potter 3/22/12, Odessa, TX  
[www.blendphonics.org](http://www.blendphonics.org)

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Odessa, TX

These materials will enable students to develop fluency with the alphabet very quickly. There is convincing evidence that alphabet identification and writing fluency is a very excellent predictor of early student reading and spelling ability.

The use of these materials is very simple, especially when used in conjunction with my edition of Hazel Loring's highly effective 1980 *Reading Made Easy for First Grade with Blend Phonics*.

Clarence Barnhart, the dictionary expert and co-author of the Leonard Bloomfield *Let's Read* reading system wrote, "Under no circumstance should you start to teach your child to read until he has the necessary muscular skills to see the small distinctions between letters of the alphabet. You can tell he has the necessary muscular coordination when you notice that he can button his clothes or see and pick up a pin on the floor." (3)

June Brown in her excellent 1981 *Guide to let's read*, says, "Every child I worked with learned to read providing he or she could see a pin on the floor and pick it up, could button clothes, and *had total recall of the alphabet*. No one can read an alphabet language without total recall of the alphabet. 'Total recall' means that the student can recite the letters in alphabetical order, can identify them when they are presented in random order, and can print any word when it is pronounced and spelled. These three goals must be met with absolute perfection before the student can become a good reader. Unfortunately, many schools do not insist on total recall. They teach children to recite the letters in alphabetical order, and sometimes they teach them to identify the letters in random order. However, very few schools teach children to print any word when it is pronounced and spelled. The foundation of reading success is total recall of the alphabet." (7)

Concerning dyslexia, June Brown had some interesting comments, "Let's get the facts straight! There is no such thing as dyslexia among children who know the alphabet. Any child who can learn the alphabet is not dyslexic. Therefore, if your child knows the alphabet, can see normally, can button clothes, your child can and will learn to read. "Dyslexia" is a very confusing term. Many educators no longer use it because no one is quite sure what it means. Generally it means that a child can only read with great difficulty, but sometimes it means a child cannot read at all. I have seen many children labeled dyslexia. But every one of them who knew the alphabet learned to read." (12)

Bob Rose, in his important book *Forget the Bell Curve*, maintains that there is strong evidence that kindergarten students who are taught to write the letters of the alphabet at a rate of 40 letter per minute will have no problem learning to read. (See the excerpt of Chapter 12 at the end of this document.). Note: Mr. Rose has used the words in Hazel Loring's 1980 *Reading Made Easy with Blend Phonics for First Grade* to teach reading using his methodology

My recommendation for developing fluency is simply have the student write the alphabet from *a* to *z* everyday until they reach the desired fluency as measured by letters for minute. My preference for timing the students is simply to time how long it takes them to write the alphabet from *a* to *z* and divide 1560 by the results in seconds (LPM = 1560/Seconds). The Flashcards are excellent for developing fast letter identification responses and for practice in alphabetization.

# Learning Letter Names

Students should learn the names of the letters of the alphabet as they learn to write the alphabet. The names of most of the letters have elements (hints) of the sound represented by the letter, which are of great assistance to children beginning their first steps in reading. The underlined letters contain at least one of the sounds of the letter in the name: a b c d e f g h i j k l m n o p q r s t u v w x y z.

The following have the sound value at the **beginning** of the letter name:

a /ā/, b /b/, c /s/, d /d/, e /ē/, g /j/, i /ī/, j /j/, k /k/, o /ō/, p /p/, t /t/, v /v/, z /z/.

The following letters have the sound value at the **end** of the name.

f /f/, l /l/, m /m/, n /n/, r /r/, s /s/, x /x/, y /ī/

This leaves only h, q, w, and y to be learned by associations other than the letter name.

Noah Webster's spelling for the names for the letters are very helpful, yet little known today:

a (ā), b (bē), c (cē), d (dē), e (ē), f (ěf), g (gē), h (aytch), i (ī), j (jā), k (kā), l (ěl), m (ěm), n (ěn), o (ō), p (pē), q (cū), r (ar), s (ěs), t (tē), u (ū), v (vē), w (double ū), x (ěks), y (wī), z (zē).

You can download *Blend Phonics* free from [www.blendphonics.org](http://www.blendphonics.org) or my website, [www.donpotter.net](http://www.donpotter.net).

The best method for teaching the sound-to-letter correspondences is the Phonovisual Method, consisting of two easy-to-teach wall charts: Consonants and Vowels. [www.phonovisual.com](http://www.phonovisual.com).

I would like to recommend my own *Shortcut to Cursive* (2014). I created it for the student at the Odessa Christian School in Odessa, TX. It has proven very effective with a wide range of tutoring students from kindergarten up. The evidence of its effectiveness was proven beyond doubt when three of my students at the Odessa Christian School won first for their grade level in an International Handwriting Competition with *Cursive Is Cool*, and I was awarded Outstanding Teacher of the Year. This year (2015-2016) five of my student won prizes for their cursive!

<http://donpotter.net/pdf/shortcut-to-cursive.pdf>

I have also published *Shortcut to Manuscript* on my website for those who prefer to start with manuscript.

<http://www.donpotter.net/pdf/shortcut-to-manuscript.pdf>

For excellent instructional material for teaching letter fluency and the reliable phonics facts be sure and see Mary Pecci's At Last! A reading Method for EVERY Child.

[http://donpotter.net/education\\_pages/mary-pecci-at-last.html](http://donpotter.net/education_pages/mary-pecci-at-last.html)

This document last revised 5/15/14 and 8/30/16 by Donald L. Potter.

# Pangrams

<http://www.rinkworks.com/words/pangrams.shtml>

A *pangram* is a sentence that contains all letters of the alphabet. Less frequently, such sentences are called *holalphabetic* sentences. Interesting pangrams are generally short ones; constructing a sentence that includes the fewest repeat letters possible is a challenging task. However, pangrams that are slightly longer yet enlightening, humorous, or eccentric are noteworthy in their own right.

By far the most well known pangram is, "The quick brown fox jumps over a lazy dog." Frequently this is the sentence used to test out new typewriters, presumably *because* it includes every letter of the alphabet. Curiously, this sentence is often misquoted by changing "jumps" to "jumped." The past tense version, lacking an "s," is not a pangram. Often, too, it is misquoted as "the lazy dog" rather than "a lazy dog." This error is not as grievous; the sentence remains a pangram, just a slightly longer one.

A number of pangrams are given below, listed from longest to shortest.

1. Forsaking monastic tradition, twelve jovial friars gave up their vocation for a questionable existence on the flying trapeze. (106 letters)
2. No kidding -- Lorenzo called off his trip to visit Mexico City just because they told him the conquistadores were extinct. (99 letters)
3. Jelly-like above the high wire, six quaking pachyderms kept the climax of the extravaganza in a dazzling state of flux. (96 letters)
4. Ebenezer unexpectedly bagged two tranquil aardvarks with his jiffy vacuum cleaner. (71 letters)
5. Six javelins thrown by the quick savages whizzed forty paces beyond the mark. (64 letters)
6. The explorer was frozen in his big kayak just after making queer discoveries. (64 letters)
7. The July sun caused a fragment of black pine wax to ooze on the velvet quilt. (61 letters)
8. The public was amazed to view the quickness and dexterity of the juggler. (60 letters)
9. While Suez sailors wax parquet decks, Afghan Jews vomit jauntily abaft. (59 letters)
10. We quickly seized the black axle and just saved it from going past him. (57 letters)
11. Six big juicy steaks sizzled in a pan as five workmen left the quarry. (56 letters)
12. While making deep excavations we found some quaint bronze jewelry. (56 letters)
13. Jaded zombies acted quaintly but kept driving their oxen forward. (55 letters)
14. A mad boxer shot a quick, gloved jab to the jaw of his dizzy opponent. (54 letters)
15. The job requires extra pluck and zeal from every young wage earner. (54 letters)
16. A quart jar of oil mixed with zinc oxide makes a very bright paint. (53 letters)
17. Whenever the black fox jumped the squirrel gazed suspiciously. (53 letters)
18. We promptly judged antique ivory buckles for the next prize. (50 letters)
19. How razorback-jumping frogs can level six piqued gymnasts! (49 letters)
20. Crazy Fredericka bought many very exquisite opal jewels. (48 letters)
21. Sixty zippers were quickly picked from the woven jute bag. (48 letters)
22. Amazingly few discotheques provide jukeboxes. (40 letters)
23. Heavy boxes perform quick waltzes and jigs. (36 letters)
24. Jinxed wizards pluck ivy from the big quilt. (36 letters)
25. The quick brown fox jumps over a lazy dog. (33 letters)
26. Pack my box with five dozen liquor jugs. (32 letters)
27. Jackdaws love my big sphinx of quartz. (31 letters)
28. The five boxing wizards jump quickly. (31 letters)
29. How quickly daft jumping zebras vex. (30 letters)
30. Quick zephyrs blow, vexing daft Jim. (29 letters)
31. Sphinx of black quartz, judge my vow. (29 letters)
32. Waltz, nymph, for quick jigs vex Bud. (28 letters)
33. Blowzy night-frumps vex'd Jack Q. (26 letters)

To figure letters per minute, multiply the numbers of words by 60 and divide that number by the number of seconds it took the child to write the sentence. **Example:** I just wrote, "The quick brown fox jumps over the lazy dog" in 21 seconds.  $33 \times 60 = 1,980$ .  $1,980 \div 21 = 94.28$  letters per minute.

## **INFORMATION ON FLUENCY FROM THE MORNINGSIDESIDE MODEL OF GENERATIVE INSTRUCTION**

Mr. Bob Rose brought the Morningside Model of Instruction to my attention in his thought-provoking book, *FORGET THE BELL CURVE*. In June 2011, I got a copy of Ken Johnson and Elizabeth M. Street's book, *THE MORNINGSIDESIDE MODEL OF GENERATIVE INSTRUCTION: WHAT IT MEANS TO LEAVE NO CHILD BEHIND*, CAMBRIDGE CENTER FOR BEHAVIORAL STUDIES, 2004.

I simply want to show insights that I gained from the book that relate to the nature of fluency as it relates to the development of alphabet letter writing and identification fluency. I have two main point: 1) to show that insufficient fluency does not support student advancement in the same way that higher levels of fluency do, and 2) to encourage teachers to help students achieve the necessary levels of fluency through well designed daily practice exercises.

In the following paragraphs I will present information from that book as a series of quotations with comments. My comments are in [brackets].

The elegance of an instructional program depends on the programmer's ability to detect and teach some minimal response or generative set which can combine and recombine into the universal set of all possible relationships. One is looking, very simply, for the exponential value of key instructional events, in which behaviors that emerge are in a power relationship to the elements which are taught (28f). [Generative is also called "contingency adduction," in which the contingency "draws out" the additional (novel) behavior. Learning the alphabet to fluency is a "key instructional event" which has a "power relationship" (possessing exponential value) with learning to read and spell. The paragraph goes on to illustrate by comparing sight-word and phonics instruction. Sight-word instruction possesses no power-relationship (exponential value) to reading because it does not generalize to other words, phonics, on the other hand, "will reliably produce recombinative reading behavior, guaranteeing successful reading of thousands of words beyond those taught in the original instruction."]

The goal of fluency building is to build hardy academic behaviors – behaviors that weather periods of no practice, occur with short latencies, are impervious to distraction, and are easily accessible in new situations (30). [Each of these goals is important. Alphabet fluency makes the letters of the alphabet available for learning to read and spell. For maximum effectiveness this fluency needs to be developed even before reading instruction begins. "Easily accessible in new situations" means that once the alphabet is learned to fluency the students can use it for the practical purposes of learning. Students whose alphabet fluency is low will have to look repeatedly at a word on the board, overhead, or paper in order to copy the complete word. They will not be able to store the spelling of the entire word in their memory. They are also easily distracted.]

Precision Teaching was conceived by Dr. Ogden Lindsey at the University of Kansas in his quest for a mechanism that brought continuous measurement and rate data into educational practice. Lindsey was heavily influenced by Skinner's allegiance to rate as the primary datum for studying behavioral change, and he recognized that traditional educational measurement systems that depend on percent correct and letter grades placed artificial ceilings on performance and lead students and teachers to a false security about the strength of their performance. Both Skinner and Lindsey believed that high rate behavior not only looked different than low-rate behavior, it also

had fundamentally different features (66). [Note that high rate behavior is fundamentally different. There is a quantum of difference.]

In Precision Teaching parlance, once a performance demonstrates retention, endurance, and application, it is *fluent*. As a metaphor, performance fluency is flowing, flexible, effortless, errorless, automatic, confident, second-nature and masterful. When performance is fluent, it becomes a highly probably activity. Fluent performance is fun, energetic, naturally reinforced behavior. Dr. Carl Binder (1993,1996) coined the term *fluency building* to refer to practice activities that are designed to achieve these goals. [My Alphabet Fluency exercises are designed with this purpose in mind.] Currently at Morningside, we use five characteristics of performance to set fluency performance frequencies, changing the acronym to RESSA: Retention, Endurance, Stability, Application, and Adduction (67).

## References on Fluency

1. Carl Binder's brief explanation of Precision Teaching: "Behavioral Fluency: A New Paradigm."

[http://binder-riha.com/behav\\_fluency\\_new\\_paradigm.pdf](http://binder-riha.com/behav_fluency_new_paradigm.pdf)

2. Carl Binder & C. L. Watkins (1990) Precision Teaching and Direct Instruction: Measurably superior instructional technology in school.

[http://www.binder-riha.com/PT\\_DI.pdf](http://www.binder-riha.com/PT_DI.pdf)

3. Fluency: Achieving True Masterly in the Learning Process (2002) by Carl Binder, Elizabeth Houghton & Barbara Bateman. (Note: Bateman wrote the special education edition of Open Court many years ago, before it was purchased by SRA/McGraw-Hill.). This is a very clear and helpful article.

[http://special.edschool.virginia.edu/papers/Binder-et-al\\_Fluency.pdf](http://special.edschool.virginia.edu/papers/Binder-et-al_Fluency.pdf)

# Excerpt from *Forget the Bell Curve*

## Chapter Twelve – How Children Learn to Read

By Dr. Bob Rose

Speech exists in both oral and written forms. The conceptual aspects of each are parallel to one another in many ways. The learning of the language of music and of learning to play a musical instrument are also parallel to it, as is the learning of almost any complex system of study. A discussion of these latter subjects is beyond the scope of this present book.

I have mentioned the schema theory held important and dear to writers Marilyn Adams and E.D. Hirsch, Jr. Hirsch's *Cultural Literacy* is available as an inexpensive paperback. It is indispensable to anyone interested in improving education. The second chapter is devoted to an explanation of what "schema theory" means and how it relates to learning and to education. This chapter alone is worth the price of the book.

By means of one brief example, if one tries to learn the appearance of a painting of a rural scene containing a cottage, a meadow, some cattle, a small stream and footbridge and some birds flying overhead, the task will be much simpler for an individual who already has prior knowledge of the appearance of cottages, meadows, cattle, streams, footbridges and flying birds. It is the essence of common sense. Hirsch shows knowledge is like "mental Velcro." Once a mind contains sufficient basic knowledge, new knowledge tends to adhere in memory to related knowledge already there. Adams extends the idea to learning to read.

Adams points out knowledge of letters leads to the ability to perceive and recognize sequences of letters. This leads to easier familiarity with the written syllables. She postulates there are about 5,000 different written syllables in English, about the same number of abstract geometric characters Chinese children learn to recognize and identify before they become highly literate in their language.

I like to put it as follows: *It is not possible to mentally envision, remember and recognize the written word "at" unless one is first quite familiar with the appearances of the letters "a" and "t". One cannot conceive of the written word "cat" without first being capable of envisioning "at, and "cat" precedes "catch", which in turn must precede "catching."*

Some months ago I fell into conversation with a severely dyslexic seventeen-year-old boy. He told me he was dyslexic because his birth mother had ingested cocaine during her pregnancy with him. He believed the ensuing brain damage had made it impossible for him to learn to read normally.

I asked him to spell "candy" and he did so immediately. He explained that was possible because he had memorized the verbal sequence of alphabet letter names in the world, "C-A-N-D-Y spells candy."

I asked him if he could close his eyes and picture what a capital "H" looks like. He said he could; it was easy. I then asked him if he could mentally picture the word "IT", written with capital letters. He said he could not, adding the mental imagery of words is much more difficult than the imagination of single letters.

Then I pointed out "H" is formed by adding a short horizontal line to two straight vertical lines. "IT" is likewise formed by exactly the same combination. Only the relative position of the horizontal bar shifts somewhat in the conversion of "H" to "IT". One is no more difficult than the other. The boy stared at me long and hard, not knowing what to say.

Some years ago I had considerable email and surface mail contact with some psychologists who are practitioners of a subdivision of Behavior Analysis known as Precision Teaching (PT). PT folks measure the rate at which students can perform the skills they are trying to acquire. It was PT researchers who had done the study in Seattle showing children who can deliver simple addition facts at something faster than a basal rate of fluency never have subsequent problems in math if this skill is acquired by sufficient practice before the end of second grade.

PT people use their own special graphs to chart student progress and they believe the rate of change in rate (called "acceleration" as opposed to "deceleration") of behavior is an important constant in studying the success of students in virtually any learning domain. I was particularly impressed by the PT definition of "fluency." Their definition involves a series of positive statements about it. According to them you are fluent at a given activity if:

1. You can perform it at a high rate of speed.
2. You can perform it accurately with a minimum of mistakes.
3. You can continue your performance for relatively long periods of time without undue stress and fatigue.



4. You can persist in your performance even in the presence of external distractions which would interrupt the performance of a less fluent student.
5. You can perform the activity well even after long periods without regular practice.

The PT enthusiasts, many of whom specialize in the education of autistic or retarded children, have found when learning a complex activity, learning tends to proceed through a predictable sequences of steps or stages. They have also found the almost invariable cause of a learning arrest at one of these learning stages is lack of adequate fluency at the performance of the activity of the preceding learning step. And they found if adequate fluency is attained at each step, progression to the next one is relatively easy. Students often seem to make the advancement almost spontaneously and without specific instruction from the teacher.

I was very happy to have these shared insights. The concept of practicing to the point of fluency and of schema theory seemed to dovetail nicely. If children learn to envision individual letters quickly, easily and automatically (or “fluently”) then the ability to envision combinations of letters in sequence is not difficult either.

Aristotle wrote that one learns to play the harp by playing the harp. It is apparently not true that one can strengthen a generic ability to remember things in general. Learning Latin certainly must offer many advantages to the learner. However it will not increase one’s ability to remember telephone numbers or items on a grocery list.

It is certainly true that success breeds success. Success at learning Latin may well give students a sense of pride, self-confidence and determination, which is helpful in many different ways.

Pioneer psychologist, William James, once undertook to memorize poetry to see if it would make him faster at memorizing it. He timed himself to see how long it took him to memorize a certain number of lines or verses.

The exercise no doubt benefited James, but he never found his speed at memorizing poetry increased. But when it comes to learning specific things, repetition is certainly the key to learning. As the saying goes, perfect practice makes perfect. And we get good at remembering a specific thing by remembering it over and over. We get good at remembering by remembering. Think of a person practicing the delivery of a memorized speech. The night before he stands in his living room reciting the speech over and over. The presence of a prompter with a written version of the speech is an obvious facilitator of memory and learning.

It occurred to me if little children are to be able to automatically recognize written syllables, and then use schema theory to learn to recognize “written entities” such as words and common phrases (“in the park”, “after the party”), the first thing to do would be to have the children practice remembering what individual alphabet letters look like.

In theory it should suffice to tell our five-year-olds, “Please spend five minutes each day remembering what each of the capital and small letters in the alphabet look like.” Yes, this would be fine in theory. But how many five-year-olds would actually do it?

Suddenly I realized if a child writes an alphabet letter with a pencil, the child must imagine, or remember what the letter will look like before the pencil tip can begin to move. And applying the principle of synesthesia, we can quickly understand if a child has learned the trajectory the pencil makes in writing a letter, the physical form and visual appearance of the letter are learned simultaneously and automatically.

This is not to say it’s wise or beneficial to emphasize speed in printing in itself to young students. As a matter of fact it isn’t a good idea at all. If one attempts to do something fast, one does it as quickly as one can. In other words one rushes. We can never do anything well if we rush or do it as fast as we possibly can. The idea of fluency is not to be fast. It is easy, relaxed and automatic we are striving for. That is how pianists practice a new piece. They always play slowly. As a piece is played more fluently, what seems slow to the artist is actually faster and faster to his audience. It’s the same with teaching kindergarten students to write the alphabet fluently. Just a few minutes a day for a few months will suffice. But the children must never rush. They hold their pencils as lightly as possible. They concentrate only on ease and legibility. Speed then takes care of itself.

Writing with a pencil is a marvelous exercise for young children. Pencils as we know them were invented in the first half of the nineteenth century. Before that there was a lead “plummet” used to write instead.

There is a right way and a wrong way to hold a pencil. It is described and illustrated in Romalda Spalding’s book, the *Writing Road to Reading*. Both my mother and my mother in law were born shortly after 1910. Both remember filling entire pages with the letter “a” in the early grades and they do not remember any children failing to learn to read.

The pencil should be held in a relaxed hand and with a natural position to the hand. As Spalding pointed out, the most common reason children have trouble learning to write is holding the pencil too tightly or pressing too hard on the paper.

This is not taught in most classrooms. Most children (and even adults) hold a pen or pencil with an awful “monkey fist.” I saw a young woman actually holding her pen the right way the other day. When I commented she

said when she learned to write, the teacher taught the children how to manipulate chopsticks at the same time they were learning to hold a pencil. Maybe she has something there.

With the Suzuki method, young children about to begin violin lessons are given an exercise that teaches them the lightest and most effective way to hold a bow. The lesson is the same with holding and using a writing instrument. To do so effectively requires only the minimal amount of muscular work to perform easily and effortlessly.

A common and effective teaching practice is to have little children learn to “air write” the letters with a finger or hand. Maria Montessori wrote almost 100 years ago that she easily taught the three- and four-year-old children of poor working families in Rome to write even before they had learned to hold a pencil. She taught them to make the trajectories of the letters with a finger. Afterwards the children only had to hold pencil to paper and move the hand in the same way in order to write the letters on paper.

Many teachers worry that a significant number of children don’t have the “fine motor control” necessary to become skillful at printing alphabet letters at the age of five or six. But I have corresponded with a physician who is a published expert on “the clumsy child syndrome”. This entity only appeared in the medical literature in the past twenty years. Its name was changed to the lexically inappropriate term “dyspraxia”, and later to its present official designation as CDD, or “coordination deficit disorder”. But according to my source, “clumsiness” in the absence of demonstrable neurological abnormalities (which is essential to the diagnosis...if a neurological abnormality exists, its diagnosis supersedes the default diagnosis of “clumsiness”), this condition, while globally incurable, does not preclude the acquisition of specific skilled motor skills with adequate coaching and practice. So for the purposes of schooling children in the classroom, this condition may be ignored.

One day during a recess on the roof of Montessori’s preschool a boy who had only been taught the letters, but knew nothing about reading announced he could write words. When the doubting Montessori challenged him, he took a lump of coal and wrote “mano” (hand) on the rooftop.

Suzuki teaches young violin students to hold the bow the easiest and most natural way. When Montessori’s book was published in English, the Harvard professor supplying the preface wrote, “That couldn’t possibly work with English-speaking children.”

But it will work! The only reasonable definition of “dyslexic” is a dyslexic child is one who has not learned to read well by the time his grade peers have. Once a reading problem has been defined and established with psychologist, parents, teacher and child it is devilishly difficult to remediate. The trick is to prevent it before the end of first-grade. The best technical definition of dyslexic is “a child who appears unable to remember what written words look like.”

In order to remember what a word looks like it is necessary for a child to remember what its component written syllables look like. Notice for yourself when you envision the appearance of a one-syllable word, you see the whole word written in your mind’s eye. But with longer words we can only envision one written syllable at a time. In imagination the other syllables are indicated only by their veiled positions. We don’t actually see how they are spelled unless we turn our mental attention from one to the other. When we write or type we proceed to do so automatically without even thinking about it.

It is widely believed that in the earliest stages of the acquisition of literacy young children go through a phase of reading “logographically.” This refers to the remembering of the geometric forms of written words without any mental reference to the correspondence of letters (graphemes) and letter-sounds (phonemes). Children often can recognize some words and product logos (like the one on bottles of *Coca Cola*) before they can really read at all.

But research has shown this to essentially be a myth. The British reading researcher, Morag Stuart, has demonstrated the number of written words five-year-old children can learn to reliably recognize without confusion with other similarly written words is approximately zero unless they understand the alphabetic principle of representing sounds with letters. But once they understand the alphabetic principle and learn to recognize known words as familiar, they expand their sight vocabularies with a “sponge like” facility.

One can’t associate a word with a graphic symbol without knowing both first. That’s why the Chinese began writing words phonetically under the written characters in beginners’ books years ago.

Once a child knows letters well enough to be able to mentally envision three of them in a row, the child will ask how a few simple spoken words are written. A teacher or parent should start with some of the twenty-five two-letter words in common English (it, at, as, if, on, etcetera). After they are secure one proceeds to three-letter words (cat, hat, cut, hut). **Teaching the first thousand words by grouping them into such gradually more complex word families after children learn to envision letters fluently is a faultless method of ensuring fluent literacy by the end of first grade if it is done systematically.**

If a child can read aloud and accurately a text composed only of the thousand most common words in children’s vocabularies fluently by the end of first-grade, the child will be a good reader and a good student for life.

Fluency in this case may be defined as a minimum of 120 correct words per minute read aloud. With this degree of fluency children are able to pay attention to the “inner voice” and reading comprehension also takes care of itself.

The NICHD has proved this by studies and has prescribed specific reading rate fluency goals for the end of each of the specific early school grades. According to their studies lack of reading fluency is the principal cause of low scores on reading comprehension tests in American elementary schools. E.D. Hirsch, Jr. has an opposing and erroneous opinion. All of his writings indicate he believes the sole cause of poor reading comprehension is lack of the knowledge necessary to understand the meaning of the written sentences.

The best way to teach children how words are phonetically encoded (and all written English words are, no matter how idiosyncratic and arbitrary the choices of our spellings are) is to teach children to write them “iteratively.” That means as a beginning student writes a word, he or she should silently say the sound that letter happens to represent in the very same word. Learning rules of “phonics” is not necessary at first. The child simply learns the “e” in “the” is pronounced short before words starting with consonants (the man, the store), and long when before an initial vowel (the apple, the orange). This reverses the order in which children learn to go from “sounds to letters”, proving the order makes no difference.

**Iterative writing is an absolutely essential habit for young students to develop.** By means of this technique they learn to associate the geometrical trajectories of written words with the corresponding spoken words.

Our spoken language depends on acoustical representations of geometric symbols transmitted through the air in sound waves. The same thing is true with writing. We know a pencil or hand trajectory for each word we can write. If we are fluent at touch-typing, we also know the thousands of finger dances necessary to express ourselves on a keyboard.

The essence of mentation is twofold. First, we must be able to make mental representations of reality. Second, we must be able to associate memories with one another. We are all familiar with Freud’s free association test. And as Mark Twain observed, a cat will only sit on a hot stove once.

**This “iterative writing” which involves the stretching out of a spoken word and emphasizing its component sequence of phonemes as a child writes is a time honored and extremely effective way for children to learn penmanship, letter-sound correspondences, the alphabet principle, phonemic awareness and spelling all simultaneously and spontaneously.** This put the lie to the prevalent idea among phonics fanatics who insist the association must be learned “from sound to letter and not from letter to sound.”

It doesn’t matter which way they learn, as long as they learn. As Samuel Johnson once quipped there is little profit in pondering too long about which leg will go into the trousers first.

Marilyn Adams wrote the most important habit for beginning readers to acquire is the habit of glancing back at a new word immediately after it has been “sounded out.” In this way, the letter-sound correspondences are verified, and the image of the word can be mnemonically stored in memory.

That is also a most important principle. However, no one has ever checked this out to see whether it would work or not. In the article by Professor Groff referenced in the article I submitted to the *Harvard Education Review*, appended after the end of this book, he wrote no one can truly tell if it would work unless someone checks it out first. In his concluding line, Groff writes, “Until that time we will continue to be guided by personal intuition and by armchair philosophy.”

You can read Mr. Rose’s book at:

[http://donpotter.net/PDF/Forget\\_the\\_Bell\\_Curve.pdf](http://donpotter.net/PDF/Forget_the_Bell_Curve.pdf)

## **Quotes Regarding Alphabet Fluency from Marilyn Jager Adams' 1990 *Beginning to Read: Thinking and Learning about Print***

The following quote is taken from Chapter 13 of Adam's well-respected and much quoted book. I am afraid that Chapter 13 on "Print Preliminaries" has been largely overlooked and unfortunately underestimated in the designing of reading curriculum.

Both theory and data suggest that instruction on neither the sounds of letters nor the recognition of whole words should be earnestly undertaken until the child has become confident and quick at recognizing individual letters (363). [This is the reason behind the creation of these Alphabet Fluency materials. This may be the most frequently violated principle of reading acquisition.]

In Chapter 6 of *Beginning to Read*, Dr. Adams gives a **summary** and the **instructional implications** of the Orthographic Processing Module of the reading process according to the Parallel Distributed Processing (Connectionist) Model of Reading. It merits careful consideration.

When the skilled reader fixates on a word, each letter activates its own recognition unit in the reader's memory. These directly activated units, in turn, send activation to each other, with the result that the associations between them are strengthened as the automatic consequence of having looked at the word. Over time, as the reader encounters more and more words, the associations between the letter units will ultimately come to reflect the more general orthographic structure of the printed language.

Strong associations develop between the units representing sequences and patterns of letters that have been seen frequently. As a result, any word composed of these sequences and patterns is perceived more or less holistically: Because of the learned associative linkages, every one of its component letters effectively primes and reinforces the perception of every other. In contrast, weak or inhibitory associations develop between letters that have rarely occurred together. As a result, long words are automatically broken into syllables: Because the letter sequences within syllables are quite predictable, the perception of the syllable as a whole coheres; because the sequences of letters that occur between syllables are unpredictable, the perception of the word becomes somewhat disassociated at the syllable boundary.

In short, then, although the skilled reader's Orthographic processor requires sequences of individual letters as input, it effectively perceives whole words and syllables. In reverse, however, the ability to perceive words and syllables as wholes evolves only through complete repeated attention to sequences of individual letters. With concern toward how to develop word recognition skills, the theory thus carries several implications.

First, it is extremely important that young readers be able to recognize individual letters accurately before word recognition instruction begins. Individual letters are input to the network. If a child cannot recognize a letter, it will not activate the appropriate unit within the network. Unless it activates its appropriate unit with the network, it cannot share the excitation with the other letters of the word under study. Unless the letters share excitation with the other letters of the word under study, the associations between them cannot be strengthened. Only through strengthening of these associations can word study enhance word recognition capacity.

Second, for the development of word recognition proficiency to proceed at its optimal rate, young readers must be able to recognize individual letters relatively quickly. The associations between one letter and another are strengthened or created only when both recognition units are active at the same time. If the child spends any measurable amount of time recognizing the second letter in a word, then, by the time it is resolved, the activation of the first will have

uselessly swindled away. Difficulties in individual letter recognition thus subtract directly from any potential profit to be gained from studying whole words.

Third, for immature readers – readers who have not yet acquired a set of associations to match the print before them, it is important not just that they look at the word before them but that they attend carefully to its completed ordered sequence of letters.

Toward hastening the development and refinement of the letter recognition network, students should be engaged in activities that encourage attention to the ordered, letter-by-letter structure of the syllables and words they are to read. (Remember that the order of letters in a sequence is poorly perceived until the sequence becomes familiar.) Many of the most common practices of reading programs – including synthetic phonics, writing exercise with frequent blends and digraphs, and practice with word families – seem ideally suited to this end.

In this context, the allure of phonics, or the exercise of discovering words by sounding out its spelling, is that it inherently forces the child to attend to each and every letter of the word, in left-to-right order. The motivation for its recommendation has little to do with the value or importance of actually sounding out words. It is, from this perspective, merely a gimmick to focus the child's attention on its spelling. Note too that phonics activities that direct the child's attention to individual letters rather than sequences of letters do not seem useful to this end.

The value of having children write and spell is also strongly reinforced. It has been shown that the act of writing newly learned words results in a significant strengthening of their perceptual integrity in recognition.

By writing and spelling, I mean writing and spelling of whole words, as when a child composes her or his own story, writes to dictation, or even copies words over. (See Endnote) Workbook exercises that have children fill in the appropriate letter in a blank do not serve the same purpose because they do not force the child's attention to the spelling patterns of the words as wholes.

Exercise on frequent blends and digraphs such as *bl*, *st*, *pr*, *th*, *sh* and *ch* also seem worthwhile. As attention to such letter groups serves to strengthen the associations among their letters in memory, it should hasten the children's ability to perceive such strings quickly and holistically. In the same spirit, instruction on frequent prefixes and suffixes may similarly be helpful for the reader who is sufficiently advanced to be working on polysyllable words.

The theory suggests further that children be discouraged from skipping or glossing over words that are difficult for them. When they encounter a word that is hard to read, they should take the time to study it. They should look carefully at its spelling and sound out its pronunciation; then they should repeat this process until they can read off the word with something close to normal ease and speed. Happily, for children who are normal readers, this level is reached with only a couple encounters of the word, even if the encounters are separated by several days.

Importantly such focused word study during corrected reading should be relatively infrequent in practice. Intuitions and research concur that students' reading abilities are best advanced by giving them texts in which the vast majority of words are manageable. When students are stumbling on too many words, the best solution is no longer to ask them to reread; it is to give them an easier text. Note further that the objective here is not to force children to study and reread difficult words while you are watching; it is to help them develop the inclination to study and reread words they are reading by themselves.

These qualifications notwithstanding, repeated readings of difficult words and passages result in marked improvements in children's speed, accuracy, and expression during oral reading and, most important, in their comprehension. In view of this, we should choose texts that are worth rereading and, whenever it seems worthwhile, we should have children reread them.

In view of the importance of syllabification skills, one might infer that they ought to be taught. Is this inference supportable? Opponents of syllabification training have argued that it is

circularly unproductive. In order to break a word down into syllables, they argue, the readers must first sound the word out. Being able to sound the word out was the goal of breaking it into syllables in the first place. Consistent with this argument, various efforts to teach children to divide words into syllables have generally produced very little improvement either in children's ability to divide new, untrained words into syllables or in their overall vocabulary and reading comprehension scores.

As exceptions, several recent studies have obtained improvement in children's ability to pronounce two-syllable words by training them to compare the syllable to known one-syllable words (e.g., *problem-rob, them*) ...

Overall, the best instructional strategy for orthographic development is to induce children to focus on likely sequences that comprise syllables, words, and frequent blends and digraphs. As the children become familiar with these spelling patterns their ability to syllabify will naturally emerge along with the automaticity with which they will recognize the ordered spellings of single syllables. Beyond that, the strongest implication of the theory toward developing solid word recognition skills is that children should read lots and often.

#### Endnote

It is worth taking time to watch individual students copying words. Some persist in looking at the word to be copied, writing down one single letter and then looking back for the next letter. With respect to orthographic learning, however, the benefits of copying are expected to come from looking at the text to be copied, remembering the whole word or syllable, and writing that down before looking back to check one's spelling or to get the next word or syllable to be copied. Sometimes letter-by-letter copying seems to be nothing more than a habit, as though it simply has not occurred to the child to go for whole words or syllables. In these cases, the problem may be fully remedied by providing a little guidance on the method and increase efficiency of treating the to-be-copied materials in a word-by-word or syllable-by-syllable manner.

#### **Quotes Regarding Alphabet Fluency from Marilyn Jager Adams' 2013 *ABC Foundations for Young Children: A Classroom Curriculum***

I was overjoyed recently to learn that Dr. Adams has published a new book: *ABC Foundations for Young Children: A Classroom Curriculum*. It is published by Paula H. Brookes Publ. Co, Baltimore, Maryland, 2013. In this book, Dr. Adams has translated the most current research into classroom practice. It is basically the outworking of the principles laid down in chapter 13 of her 1990 *Beginning to Read*. I am surprised that it took 23 long years for someone to finally write the book we have needed all along. I had surmised from reading the book that there was one very creative and practical mind behind it. Dr. Adams recently emailed me that my suspicion was correct, and that she had written it herself from start to finish. Let's proceed to my quotes. I will not be including the references. I trust that everyone who reads these quotes will have their appetite whet sufficiently to purchase the book and read it all for themselves.

Children need to know the alphabet. To use phonemic awareness for reading, children need to know which letter represents which phoneme. In turn, learning letter-sound correspondences requires that children not only be able to discern each letter but also to identify each letter by shape, confidently and securely. To use their phonemic awareness to write, children must also be able to form the letters with legible accuracy and reasonable ease. For much of their classroom instruction on reading and spelling,

they must be able not only to recognize each letter, but also to seek, recall, or even image the letter given only its name or sound. (2).

Even so, the issue is deeper than that, for children's letter knowledge is a good predictor of their responsiveness to phonemic training. ... It may well be, as several have argued, that gaining phonemics awareness *depends* on prior letter knowledge. (2)

In all, children's knowledge of letter names and sounds at school entry is the single best predictor of their reading and spelling growth, not just at the outset but throughout the elementary school years. Moreover, this is so even when other weighty predictors such as phonological awareness, language development, and intelligence measures are factored out of the equation. Children who enter school with poor knowledge of letters names and sounds face a far higher risk of reading delay and disability. (2)

Studies commonly show that only a minority of children are able to name or write all letters of the alphabet by the end of first grade and that the number who know the letter sounds is still smaller. (2) [Three years ago, I developed a simple alphabet knowledge and fluency assessment, in response to reading Bob Rose's *Forget the Bell Curve*. Bob maintained that children who know the alphabet to fluency will generally learn to read with little or no problem. I have a very busy tutoring practice for children, teens, and adults with reading problems, getting students from a wide range of local public and private public schools. My assessment revealed that NONE of the student coming to me for tutoring had alphabet fluency. That came to me as a shock, but confirms Dr. Adams' research observation.]

How can this be? Alphabetic knowledge is so fundamental and so pervasively important to literacy development. Without a comfortable familiarity with the alphabet, the student is effectively locked out of virtually everything that formal education has to offer. Our schools *must* do far better in helping children learn their ABC's. What could be the problem? [Adams then explains that most reading programs allocate too little attention and time to developing alphabet fluency, being only a small or incidental portion of a larger literacy program. (3, 4)

Of all the challenges that the child will ultimately confronting the letters of the alphabet is the *only* on that depends exactly and only on sheer rote memorization, and it must be over-memorization, at that. (4)

If the support they need is offered neither at home nor at school, then how will they learn? And without solid alphabetic knowledge, how much else will remain unlearnable? (4) [These are soul-searching questions. As the situation stands all across America, most first-graders do not know the alphabet at the end of first-grade. Here Adams was contrasting children coming to school from families that teach the alphabet and families that don't.]

Alphabetic knowledge refers to the children's familiarity with the names, forms, and sounds of the letters of the alphabet as measured by recognition, production, and writing tasks. The **goal** of this book is provide teachers with lesson plans, materials, and assessments that will help them give their students the instruction, practice, and support

needed to master each of these dimensions of alphabetic knowledge. (5) [Emphasis by DLP. Here Adams is summing up the rationale and purpose for the book.]

There are two underlying motivations for this design. The first, of course, is to help the children learn to print each letter efficiently and legibly. The second is that learning to write the letters significantly hastens children's ability to recognize them as, deep in the brain, the motor habits involved in writing each letter become tightly tied to the letter's visual representation. (6) ["Design" here refers to her explicit letter writing instructions. This is why Dr. Rose and I insist on having children *write* the letters of the alphabet in ABC order on a daily basis until they attain true fluency (automaticity).]

In the introduction to "Writing Uppercase Letters," Dr. Adams has some very important information that should be carefully considered.

There are several strong reasons for anchoring letter writing as soon as possible. The most obvious, of course, is to engage children in writing as soon as possible – yet students will not be able to write much as long as the letters are insecure or onerous for them. A second reason is that spelling activities, both structured and independent are shown to be a superlative means of advancing children's phonemic awareness, their grasp of the alphabetic principle, and their internalization of spelling patterns and conventions. However, spelling activities are thwarted to the extent that children are struggling with letters. (59)

Even so, learning to form letters so that they *look* right is only part of the challenge. Mature readers and writers do not "draw" letters in the way they draw faces, bunnies, or trees. Instead, each letter is tied to a highly overlearned series of movements that are executed almost automatically as people write. Thus, most people can write more legibly with their eyes closed than they can with their nondominant hand. A more important consequence is that as letter formation becomes automatic, people can devote their attention to their message, choice of wording, and spelling as they write. (59)

Leading children to practice a consistent set of strokes for each letter serves to accelerate the development of letter-writing automaticity. Furthermore, as the hand movements involved in writing each letters becomes bound to the visual representation, they serve to hasten and secure the child's ability to recognize the letters. (59) [The term "bound" here refers to the connections model of learning that is the psychological theory behind Dr. Adams' work – and mine. This would apply to any letterform, cursive, manuscript, or italic. I prefer cursive.]

In the introduction to "Writing Lowercase Letters," Dr. Adams has some very important information that should be carefully considered.

The lowercase letters are far more difficult to learn than uppercase letters. [I do not think most parents and teachers are aware that lowercase letters are "far more difficult to learn than uppercase letters." It is my personal preference to teach uppercase first and then go to lowercase cursive; but it takes a good knowledge of cursive instruction to do that. I come from the last generation in America to have learned cursive-first in first grade, before lowercase manuscript for math and drafting. I do not force my personal



preference on other, although it is my consistent practice with my tutoring students; and I can vouch for its effectiveness.]

As mentioned in the introduction to Unit II, visual representation of the letters is integrally bound to the movements that the hands make when writing them. But there is more. Although learning to recognize uppercase letters is *hastened* by learning to write them, research indicates that learning to recognize lowercase letters *depends* on learning to write them. This is the reason that, for survival purposes, the visual system itself is preprogrammed to ignore differences in orientation of objects; yet, orientation is integral to letter identity and, indeed, makes all the difference between *b*, *p*, *q* and between *n* and *u*. (121)

What matters is not just *writing* the letters, but linking the appearance to a common habitual stroke sequence for its writing. Thus, letter-writing lessons are designed to help the children write letters such that each is represented by a consistent set of strokes, produced in a consistent order. You will be able to tell whether children are using the proper stroke sequence by examining their written work. The tendency to write letters backwards is a strong indication that children are not adhering to recommended starting spots or stroke sequences, as is inconsistency in rendering of a letterform one occasion to the next. (121) [I consider these words of wisdom that are worthy of serious consideration. Dr. Adams' advice applies to any form of writing. Most children coming to me have either received no handwriting instruction or were not paying attention when proper handwriting strokes were taught. While she does not mention it, proper posture and grip are also vital. To get to the heart of why handwriting instruction has been neglected for decades in American schools just read Gail Harold-Taylor's 1989 *Administrator's Guide to Whole Language*, where the author clearly says that formal handwriting instruction is not necessary in the primary grades. My own school district has gone without any formal handwriting program for over 25 years. Just ask any first-grade teacher. Yes, it is hard to believe, but true!]

Quotes from Unit 4: "Introducing Letters and Sounds." Here Dr. Adams recommends teaching long-vowel sounds **before** short-vowel sounds, in accordance with only a hand full of phonics programs such as the Priscilla McQueen's method which was based on the Association Method of Mildred McGinnis, the Weiss Method, Stevenson, Open Court before SRA/McGraw-Hill switched from long to short vowels first, and a few others.

The vowels, by contrast, are exercised by having children listen for such sounds as /ē/ when it occurs in the medial (*meet* versus *moat*) or final (*see* versus *sow*) position in words. This is a relatively difficult challenge. However, it is also an important one. Children must learn to hear vowels in the middle and end of word as they develop phonemic awareness and learn phonics and spelling. To make this challenge easier, only the *long*, sounds of the vowels are introduced in Chapter 12. One advantage of the long vowels is that they require tensing of the mouth that must be held long enough to make a relatively clean and distinct sound. A second is that the long sounds of the vowels are the same as their names. As such, each long vowel sound is already familiar to the children, allowing them to concentrate their attention on finding the sound within the words. (185)

Awareness of vowel phonemes is notoriously difficult for young children. How many times to young spellers have to be reminded that every syllable must have a vowel? One reason is that consonants are intentional, ballistic movements. They are articulated, whereas the vowels are shapes of the mouth. Awareness of short vowels is particularly difficult. Because they are short in duration and lax in pronunciation, the short vowels are hard to detect, and their sounds may vary far more as a function of the phonemes that surround them than do those of the long vowels. (185)

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