

**Title:** “Effective Academic Interventions in the United States: Evaluating and Enhancing the Acquisition of Early Reading Skills”

**Full Citation:** Good, R. H., Simmons, D. C., & Smith, S. B. (1998). “Effective Academic Interventions in the United States: Evaluating and Enhancing the Acquisition of Early Reading Skills.” *Educational and Child Psychology*, 15 (1).

**Subject(s):** Intervention, Dyslexia/Reading Disabilities, Fluency, Phonological and Phonemic Awareness, Phonics and Decoding

**Grade Level:** Preschool, K, 1–2

**Synopsis:** The most important educational goal in the early grades is to teach children to read. National studies show that 20% of children have trouble reading in grades 1–3 (Kameenui, 1996); it appears from these numbers that “reading deficits are not specific to disability.” (p. 218) Two characteristics are common to all children having difficulties learning to read:

- (1) their “trajectory of reading progress” diverges early from that of their peers, and
- (2) they have a “phonological deficit” that leaves them unable to use the sound structure of the language to learn written language. “The phonologically based deficit of students with reading difficulties has garnered such empirical convergence that it has been deemed a ‘core deficit’ (Stanovich, 1986; Torgesen & Hecht, 1996).” (p. 219)

The authors provide evidence of the divergence in trajectories of reading progress through data collected from students in grades 1–5 at the St. Croix Education District in Minnesota in 1990–91. The reading progress of all students was assessed monthly through the school year, using a Curriculum-based measurement (CBM) in reading (see Shinn, 1989) in which children were assessed on oral reading fluency tasks using basal reading passages. (They also read word lists taken from the Harris-Jacobson list.) The differences between the middle (50th percentile) and low (10th percentile) readers is not apparent in the middle of first grade, but by the end of first grade the differences are significant, and the discrepancies increase with the passage of time. The data provides evidence for what Stanovich called the “Matthew effect. Once they fall behind their peers in reading skills, the students seem never to be able to catch up. “The problem of increasingly discrepant reading skills for students on a low developmental reading trajectory is twofold: they begin with lower scores, and they increase their skills at a slower rate.” (p. 221)

“The solution is to intervene early so that students have both adequate initial skills, and the necessary pre-skills to make adequate progress. . . . Early intervention requires accurate identification of children at risk for reading failure.” (p. 221) “Fortunately, an emerging body of intervention research demonstrates reliable parameters for determining the components of effective early reading instruction.” (p. 222)

“Converging conclusions from multiple sources” (p. 222) indicate that these four areas need to be taught and assessed in early reading:

1. Phonological Awareness: “Converging evidence underscores the importance of explicit phonological awareness instruction prior to formal alphabetic awareness instruction, especially for children with deficits in this area (Smith et al., in press).” (p. 223)

2. Alphabetic Understanding: Juel (1991) cites 8 studies that provide evidence of the importance of alphabetic understanding (mapping of print to speech) in accounting for differences between good and poor readers.
3. Phonological Recoding: “the use of systematic relationships between letters and phonemes to recognize the printed match of a spoken word or syllable, to retrieve the pronunciation of an unknown printed string, or to spell.” (Vandervelden & Siefel, 1997, p. 64) This is a developmental progression. The easiest task is speech-to-print (children hear a word and match it to one of 3 printed words). Then, children begin to decode written words by attending to every letter.
4. Accuracy and Fluency with Connected Text: Poor word recognition limits “storage of and access to word meanings, and ability to access or remember sequences of words.” (p. 224)

A team of researchers at the University of Oregon has developed an assessment tool for assessing early literacy skills. The tool, called Dynamic Indicators of Basic Early Literacy Skills (DIBELS), allows a dynamic, continuing evaluation of students’ skills over time and is sensitive to changes that result from effective interventions. (Good & Kaminski, 1996) DIBELS are not exhaustive of all skill areas, but are *indicators*, “representative of, or correlated with, important skill areas.” (p. 226)

“Phonological awareness measures, in particular, have emerged as strong predictors of later reading skills that are causally related to reading success. Two DIBELS measures of phonological awareness have been developed and validated for use with children in kindergarten and early first grade.” (p. 226)

In one, Phoneme Segmentation Fluency (PSF), children in winter of K thru fall of Grade 1 are asked to segment a spoken word into its sounds. They get credit for each correct sound segment (for example, for the word *fish*, they can get credit for up to 3 sounds). The test is timed, and the number of correct sound segments per minute is recorded. A single probe of 10 words “has a reliability of .88, and the average of 3 probes has a reliability of .96. The one-year predictive validity with reading outcome measures ranges from .73 to .91 (Kaminski & Good, in press).” (p. 227)

Onset Recognition Fluency (OnRF) is for children in late preschool through the winter of K. For 12 items, children are asked to recognize beginning sounds by choosing from 3 pictures the one that starts with a certain sound. (“Which picture begins with /b/?”) For 4 items, children are asked to produce sounds by being shown a picture and asked, “What sound does *hat* begin with?” “The reliability of a single probe is .65, and the reliability of the average of 5 probes is .90.” (p. 227)

In evaluating the effectiveness of an intervention, it is important to measure the child’s trajectory, or slope of progress. “An intervention is effective if it results in an increase in the slope of student progress.” (p. 227)

**Quote(s):** “The problem of increasingly discrepant reading skills for students on a low developmental reading trajectory is twofold: they begin with lower scores, and they increase their skills at a slower rate. . . . The solution is to intervene early so that students have both adequate initial skills, and the necessary pre-skills to make adequate progress.”

“Converging evidence underscores the importance of explicit phonological awareness instruction prior to formal alphabetic awareness

instruction, especially for children with deficits in this area (Smith et al., in press).”

“Phonological awareness measures, in particular, have emerged as strong predictors of later reading skills that are causally related to reading success.”