

### Preventing Writing Difficulties

By Steve Graham and Karen R. Harris

Many students with disabilities experience difficulties learning to write. A recent study by CASL investigators indicates that problems mastering handwriting play an important role in the development of writing difficulties.

In this study, first-grade children with and without disabilities who were experiencing handwriting and writing difficulties participated in 27 15-minute sessions designed to improve the accuracy and fluency of their handwriting. These 27 sessions supplemented the handwriting instruction that children were already receiving in their regular classrooms.

In comparison to other first-graders receiving instruction in phonological awareness but not receiving the handwriting sessions, students with and without disabilities who received the supplemental handwriting program made greater gains in handwriting as well as writing immediately following instruction and 6 months later. This included faster and more correctly formed handwriting, greater facility in constructing sentences, and more fluent output when writing stories.

These findings show that early, supplemental handwriting instruction can boost the writing performance of children with and without disabilities, and that such instruction is an important element in preventing writing difficulties in the primary grades.

In this issue of *CASL News*, this feature article describes the supplemental handwriting program used in the study described above. In the section "From the Teacher's Desk," we share the observations of one of the teachers who implemented the handwriting program. Finally, we provide a checklist for evaluating handwriting instruction.

#### The Handwriting Program

The handwriting program contains 27 lessons divided into 9 units (3 lessons per unit). The following lower-case manuscript letters are introduced and practiced in each

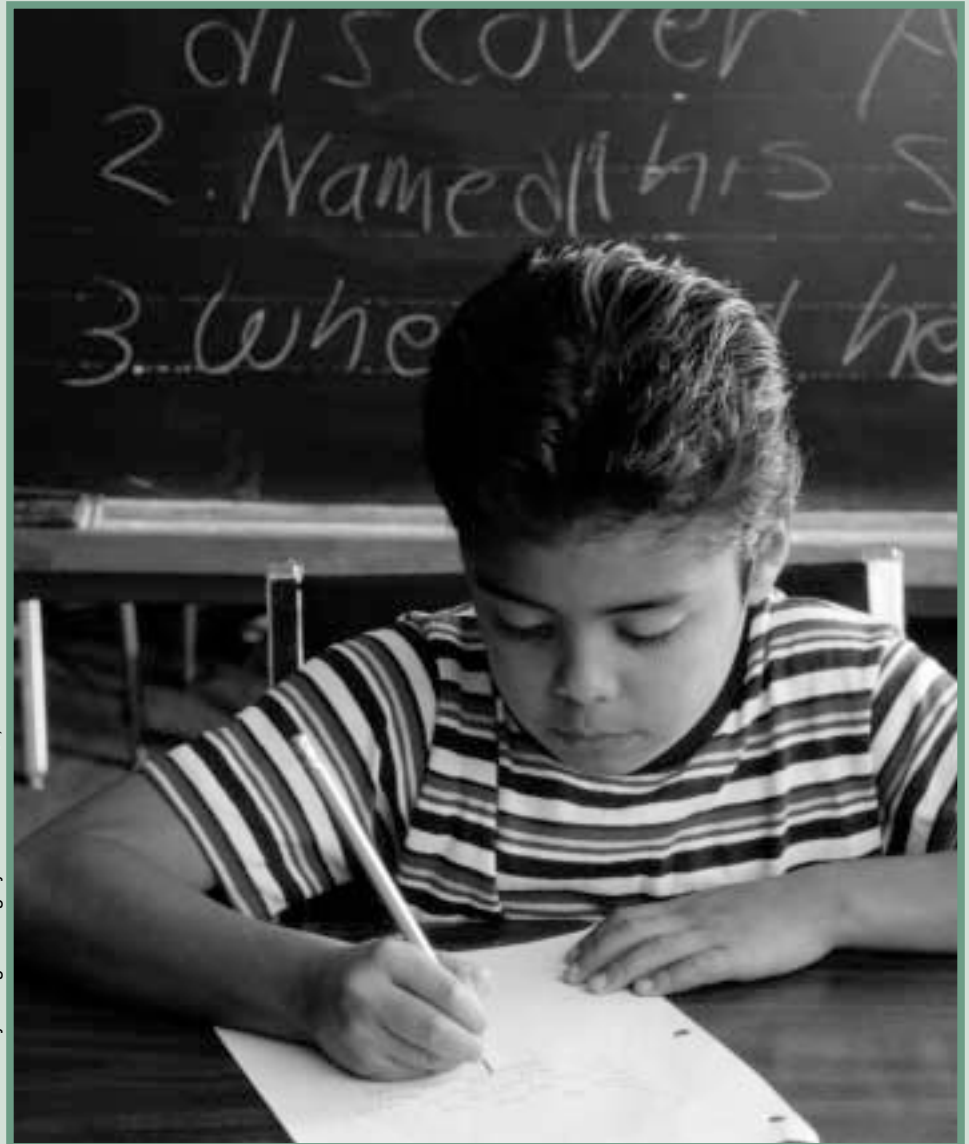


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unit: unit 1 (l, i, t), unit 2 (o, e, a), unit 3 (n, s, r), unit 4 (p, h, f), unit 5 (c, d, g), unit 6 (b, u, m), unit 7 (v, w, m), unit 8 (x, k, z), and unit 9 (j and q). Letters in each unit share common formational characteristics and, for the most part, easier and more frequently used letters are introduced before more difficult and less frequently used letters.

Each lesson involves four activities: Alphabet Warm-up, Alphabet Practice, Alphabet Rockets, and Alphabet Fun.

*Alphabet Warm-up.* Students learn the letters of the alphabet, identifying, sequencing, and naming them. Students practice four different tasks. The first involves singing the alphabet song, while pointing to the corre-

sponding letter on an alphabet chart. With the second task, the teacher says the name of a letter, and the child points to it on an alphabet chart. On the third task, the teacher points to a letter on an alphabet chart, and the child names the letter. For the fourth task, the teacher says the name of a letter and asks the child to tell what letter comes before or after it in the alphabet. For each task, the teacher provides feedback and assistance as needed.

*Continued on page 2*

# Preventing Writing Difficulties Continued from page 1

**Alphabet Practice.** This second activity employs an identical format for each unit. The first lesson contains five stages. First, the teacher traces and describes aloud how to form each of the target letters (e.g., l, i, t), using cards with numbered arrows that show the order and direction of strokes for each letter (model stage). Second, the child imitates the teacher, tracing each letter, while describing how to form it (imitate stage). Third, the teacher and the child discuss how the formation of the letters are similar and different (discuss stage). Fourth, using a practice worksheet, the student practices each letter, tracing with a pencil a copy of the letter with numbered arrows, then tracing three copies of the letter without numbered arrows, followed by writing the letter three times within the confines of an outline of the letter, and finally writing

the letter three times on regular-lined paper (practice stage). Fifth, the child identifies and circles his or her best written letters (evaluate stage). Tasks for lessons two and three of Alphabet Practice are similar to the ones described above except that the teacher and the child do not discuss how to form the letters (stage three), and the child practices by writing words containing the letters.

**Alphabet Rockets.** This third activity involves copying a sentence that contains multiple instances of each of the letters for that unit (e.g., "Little kids like to get letters" for unit one on l, i, t). The child is asked to copy the sentence, quickly and without making mistakes, for a period of 3 minutes. The number of letters copied is then counted and graphed on the first of three rockets on a performance chart.

During the second lesson of each unit, the child again does Alphabet Rockets with the goal of beating his or her previous performance by 3 letters. The number of letters copied by the child is then graphed on the second rocket. If the goal is met, the teachers draws a big star above the second rocket to reinforce the child's performance. The same procedures are used in lesson three, except the goal increases by another 3 letters if the child met the goal set in lesson two.

**Alphabet Fun.** During this fourth activity, the child learns how to write one of the letters in the unit in an unusual way (e.g., as long and tall, or short and fat), or to use it as part of a picture (e.g., turning an "I" into a butterfly or an "s" into a snake).

To order the manual *Handwriting—Grade 1*: email [sg23@umail.umd.edu](mailto:sg23@umail.umd.edu), phone (301) 405-6493, fax (301) 314-9158.

## Accelerating Student Progress: What We Know

This column provides instructional tips and resources and is a regular feature of CASL News.

■ Study procedures that are helpful in learning to spell new words include careful pronunciation of the word before writing it, writing the word and checking its correctness, saying the letters while writing the word, tracing the word, and visualizing the letters in the word with eyes closed.

Where's the evidence? See Graham, S. (1999). Handwriting and spelling instruction for students with learning disabilities: A review. *Learning Disability Quarterly*, 22, 78-98.

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■ Children work harder at school tasks if they receive frequent, specific feedback about how they are improving on those tasks.

Where's the evidence? See Fuchs, L. S., Fuchs, D., Karns, K., Hamlett, C. L., Kataroff, M., & Dutka, S. (1997). Effects of task-focused goals on low-achieving students with and without learning disabilities. *American Educational Research Journal*, 34, 513-544.

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■ Children with disabilities participate more and learn better when they work with classroom peers in pairs than in small groups.

Where's the evidence? See Fuchs, D., & Fuchs, L. S. (1998). Researchers and teachers working closely together to

adapt instruction for diverse learners. *Learning Disabilities Research and Practice*, 13, 126-137.

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*Continued on page 4*



### From The Teacher's Desk By Erin Pecor

Erin Pecor shares her observations on the effectiveness of the handwriting program. Ms Pecor is a teacher in Prince George's County Public School in Maryland. She implemented the handwriting program with first-grade students.

When using the handwriting program, the children I worked with made progress in both the formation of their letters as well as in the quality of their writing. Before starting the program, students' letters were misshapen and often too large or too small. After several weeks of working with students, however, I noticed that they made letters more neatly and correctly, made fewer reversals, and wrote faster.

The part of the program that students enjoyed the most was Alphabet Rockets. In this section of the lesson, students copied two sentences for a period of 3 minutes, counted the number of letters written, and graphed the amount written on a rocket chart. The idea of the timed rockets was to challenge children to increase the speed of their writing by three letters each session. Most of my children took to the challenge with enthusiasm and really pushed themselves to write faster so that they could earn a star for their work.

I liked having children concentrate on learning a couple of letters at a time and saying them aloud while tracing and writing them. I noticed that the materials in the program helped students work with more deliberation and attention. As each week of instruction progressed, students learned how to form letters more accurately, and they also increased the fluency of their written expression.

# Assessing Handwriting Instruction in the Classroom

This checklist is a tool for assessing handwriting instruction. Place a check next to each item that describes a feature of instruction in your classroom.

When completed, a review of this checklist can assist you in maintaining and improving the effectiveness of your current handwriting program. It can also help you identify instructional procedures that are effective in improving the legibility and fluency of children who experience difficulty mastering the handwriting process.

## Teach Children How to Write Each Letter by

- Showing them how it is formed.
- Describing how it is similar and different from other letters.
- Using visual cues, such as numbered arrows, as a guide for letter formation.
- Providing practice tracing, copying, and writing the letter from memory.
- Keeping instructional sessions short, with frequent reviews and practice.
- Asking children to identify or circle their best formed letter or letters.
- Encouraging them to correct or rewrite poorly formed letters.
- Monitoring their practice to ensure that letters are formed correctly.
- Reinforcing their successful efforts and providing corrective feedback as needed.

## Help Children Become More Fluent in Handwriting by

- Providing them with plenty of opportunities to write.
- Eliminating interfering habits that may reduce handwriting fluency.
- Having them copy a short passage several times, asking them write it a little faster each time.

## Promote Handwriting Development by

- Making sure that each child develops a comfortable and efficient pencil grip.
- Encouraging children to sit in an upright position, leaning slightly forward, as they write.
- Showing them how to place or position their paper when writing.
- Teaching children to identify and name the letters of the alphabet.
- Teaching them how to write both upper- and lower-case letters.
- Allotting 75 to 100 minutes per week to handwriting instruction.
- Providing children with plenty of opportunities to use different types of writing instruments and paper.
- Asking children to set goals for improving specific aspects of their handwriting.
- Implementing appropriate procedures for left-handed writers, such as how to properly place or position their paper when writing.
- Monitoring students' handwriting, paying special attention to their instructional needs in letter formation, spacing, size, alignment, and line quality.
- Dramatizing children's progress in handwriting through the use of charts or graphs, praise, or posting neatly written papers.
- Helping children develop a positive attitude about handwriting.

## Assist Students Who Are Experiencing Difficulty by

- Organizing my class so that I can provide additional handwriting instruction to children who need it.
- Identifying and addressing roadblocks that may impede a child's success in handwriting.

- Talking with parents and soliciting their advice about how to improve their child's handwriting.
- Coordinating my handwriting instruction with the efforts of other professionals, such as an occupational therapist.
- Placing special emphasis on the teaching of difficult letters, such as a, j, k, n, q, u, and z as well as reversals.
- Ensuring that the child masters one style of handwriting before introducing a second style.
- Considering if an alternative to handwriting, such as an Alpha Smart keyboard, is warranted.

## Make Sure that I

- Encourage students to make all final drafts of papers neat and legible.
- Maintain my belief that I can teach each child in my class how to write fluently and legibly.
- Set high but realistic expectations for the handwriting performance of each child in my class.
- Maintain a balanced perspective on the role of handwriting in learning to write.

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