NCSALL Seminar Guide:

Reading Difficulties

September 2005

National Center for the Study of Adult Learning and Literacy

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Reading Difficulties

This seminar guide was created by the National Center for the Study of Adult Learning and Literacy (NCSALL) to introduce adult education practitioners to risk factors identified in children with reading difficulties and to compare these characteristics to those of adult literacy students. Programs or professional developers may want to use this seminar in place of a regularly scheduled meeting, such as a statewide training or a local program staff meeting.

Objectives:

By the end of the seminar, participants will be able to:

- Discuss their assumptions and beliefs about reading
- Explain the six findings of the Preventing Reading Difficulties study and describe how those findings apply to teaching adults

Participants: 8 to 12 practitioners who work in adult education—teachers, tutors, program directors, state staff, counselors

Time: 4 hours

Agenda:

15 minutes	1. Welcome and Introductions
5 minutes	2. Objectives and Agenda
30 minutes	3. Assumptions and Beliefs about Reading
30 minutes	4. Six Findings
55 minutes	5. Matthew Effects
15 minutes	***Break***
50 minutes	6. Case History
30 minutes	7. Reflections
10 minutes	8. Evaluation of the Seminar

Session Preparation:

This guide includes the information and materials needed to conduct the seminar—step-by-step instructions for the activities, approximate time for each activity, and notes and other ideas for conducting the activities. The reading, ready for photocopying, is at the end of the guide.

Participants should receive the following reading at least 10 days before the seminar. Ask participants to read the entire article before the seminar.

- Excerpt from **Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy** by Catherine E. Snow and John Strucker (*NCSALL Annual Review of Adult Learning and Literacy*, Volume 1, Chapter 2, pp. 25-38).

The facilitator should read the article, in addition to studying the seminar steps and preparing the materials on the following list.

Newsprints (Prepare ahead of time.)

___ Objectives and Agenda (p. 5)
___ Statements (p. 6)
___ Six Findings (p. 7)
___ Discussion Questions (p. 7)
___ Statement (p. 8)
___ Reflections (p. 9)
___ Useful/How to Improve (p. 10)

Handout (Make copies for each participant.)

___ *Joseph, a Beginning Reader* (excerpted from **Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy**)

Reading (Have two or three extra copies available for participants who forget to bring theirs.)

___ Excerpt from **Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy**

Materials

___ Newsprint easel and blank sheets of newsprint
___ Markers, pens, tape
___ Signs—Agree, Disagree, Not Sure

Steps:

1. Welcome and Introductions (15 minutes)

- **Welcome participants** to the seminar. **Introduce yourself** and state your role as facilitator. Explain how you came to facilitate this seminar and who is sponsoring it.
- **Ask participants to introduce themselves** (name, program, and role) and briefly state the "good news" of the day.
- **Make sure that participants know** where bathrooms are located, when the session will end, when lunch and the breaks will be, and any other housekeeping information.

Note to Facilitator
Since time is very tight, it's important to move participants along gently but firmly if they are exceeding their time limit for introductions.

2. Objectives and Agenda (5 minutes)

- **Post the newsprint <u>Objectives and Agenda</u>** and review the objectives and steps with the participants.

Objectives

By the end of the seminar, you will be able to:

- Discuss your assumptions and beliefs about reading
- Explain the six findings of the Preventing Reading Difficulties study and describe how those findings apply to teaching adults

Agenda

1. Welcome and Introductions (Done!)
2. Objectives and Agenda (Doing)
3. Assumptions and Beliefs About Reading
4. Six Findings
5. Matthew Effects
6. Case History
7. Reflections
8. Evaluation of the Seminar

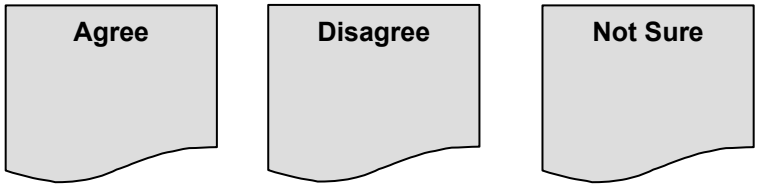
3. Assumptions and Beliefs about Reading (30 minutes)

- **Explain that the purpose** of the "live Likert scale" activity **is to explore the participants' assumptions and beliefs** about reading.

- **Place three signs up on the walls.** On one wall, "AGREE," on the opposite wall, "DISAGREE," and on the back wall, "NOT SURE." Next ask everyone to stand up, moving chairs if necessary so that people can easily move around the room.

- **Explain that this activity is purely for promoting discussion** and that there are no right or wrong answers. Read each statement aloud twice. Participants will listen to the statement and then move to the sign that corresponds to how they feel about the statement: **AGREE, DISAGREE,** or **NOT SURE.**

  After participants have identified their position, ask each group to explain their selection to the others. Participants may move to a different location if they alter their opinion while listening to the reasoning of others. Continue this process for each of the following statements.



(These statements are excerpted from "There's Reading and Then There's Reading: Process Models and Instruction" by Victoria Purcell-Gates from *Focus on Basic*s, Volume 1, Issue B, October, 1997.)

Statements

- Reading is comprehending from print. Decoding is not reading. Only comprehension is reading.
- It is necessary to practice decoding skills to the point of mastery before the process of comprehension—the goal of reading—is possible.
- Literacy is not a generic process that is the same for everyone in all instances.

4. Six Findings (30 minutes)

- **Explain that now that the participants have reflected on their own beliefs around reading, they will reflect on the concepts in the reading for today's meeting.**

  [Note to facilitator: The authors outline risk factors identified in children with reading difficulties and compare these characteristics to those of adult literacy students. They provide case studies of adult learners in which component reading skills (word analysis/phonics, word recognition, spelling, oral reading, silent reading comprehension, and oral vocabulary) are tested to identify reading strengths and weaknesses. Adults, like children, require ample opportunities to learn and master alphabetic principles, to develop fluency, and to become enthusiastic readers. All instruction should engage students in meaningful reading activities. It should also address the social risk factors with which adult learners contend.]

- **Post the newsprint <u>Six Findings</u>.**

Six Findings

The report identifies six opportunities that, if accessible to every child, would greatly decrease the risk of reading difficulties:

1. Support for the acquisition of language and of sufficient metalinguistic awareness to approach the segmentation of speech into smaller units that could be related to alphabetic writing
2. Exposure to print and literacy uses and functions
3. Development of enthusiasm for reading
4. Opportunities to grasp and master the alphabetic principle
5. Access to preventive services if needed
6. Access to intervention as soon as reading difficulties emerge

- **Post the newsprint <u>Discussion Question</u>.** Ask the participants to explore the following questions.

Discussion Questions

- How might the personal and social backgrounds of your adult students have contributed to their difficulties in acquiring reading skills?
- Which of these opportunities can you identify as not having been available to the adult students with whom you work?

5. Matthew Effects (55 minutes)

- **Explain that in this next activity participants will again reflect on the reading for today's meeting.** This exercise, developed by Peter Elbow, encourages participants to attempt to understand how those with whom they may disagree understand an issue. To begin, divide the group in half. Name one group the "Doubters" and instruct them to take a doubting role. Label the other group "Believers" and instruct them to assume a believing stance.

- Ask the Doubters to work together to come up with as many reasons and examples as possible to argue against or to disprove the Matthew Effects theory (see pp. 20-22 of the Reading). Ask the Believers to work together to generate as many ideas and examples as possible to support the theory.

  Next, ask the Doubters and Believers to share their ideas and to engage in debate. Please note that it does not matter what the participants truly believe, they must remain Doubters or Believers throughout the debate. If the group wishes, they may then take some time at the end of the debate to identify their true opinions and to discuss how the debate affected their opinions.

- **Post the newsprint <u>Statement</u>.**

  (This statement is excerpted from "Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy" by Catherine E. Snow and John Strucker. *The Annual Review of Adult Learning and Literacy, Volume 1* (2000) San Francisco, CA: Jossey-Bass, p. 67)

  Statement

  We cannot expect to solve the problems of adult literacy achievement by focusing exclusively on better methods for teaching reading. Improving the quality of adult learners' lives more broadly is not only socially responsible, but necessary.

- The group that was originally Doubters becomes Believers and the Believers become Doubters to discuss the statement presented on the newsprint. Follow the process outlined above.

(This activity is based on "The Doubting Game and the Believing Game—an Analysis of the Intellectual Enterprise" from *Writing Without Teachers* by Peter Elbow. New York: Oxford University Press, 1998, pp. 147-190.)

Break (15 minutes)

6. Case History (50 minutes)

- **Explain** that this case history will be used to start their thinking on how personal and social risk factors may impact learning how to read and the implications for their own instruction and/or program practices. **Ask participants to** take a few minutes to **read the handout *Joseph, a Beginning Reader.***

- **Ask participants to form small groups of three to four people and develop a list of instructional and program strategies and implications** in teaching reading skills to Joseph. Give them blank sheets of newsprint on which to record their lists.

- **After 20 minutes, reconvene the whole group.** Ask participants to post their newsprints and briefly summarize their lists. After each group presents, time should be allotted for questions and comments from other participants.

Helpful Hint
If you find that participants don't have follow-up questions or seem quiet, you should begin to ask questions that you feel can facilitate more discussion in the large group format.

7. Reflections (30 minutes)

- **Post the newsprint <u>Reflections</u>.** Ask participants to reflect on a student in their programs and how they might use this information when planning for instruction for a particular student.

- **After 10 minutes, reconvene the group. Ask participants to briefly profile the student and describe the instructional approach they plan to try.** Summarize the responses on the newsprint.

Reflections

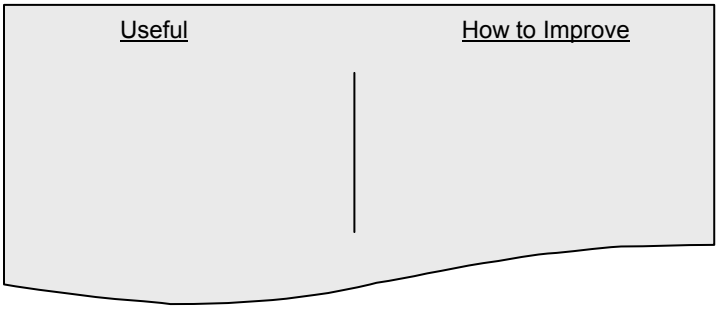
- Suggest to participants that they may want to share with each other how their plans worked, or ask each other questions through another

meeting, e-mail list, and so on. Help the group to organize how they might do next steps.

8. Evaluation of the Seminar (10 minutes)

- **Explain to participants that, in the time left, you would like to get feedback from them about this seminar.** You will use this feedback in shaping future seminars.

- **Post the newsprint Useful/How to Improve.**



Ask participants first to tell you what was useful or helpful to them about the design and content of this seminar. Write their comments, without response from you, on the newsprint under "Useful."

- **Then ask participants for suggestions on how to improve this design and content**. Write their comments, without response from you, on the newsprint under "How to Improve." If anyone makes a negative comment that's not in the form of a suggestion, ask the person to rephrase it as a suggestion for improvement, and then write the suggestion on the newsprint.

- **Do not make any response to participants' comments during this evaluation.** It is very important for you not to defend or justify anything you have done in the seminar or anything about the design or content, as this will discourage further suggestions. If anyone makes a suggestion you don't agree with, just nod your head. If you feel some response is needed, rephrase their concern: "So you feel that what we should do instead of the small group discussion is . . . ? Is that right?"

- **Refer participants to the National Center for the Study of Adult Learning and Literacy's Web site (www.ncsall.net) for further information.** Point out that most NSCALL publications may be downloaded free from the Web site. Print versions can be ordered by contacting NSCALL at World Education: ncsall@worlded.org.

- **Thank everyone** for coming and participating in the seminar.

Reading

(To be read by participants *before* the session.)

Excerpt from **Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy**

by Catherine E. Snow and John Strucker
The Annual Review of Adult Learning and Literacy, Volume 1, Chapter 2, pp. 25-38

In the spring of 1998 the National Research Council released a report, *Preventing Reading Difficulties in Young Children for Adult Learning and Literacy (PRD).* This report, produced by a committee that included members identified with quite diverse perspectives on reading instruction, was widely heralded as having the potential to "end the reading wars." *PRD* was written with the goal of contributing to the prevention of reading difficulties by documenting the contributions of research to an understanding of reading development and the conditions under which reading develops with the greatest ease. The report started by presenting the best current, research-based model of skilled reading as a basis for reviewing the literature to determine which groups and individuals are at greatest risk of failure and what factors are associated with the reduction of risk. The perhaps somewhat utopian vision offered by *PRD* was that if the long list of recommendations within the report were implemented, the incidence of reading difficulties among American school children would be reduced from 15 percent to 40 percent down to 3 percent to 5 percent—eventually.

The most frequent question encountered by members of the *PRD* committee as they talk about the report to groups of educators is, "But what do we do about the middle and secondary school students who haven't learned to read? Will the recommendations in the report help them?" A similar question could be formulated about the many adults in the United States with poor literacy skills. This chapter discusses the implications of the report for adult literacy and family literacy programs, including programs teaching English for speakers of other languages (ESOL). The questions we address include the following: What is the relevance of the research base reviewed in the report to understanding adult literacy performance and instructional practice for adults? Are the risk factors identified in the report as justifying secondary prevention efforts equally applicable to adult learners? What is the future of adult basic education (ABE) in a world where reading difficulties have truly been well prevented?

We begin with a brief summary of the findings of *PRD* that we consider most relevant to ABE and ESOL. We then present six case studies of adult literacy learners to illustrate how the issues brought up in *PRD* are and are not directly relevant to adult literacy difficulties. We conclude by suggesting areas of adult literacy in need of further research and ways that teacher preparation for adult literacy practitioners might be improved.

PRD limited its purview to research relevant to early reading, through third grade. The report identifies six opportunities that, if accessible to every child, would greatly decrease the risk of reading difficulties:

1. Support for the acquisition of language and of sufficient metalinguistic awareness to approach the segmentation of speech into smaller units that could be related to alphabetic writing

2. Exposure to print and to literacy uses and functions

3. Development of enthusiasm for reading

4. Opportunities to grasp and master the alphabetic principle[1]

5. Access to preventive services if needed

6. Access to intervention as soon as reading difficulties emerge

With reference to the early years of school, the six opportunities define domains to which excellent reading instruction must attend; in other words, early adequate reading instruction provides children with the opportunity to acquire knowledge of and facility with the alphabetic principle and with sufficient practice to achieve fluency in the application of the alphabetic principle so that the construction of meaning is not disrupted.

The issues that emerge in higher stages of reading development (reading to learn, acquisition of literate vocabulary, education in content areas, and reading for critical purposes) are not covered by the report (although the report's discussion of the importance of decontextualized language skills even in the preschool years prefigures the important topic of the obstacles that at-risk learners face in some of these areas). A large proportion of ABE students—both those who are reading disabled and those who are not but still have all of the other risk factors—are stuck precisely at these later stages of literacy development.

RISK FACTORS

Preventing Reading Difficulties in Young Children for Adult Learning and Literacy devotes considerable attention to the task of defining risk factors and using the research literature as a basis for deciding which children are at an elevated risk of reading difficulties. We use this section of the report as a basis for comparison with factors associated with the risk of low literacy in the adult population.

Which Children Are at Risk for Literacy Problems?

The report distinguishes group and individual risk factors—not because the difference has any theoretical significance but because the strategies for identifying and providing secondary prevention efforts differ for the two types of risk. The most important group risk factors are listed here, but it is important to note that these factors are likely to be correlated with one another and, thus, that it has been impossible to determine the contribution of each individually:

- *Attending a chronically low-achieving school.* If a school consistently scores well below average on norm-referenced reading tests, any child attending that school (even children who do not bring other risk factors with them) is at elevated risk of reading difficulty. It has been widely documented that even middle-class children attending generally low-ranked schools do poorly. The consistently poor performance of such schools suggests the absence of a coherent strategy for teaching reading, a paucity of attentive teachers with high expectations for student success, and/or the adoption of unsuccessful approaches to teaching reading.

- *Having low proficiency in English.* Latino children are about twice as likely as Anglo children to read below average for their age. Although it is difficult to sort out precisely what percentage of the elevated risk of Latino children can be attributed to low proficiency in English (since many Latinos are native English speakers), clearly poor English skills at the time that reading instruction commences constitutes one source of risk. This risk cannot be attributed primarily to the child; it represents a failure of the educational system to develop adequate methods for introducing such children to literacy and ambivalence about the role of Spanish in their literacy instruction.

- *Speaking a nonstandard dialect of English*. Children who speak dialects of English identified with poverty, ethnic minorities, or immigrant groups (such as Caribbean or Indian English) are at

elevated risk of literacy difficulties. It is not entirely clear whether these difficulties can be attributed directly to the children's unfamiliarity with standard English, the poverty and limited education of the families from which they come, the reactions school personnel have to nonstandard speakers, or problems of mapping their own phonological system onto the phoneme-grapheme correspondences being taught. Thus, although we know that nonstandard speakers, like non-English speakers, need special attention and better-than-average instruction, we cannot use the fact of elevated risk as a basis for deciding the cause of the difficulties.

- *Living in a community of poverty.* Coming from a home with limited financial and educational resources is, in and of itself, not a major risk factor. However, living in such a home when it is located in a community composed of similarly situated families, and with the high likelihood that the neighborhood school will show generally poor achievement levels, does constitute a major risk.

Individual risk factors, which may and often do coincide with the group risks, include the following:

- *Delayed or disordered language development.* Children with a history of language problems are very likely to encounter difficulties in learning to read. Reading builds on the child's analysis of his or her own phonological, lexical, and grammatical knowledge. Children for whom such knowledge is shaky, still developing, and poorly consolidated are on much shakier ground when asked to engage in metalinguistic tasks such as performing phoneme segmentation, learning sound-symbol correspondences, or writing.

- *Hearing impairments.* The deaf population in general shows poor reading achievement. In fact, deaf children must learn English as a second language, just as native speakers of Spanish or Chinese do, and they are additionally challenged by the difference in mode between their native language (a gesture-based system) and the aural-oral mode of English. Although deaf children can learn enough about the alphabetic system to read at a third- or fourth-grade level, evidently the inaccessibility of a phonological representation of English makes further progress extremely difficult for many.

- *Developmental delays or disorders.* Children with any of a wide variety of developmental challenges—mental retardation, emotional problems, attention deficits—will find learning to read more difficult than children without such risks. It is worthy of note that there is very high comorbidity for emotional problems and communication

disorders and that approximately 50 percent of children with attention deficit disorder also have diagnosed language problems. The documented comorbidity rates may reflect a deeper reality that early in childhood, any developmental problem is likely to be reflected in a variety of domains. Reading, as a challenging problem area, is likely to be one of the affected domains.

Who Is at Risk in the Adult Population?

To discuss those parts of *PRD* that might relate to practice and research in the fields of adult basic education and adult education in English for speakers of other languages, we first need to summarize what is known about the demographic characteristics of adult literacy students and then what is known about the reading accomplishments of this population.

Not surprisingly, many adult literacy students embody some of the demographic risk factors associated with early reading difficulties in *PRD* and in previous national reports on reading (National Assessment of Educational Progress, 1995; Anderson, Hiebert, Scott, & Wilkinson, 1985)—factors such as poverty and membership in ethnic or linguistic minority groups. As noted in *PRD*, poverty is not by itself necessarily a risk factor for reading, but economic disadvantages are strongly associated with other risk factors, such as having fewer literacy-building experiences in early childhood and receiving poor-quality schooling.

Since the mid-1970s researchers have consistently described the U.S. adult literacy population in similar socioeconomic terms: most students are poor or low income, minority groups are disproportionately represented, and increasing numbers are not native speakers of English (Cook, 1977; Hunter & Harman, 1985; Kirsch, Jungeblut, Jenkins, & Kolstad, 1993; Sticht, 1988, 1998). Despite occasional reports of financially successful people who have reading difficulties (Johnston, 1985), adult literacy classes are overwhelmingly composed of the poor, the underemployed, and the unemployed.

Why are we bothering to restate the obvious: that adult literacy students come from poor, educationally disadvantaged backgrounds? As we turn to describing the kinds of reading difficulties ABE/ESOL students face, we want to keep in mind the interaction of their academic difficulties with their life histories and current socioeconomic circumstances. Like other human activities, reading ability develops in various social contexts over time. So, for example, when we discuss the vocabulary knowledge of adult students, we will also discuss how their childhood and adult exposure to words may have influenced its development.

SKILLED READING

PRD is focused on the period from birth through third grade, a crucial time in language and literacy acquisition. Through school-based instruction and independent reading, children learn to decode words independently, become automatic and fluent at word recognition, and begin to develop the skills in reading to learn that will allow them to use reading as a lifelong tool for education and enjoyment.

How Does Literacy Develop Through Grade 3?

PRD identifies several domains of development that are crucial to the emergence of solid literacy skills during the early school years.

COGNITIVE, EMOTIONAL, AND SOCIAL DEVELOPMENT. It should be clear that reading, a complex achievement, is more likely to develop in a risk-free way in children who are healthy and physiologically intact and show normal developments in the domains of cognition (in particular, understanding symbolization), emotionality and attention, and sociability.

LANGUAGE DEVELOPMENT. Children start to produce language sometime around their first birthday, but if they have been exposed to sufficient spoken language, they have already organized their speech discrimination systems to match the language they will learn. Children also typically understand several words or phrases before they start to speak. Children's language development is a prerequisite to reading in some indirect and direct ways.

First, the texts children use when they first learn to read are composed of words and grammatical structures. Children who know those words and structures orally will have easier access to meaning through reading. Second, as children acquire more vocabulary words, they become increasingly sensitive to the internal differences in the sounds and sequences of sounds of those words—awareness that is crucial to mastering the alphabetic principle. Third, children who have the opportunity to use language in a wide variety of communicative tasks learn about the different forms of communication appropriate to different situations—that talking on the telephone requires giving more explicit information than chatting face to face, that telling stories requires sequencing events, that talking about fantasy worlds and hypotheses requires forms like *pretend, suppose,* and *if.* In every respect, the progress of language development during the preschool and early school years must be seen as one aspect of literacy development.

PHONOLOGICAL AWARENESS. For children learning to read an alphabetic language such as English, phonological awareness constitutes a

precursor to reading in its own right. Phonological awareness refers to the ability to focus on the sounds of language rather than the meaning. Early evidence of children's phonological awareness often comes from their language play *(willy, wally, wooly),* their enjoyment or production of rhymes *(cat, sat, fat, pat),* or their ability to question language forms *(Is his name Rory because he makes so much noise?).*

Language segmentation abilities also reveal phonological awareness; typically young children can segment a sentence into meaningful units *(The little girl/ate/lots of ice cream.),* but only at about age four will children reliably isolate meaningless, grammatical words such as *the* and *of* as separate units. Four year olds can typically be shown how to separate syllables as well; syllables are relatively accessible, pronounceable units. Much more challenging is the ability to segment a word or syllable into its component sounds (phonemes): recognizing, for example, that cat has three parts, /c/, /a/, and /t/. Children who understand this are said to have achieved phonemic awareness, important because it is crucial in learning to read English to understand that letters stand for phonemes, not syllables or words.

Phonemic awareness develops gradually. A relatively easy phonemic awareness task involves removing the first "little bit" from a word *(say the name Fred without the fff)* or thinking of words that start with the same sound. Segmenting or matching on final sounds is more difficult. Removing medial sounds *(say Fred without the rrrr)* is extremely hard. While research makes clear that phonemic awareness continues to develop during the early stages of conventional reading, it is clear that children with no capacity to recognize, segment, or attend to individual phonemes will have a very hard time understanding phonics-based instruction, which presupposes such understanding.

LITERACY DEVELOPMENT. By literacy development, we mean development of understandings about the functions and uses of print, an understanding that language used in books may differ in certain ways from that used orally, an appreciation for literacy activities, as well as the development of the skills of reading and writing in conventional ways. Children arrive at school with vastly different amounts and kinds of experience in using literacy or seeing literacy used in their homes. Those who have had lots of chances to be read to, practice writing or scribbling, use magnetic letters (of the sort that attach to the refrigerator door), recognize letters and words in print they see in their daily environments, and so on will be much better prepared for reading instruction.

Is There Development in Reading After Grade 3?

Of course, considerable development in language and literacy occurs beyond third grade, even for learners who are progressing as expected in literacy. A

comparison of the books read by children at the end of third grade and those read by children even just a few years older makes clear how much is left to learn after the basic reading skills are established. Older readers can handle a wider variety of text types, a much higher incidence of rare or unknown vocabulary items, and more complex sentences and rhetorical structures; they can understand literary devices signaling irony, sarcasm, humor, multiple perspectives, violations of the time line, hypothetical and counterfactual reasoning, and much more.

ADVANCED LANGUAGE SKILLS. These developments in literacy skills parallel enormous developments after grade 3 in children's oral language skills. The new language skills typical of this developmental period have been variously referred to as *decontextualized* (Snow, 1983) or *focused* (Scollon & Scollon, 1982), as *oral literacy* (Tannen, 1982), and as *extended discourse skills* (Ninio & Snow, 1996). All of these terms refer to the characteristic that language can be used in a more autonomous way—to create realities rather than just referring to reality and to represent relatively complex states of affairs. Often these uses of language are also reflexive and analytic. Giving definitions, for example, requires that children analyze their own knowledge of word meanings and figure out which aspects of what they know about a word are likely to be shared. This decontextualized, or extended, use of language is relevant to literacy precisely because the texts that older children come to read use this sort of language. They are likely to be introducing novel, often complex information in ways that presuppose little shared background information and with the pragmatic features typical of distanced communication. Such texts create demands that are quite different from those of primary grade readings; early texts are mostly narratives, using only the few thousand most common words of English, telling about relatively familiar sorts of individuals and events, appearing together with contextualizing pictures, and benefiting from support for comprehension through instructional activities.

The presentation of more decontextualized texts to slightly older children may indeed generate new cases of reading difficulties even among children who have developed as expected through grade 3. More likely, though, the children who found the texts of the later elementary grades impossible to comprehend were showing some difficulties at earlier stages of reading as well, but perhaps slight enough that they were masked by strengths in some components of the reading process.

MATTHEW EFFECTS. The organizing metaphor of "Matthew effects" was introduced to the field of reading by Keith Stanovich (1986) to explain the development of individual differences in both reading and more

general cognitive functioning in verbal areas. It takes its name from the "rich get richer and the poor get poorer" discussion in the Gospel according to

Matthew. Interweaving inherited and environmental factors, Stanovich argued that relatively small cognitive differences (especially in phonological processing) among young children can lead to wide and socially significant differences in adult outcomes, not just in reading but in verbal intelligence.

Here is a schematic version of how Matthew effects might play out. If a child has a *phonological processing difficulty* at the outset of reading instruction, then the acquisition of *word analysis skills* in kindergarten and first grade may be imperiled. If *word analysis skills* are not developed, then the child's *decoding* (the ability to figure out the pronunciations of unknown words independently) is compromised. In addition, her ability to progress from analyzing letter sounds to orthographic processing (recognizing letter and syllable patterns as units) may not develop adequately. If the child cannot *decode* independently, then it is more difficult and frustrating for her to practice *reading independently.* If the child cannot practice *reading independently,* then *fluent reading* may fail to develop by the end of third grade. If *fluent reading* is not in place by the end of third grade, there are at least two results.

First, reading is less enjoyable, leading the child to read less (thus adversely affecting fluency itself). Second, if fluent reading fails to develop, then reading to learn in the later grades is imperiled for two related reasons: first, because the child must devote too much effort to word recognition, leaving insufficient resources to devote to comprehension (Perfetti, 1985), and, second, because when reading is disfluent and slow, the longer clauses and sentences that increasingly occur in content passages in the middle grades cannot be processed as effectively. If the ability to read to learn does not develop sufficiently, the child's ability to use reading to acquire vocabulary and concepts is affected, and schoolwork becomes increasingly difficult. Since knowledge in school subjects is cumulative, incomplete acquisition of basic vocabulary and background concepts in middle school can imperil high school learning.

Notice that even in this brief schematic representation of what Stanovich called a "cascade" of reading difficulties, cognitive-neurological factors are reciprocally related to behavioral-environmental factors. For example, the early phonological difficulty (of presumed neurological-cognitive origin) ultimately leads to the behavioral consequence of reading less, which impedes the acquisition of the cognitive skills in automatic word recognition. Stanovich also raised the issue that reading ability and verbal IQ are reciprocally related, especially as readers move into adulthood. (See also Stanovich, 1991, and Siegel, 1989.) In practice this means that a forty-five-year-old adult who has been a lifelong nonreader is likely to score lower on

verbal IQ tests than a forty-five-year-old who has been a lifelong reader; this is because the nonreader could not use reading to acquire some of the skills and knowledge needed for such tests.

With respect to the ABE/ESOL population, Stanovich's (1986) discussion of social environmental factors is especially relevant. The development of phonological awareness seems to have a strong inherited component, but it is probably also strongly influenced by the child's exposure to oral language in infancy and early childhood. If a child's exposure to oral language is substantially limited, comprising substantially fewer words and phoneme distinctions, then he may have fewer sounds on which to practice and develop his phonological awareness.

In a study of preschool children's vocabulary learning, Hart and Risley (1995) found that children of welfare families had far fewer language interactions with adults and were exposed to far fewer different words than were children from working-class and middle-class families. As a consequence, the children from welfare families not only knew the meanings of fewer words than the other children, but they were acquiring new vocabulary at a much slower rate, falling increasingly behind the other children in vocabulary knowledge with the passage of time. Thus, it is possible that the vocabulary difficulties of some ABE students began long before school, in early childhood, with the establishment of slower rates of vocabulary learning and less developed schema for learning new words.

WHERE ARE ADULT LITERACY STUDENTS ON THIS DEVELOPMENTAL CONTINUUM? ABE and some ESOL students can be found at every point along this schematic representation of reading difficulties. Some students appear stalled at early stages of reading by severe unremediated phonological difficulties. However, it is much more common for ABE/ESOL students to enroll with partial or incomplete development of the various reading skills: partial acquisition of phonological awareness (reflected in decoding problems and poor spelling), fluency lagging the equivalent of several grade levels (often called grade equivalents, or GEs)[2] behind untimed silent comprehension, vocabulary levels lagging behind their years of school completion, and background knowledge in the content areas stalled below 5 GE.

Until recently, many ABE programs were unaware of difficulties in decoding and fluency, particularly among students reading above 5 GE in silent reading (Strucker, 1997). Indeed, in programs where teachers were advised not to ask adults to do oral reading because it was not an "authentic" literacy act, decoding and fluency problems could go undetected for months or years. But if current models of the reading process are accurate (Chall, 1983; Perfetti, 1985; Stanovich, 1986; Adams, 1994; Snow, Burns, & Griffin, 1998),

poor decoding and lack of fluency will greatly impede the acquisition of levels of vocabulary and content knowledge that students need to pass the General Educational Development (GED) tests. Even modest gains in those processing areas can lead to substantial gains in comprehension for ABE learners.

What Does It Take to Be a Skilled Reader?

Although there has been considerable controversy about the nature of skilled reading and the degree to which all skilled readers are similar to one another, in recent years a consensus has developed among researchers, who agree that skilled readers can do the following:

- Read all or most of the words on the page
- Notice most of the letters in each word and use the letters to access a phonological representation of the word
- Read words quickly because they have automatized the processes of letter recognition and phonological access through practice
- Rely heavily on context cues for comprehension
- Use context cues only minimally for word recognition, which is primarily driven by using letters to access sounds
- Almost always read with a purpose, focus on meaning, and self-monitor their comprehension

Research comparing skilled and less skilled readers at any age or grade level typically finds differences in a wide variety of dimensions. Skilled readers are better than age-matched poorer readers in vocabulary, world knowledge, literal as well as inferential comprehension, and comprehension monitoring and repair strategies. Skilled readers are also typically better than poorer readers in various skills relevant to word identification (getting to the right pronunciation) and lexical access (getting to the right word), knowledge of how spelling patterns relate to pronunciation, sensitivity to relative frequency of letter strings, speed of word reading, and use of context to select the right meaning for homographs (different words spelled the same way).

The development of these reading skills rests on an appreciation of the alphabetic principle—knowledge that letters represent phonemes—and mastery of that principle through large amounts of practice reading. Practice in reading produces fluency, or the ability to read relatively quickly and without conscious attention to the process of word identification. Without some level of fluency, comprehension of longer texts is very difficult, because the construction of meaning is disrupted by the difficulty and slowness of word recognition.

Among the six opportunities to learn, three relate specifically to this model of skilled reading: children need opportunities to learn and master the alphabetic principle, focus on reading for meaning at every stage of instruction, and have enough opportunities to practice reading to achieve fluency. The fourth opportunity—to develop enthusiasm about literacy—is crucial. Most children encounter obstacles somewhere along the road to literacy, and without a clear understanding of how important and potentially pleasurable literacy achievement is, they are unlikely to persist.

Conclusions Concerning Skilled Reading

It should be clear that in discussing either children or adults, we start from three assumptions about reading.

First, skilled reading is the product of a developmental process that starts early in life and changes both qualitatively and quantitatively as readers grow older and experience literacy more widely.

Second, although advanced readers experience reading as a seamless process, it is helpful to view reading as the product of several different lines of development and to view skilled reading as the integration of several components (visual word identification, phonological access, lexical access, monitoring for comprehension, and so on).

Third, the relationships between the components change as the reader develops (Stanovich, 1986; Chall, 1983; Curtis, 1980). For example, when beginning readers are learning letter-sound correspondences (word analysis or phonics), they usually perfect that skill on text that contains highly familiar words. This allows them to map the letter combinations onto words whose phonological representations are well known and easily accessible. They are not expected to learn new words at the same time they are learning the alphabetic principle. However, within a few years after learning to read, successful readers are reading to learn and using reading itself to expand and deepen their vocabulary knowledge. At this stage of reading development, it is crucial that they read text with new and sufficiently challenging vocabulary and concepts. The word analysis skills that were an important focus of instruction for the beginning reader have become automatized, making fluent word recognition possible. At this stage word analysis skills are consciously employed only when decoding and spelling unfamiliar words.

Notes

1. To master the alphabetic principle is to understand that letters and combinations of letters correspond in a systematic way to the words and syllables of spoken language.

2. We will use the term grade equivalent (GE) when discussing adults. However, to say that an adult "reads at 5 GE" does not necessarily imply that he "reads like an average fifth-grade child." In vocabulary, for example, the adult may know the meanings of more words in areas pertaining to adult work life and psychological development than a fifth grader would, but the adult may not have learned or may not remember the meanings of some words associated with fifth-grade social studies or science. In the area of reading rate, average fifth graders can read about 150 words per minute with comprehension (Harris & Sipay, 1990), but many adult readers at 5 GE read more slowly. See also Pratt and Brady (1988) on the differences between the reading of adult literacy students and of age-matched children.

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Handout

Joseph, a Beginning Reader

(Excerpted from **Lessons from Preventing Reading Difficulties in Young Children for Adult Learning and Literacy,** by Catherine E. Snow and John Strucker, *The Annual Review of Adult Learning and Literacy*, Volume 1, Chapter 2, pp. 43-45.)

At the time of testing in 1994, Joseph, an African American living in Boston, was fifty-nine years old. He had grown up on the outskirts of a small town in South Carolina, where his family were sharecroppers raising cotton and tobacco. He reported that his father could read "a little" but that his mother was completely illiterate. His test scores as an adult indicated that he could recognize words at an early first-grade level and had not mastered the most basic levels of word analysis skills. Joseph was unable to read the 3 Grade Equivalent (GE) reading comprehension passage, the lowest GE available in the battery used. His oral vocabulary at 5 GE was actually slightly higher than that of many adult nonreaders from working-class backgrounds. Following is his reading profile:

Rosner	1 GE[6]
Word analysis	1 GE
Word recognition	1 GE
Spelling	1.5 GE
Oral reading	1 GE
Comprehension	Not attempted
Oral vocabulary	5 GE

Joseph is a living compendium of the risk factors, both social and personal, identified in *PRD*. He attended a segregated, rural school that was a two-mile walk from his home and where, based on his reports, he received poor-quality reading instruction. Classes were large, and what few books there were could not be taken home. His only memories of reading instruction were of the teacher's writing words on the blackboard and the children being asked to spell them letter by letter, and then being asked to read them.[7] After his father died, when Joseph was eight years old, he had to work in the fields for most of the year to contribute to the family income, and he attended school only sporadically from that point on, eventually dropping out permanently at age sixteen. Poor-quality schools coupled with poor attendance was a common experience among low-literacy adults of Joseph's generation, especially if they grew up in rural areas.

Based on current phonemic awareness testing and subsequent attempts to teach the alphabetic principle to Joseph using a variety of methods, we feel it is likely that Joseph has a phonologically based reading disability. A subsequent evaluation at the Massachusetts General Hospital Speech and Communications Disorders Program confirmed these observations. This basic phonological processing difficulty was discussed at length in *PRD* as the most prevalent personal risk factor for early reading problems.

We cannot tell with certainty how severe Joseph's phonological disability was when he was a child. Results of intervention studies cited in *PRD* suggest that if children with moderate disabilities in this area receive early instruction in phonological awareness, their rates of reading failure can be greatly reduced. (See summaries of this research by Blachman, 1994, 1997.) These kinds of early interventions did not exist when Joseph started school in the late 1930s. We can only speculate on what might have been the results if he had been given such help. Phonological development in children not only contributes to reading success; reading and spelling themselves probably contribute reciprocally to phonological development (Blachman, 1997). In Joseph's case, fifty years of not reading or spelling may have caused whatever limited phoneme awareness skills he possessed as a child to deteriorate. As is often the case with ABE students, Joseph's personal risk factors for reading difficulties, such as his inherited phonological difficulties, were undoubtedly exacerbated by social risk factors: his lack of exposure to reading and books as a young child and the particularly inadequate reading instruction he reported receiving in school.

Despite this formidable array of risk factors, Joseph has enjoyed considerable success in life. He worked in a number of factories from the 1950s to 1980s, rising to low-level supervisory positions in some of them through his hard work and excellent interpersonal skills. Joseph married a woman who was a high school graduate, and once their children were grown he worked overtime so that she could attend college and eventually earn a master's degree in business administration. They own a triple-decker home in Boston and have raised three children, and his wife now uses her computer and accounting skills to manage their small trucking company, which also employs their sons. She and the sons draw special maps for Joseph to follow when he has to make a delivery to an unfamiliar location, and she helps him study for truck driving licensing tests. Joseph is the treasurer of his church, but he would like to be able to read from the Bible at services and teach Sunday school.

In many ways Joseph resembles the low-literacy adults described by Fingeret (1983) who are able to rely on family members and networks of friends to help them successfully negotiate the world of print. Still, Joseph's

accomplishments are remarkable even in the context of the 1950s, 1960s, and 1970s, when workers with minimal reading skills could find steady employment at good wages in factories. In today's job market Joseph's success would be much harder to replicate without basic literacy skills.

Notes

6. The Rosner is a test of phonological awareness including items that require phoneme deletion.

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Information About NCSALL

NCSALL's Mission

NCSALL's purpose is to improve practice in educational programs that serve adults with limited literacy and English language skills, and those without a high school diploma. NCSALL is meeting this purpose through basic and applied research, dissemination of research findings, and leadership within the field of adult learning and literacy.

NCSALL is a collaborative effort among the Harvard Graduate School of Education, World Education, The Center for Literacy Studies at The University of Tennessee, Rutgers University, and Portland State University. NCSALL is funded by the U.S. Department of Education through its Institute of Education Sciences (formerly Office of Educational Research and Improvement).

NCSALL's Research Projects

The goal of NCSALL's research is to provide information that is used to improve practice in programs that offer adult basic education (ABE), English for Speakers of Other Languages (ESOL), and adult secondary education services. In pursuit of this goal, NCSALL has undertaken research projects in four areas: (1) student motivation, (2) instructional practice and the teaching/learning interaction, (3) staff development, and (4) assessment.

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