This research is on the website of the Southwest Educational Development Laboratory, a private, nonprofit education resource, development and dissemination corporation. Find the website at http://www.sedl.org/pubs. Although it is written with the secondary school reader in mind, it has adaptation to adult learners. It is summarized by Bella Hanson.

Research Perspectives

Perspectives: Building Reading Proficiency at the Secondary Level

Secondary-level reading remediation traditionally has not focused on decoding, but on comprehension. Readers complete instruction and practice on those skills for which they scored pretest deficiencies. Usually, they improve on a closely aligned posttest. Despite short-term gains, the effects of even the strongest of these approaches, mastery learning, are effectively zero on such transfer measures as standardized tests (Kulik, Kulik, & Bangert-Drowns, 1990; Slavin, 1990). Mastery learning through computer-assisted-instruction also has shown minimal effects for reading (Christmann, Baggett, & Lucking, 1997; Fletcher-Flinn & Gravvat, 1995) or for transfer to contexts beyond the computer program (Read, 1992). Some researchers (such as Gaskins, 1998) have observed that struggling readers need support in strategic reading, in orchestrating comprehension, and in applying reading across contexts--forms of support remedial programs usually lack.

Another traditional approach has been the modification of instruction based on assessment of learning style. Here, too, meta-analyses (of aptitude-treatment-interaction studies) have failed to establish an effect (Kavale & Forness, 1987). Recently, Stahl and Kuhn (1995) found no support for learning styles applied to reading instruction and Horton and Oakland (1997), in an empirical study of 417 seventh graders, found no support for the practice of adapting instruction to learning styles.

A consensus seems to be building among researchers that traditional reading remediation is insufficient. In their comprehensive review of the literature, Johnston and Allington (1991) concluded that remediation for reading comprehension beyond the primary grades generally has not been very effective in improving student reading performance. In their review, Klenk and Kibby (2000) concurred, calling for an end to the "remedy" metaphor. Instead, they proposed "mediational process" for both teachers and students (p. 681). Such an approach supports the Vygotskian notion of recursive zones of proximal development and the added consideration of reading contexts outside of school--such as home, church, and workplace--that are important for older readers. For example, Moll, Amanti, Neff, & Gonzalez (1992) documented the patterns of literacy learning and expertise, called "funds of knowledge," that working class, Mexican-American students bring to school. Typically these funds of student knowledge, stemming from family and home (Delgado-Gaitan, 1990) as well as church and workplace, have been unrecognized assets of those marginalized from the culture of school. In Moll's approach, teachers become ethnographers to learn about those funds, which are then integrated with classroom reading. Another example of culturally relevant pedagogy is in the work of Ladson-Billings (1994, 1995), who reported how this approach has helped African-American students to see the power of literacy in their lives.
An "engagement perspective" guides our review of building reading proficiency at the secondary level. The National Reading Research Center (Baumann & Duffy, 1997; Cramer & Castle, 1994; O'Brien, Dillon, Wellinski, Springs, & Stith, 1997) articulated this perspective, noting that engaged readers "coordinate their strategies and knowledge (cognition) within a community of literacy (social) in order to fulfill their personal goals, desires, and intentions (motivation)" (Guthrie & Wigfield, 2000, p. 404).

In the following sections we summarize the research on what struggling secondary readers need in order to build reading proficiency. The discussion is organized around four factors: (a) the motivation to read, (b) the ability to decode print, (c) the ability to comprehend language, and (c) the ability to transact with text (to actively seek information and make personal responses). For each factor, we address appropriate learning contexts and the implications for culturally and linguistically diverse learners.

**Motivation to Read**

Reading proficiency requires the reader to independently begin and persist in reading tasks, actions that hinge on motivation (Snow, Burns, & Griffin, 1998). As students move through the grades, especially at the middle school level, their motivation to choose to read tends to decline (Donahue et al., 1999; Guthrie & Wigfield, 2000).

Feelings of competence and self-determination engendered by a reading task likely affects the reader's intrinsic motivation for it (Deci & Ryan, 1985). In a study of four struggling middle school readers, Kos (1991) found that despite expressing strong desires to read successfully, these students had negative views of reading in school settings, which they associated with feelings of failure. By the secondary grades, they readily recognized the simplified text that has been written for their remediation and associated such materials with failure and social stigma. Authentic texts (such as newspapers and trade books) and choice in selecting reading materials are especially important for fostering reading persistence in struggling secondary readers (Cope, 1993; Worthy, 1996). Instructional scaffolding for choosing authentic materials has also improved reading interest and skill among these students (Ammann & Mittelsteadt, 1987; Collins, 1996; Ryan & Brewer, 1990).

**Affect**

Intrinsically motivated readers persist in reading because of affective engagement, the pleasure or satisfaction that is gained from their value or interest in the task (Baumann & Duffy, 1997). In avoiding reading, the struggling reader has little opportunity for potentially motivating connections of emotions, feelings, and sentiments of transacting with text. Even secondary students who are competent readers may avoid reading unless it is required when they fail to see it as useful or interesting to them (O'Brien et al., 1997).

**Contexts for Building Motivation**

A classroom climate of respect for peers and for cultural and linguistic differences provides a motivating social context for learning through reading. Cummins (1986) noted that students suffered in reading performance when their language or dialect was stigmatized in the classroom, but not when it was honored. The teacher who is aware of literacy contexts outside the classroom
can connect those contexts to reading tasks and the selection of materials. In structuring reading tasks and selecting materials, teachers should allow student choice, while providing support in making those choices.

The next two factors are the major cognitive components necessary for proficient reading: decoding and language comprehension.

**Decoding Skill**

Decoding skill involves basic decoding as well as fluency. Most educators assume that by the secondary grades, all but those students classified as learning disabled (or dyslexic) are skilled decoders. Consequently, relatively little research has looked at decoding skill with other populations of secondary readers.

**Basic Decoding**

Basic decoding skill requires readers to know the systematic sound-symbol relationships of English, as well as words that don't entirely follow those rules ("mischief") and words that are linguistically unique ("colonel"). By the secondary grades, even struggling readers have acquired (through print exposure) a store of words they recognize by sight. Yet most of their reading words will be "exception words" unless they are skilled in manipulating the sound-symbol system to see relationships among words in print and with spoken words they already know (Johnston, 1985). For second language learners the "exception words" can be particularly difficult, as applying first language cognates or English rule regularity doesn't help much.

Basic decoding skill depends upon abilities native speakers of English are presumed to have acquired by the secondary grades. The first is the ability to recognize and manipulate letters of the alphabet. The second, phonemic awareness, refers to consciously recognizing the separability of phonemes (abstract units that underlie the sounds of spoken language) and, just as important, the ability to manipulate them. Although the importance of phonemic awareness has been established with younger readers, it has proven difficult to measure in expert older readers (Scarborough, 1998). However, readers who are dyslexic show a clear deficit in decoding at the level of phonemes that persists into adulthood (Fawcett & Nicolson, 1995; Shaywitz, 1996). Defining the problem for struggling secondary readers requires more careful investigation. In a study of struggling high school readers, Shankweiler, Lundquist, Dreyer, & Dickinson (1996) found that differences in phonological processing efficiency accounted for individual differences in text comprehension. These readers could map phonemes with graphemes. Their difficulty was in segmenting the morphological (meaning) derivations of words, even when the words were in their listening vocabularies.

This ability to look within the printed word, gained through experience with both written and spoken language, helps the reader to decode unfamiliar and irregularly spelled words. The English spelling system, contrary to popular belief, is not unsystematic; its consistencies are recognized by proficient readers. Spelling ability contributes to word recognition and, indirectly, to comprehension (Stanovich & Cunningham, 1993). It proceeds developmentally from alphabetic spelling to within-word patterns, to (at the secondary level) spelling based on meaning. All readers, including those with learning disabilities, seem to follow a similar pattern.
of development, with struggling readers stalling at the within-word pattern stage (Templeton & Morris, 2000).

**Fluency**
Fluency represents a level of speed and accuracy of word recognition and it improves from reading practice (Dowhower, 1987; Samuels, 1979). It depends upon a reader's basic decoding skills, including phonological awareness, and knowledge of syntax (Cooper & Stewart, 1987). More fluent readers were found to read with greater comprehension (White, 1995). Excessively slow, halting reading limits comprehension and the amount of print that can be read, creating a burden that can extinguish the desire to read (LaBerge & Samuels, 1974; Nathan & Stanovich, 1991; Samuels, 1994). The use of context to help identify specific words does not sufficiently compensate for laborious basic decoding skill (Shaywitz, 1996). Lack of fluency affects many struggling secondary readers (Mathes, Simmons, & Davis, 1992). They read less text in the same amount of time as do more fluent readers and have less text to remember, comprehend, and appreciate.

**Building Decoding Skill**
Two factors, explicit instruction and teacher responsiveness, seem to characterize most successful instructional programs for building decoding skill. McCormick and Becker (1996) found that students with learning disabilities also benefited from indirect word study. Decoding skill also has implications for second language learners.

1. **Explicit instruction for word recognition.** This approach has been effective with struggling secondary readers (Gaskins, Cuncelli, & Satlow, 1992; Lenz, & Hughes, 1990; Lewkowicz, 1985; Meyer; 1982). Henry (1993) argued that these readers need extended decoding and spelling instruction to help them decode multisyllabic words. Successful programs, such as one developed by McNinch (1981) emphasize explicit instruction by a responsive teacher and include an explanation of what skill is being taught, regular modeling of how to perform the skill, constant discussion of why the skill is important, and demonstrations of when it is best to apply the skill. Struggling readers benefit from expert modeling of fluent reading and repeated readings (Chall, 1996), reading practice with different kinds of texts (Snow et al., 1998), authentic reading tasks and a rich literacy environment (Apel & Swank, 1999; Gaskins, 1997; Taylor, Harris, Pearson, & Garcia, 1995).

2. **Implications for second language learners.** Decoding skill or word recognition presumes oral proficiency in English, which has implications for second language learners. In recommending practice for younger readers Snow and colleagues (1998) advised that students reading in their native language be taught to extend their skills to reading in English as they acquired proficiency in spoken English. For younger students who did not read in L1, the recommendation was to first develop basic proficiency in spoken English. Teachers of second language learners struggling with decoding should identify and take advantage of L1 decoding skills that may transfer across languages, such as phoneme segmentation and word identification strategies (National Research Council, 1997). A rich environment of literacy resources is especially important for these readers.
Language Comprehension

The comprehension of language includes linguistic knowledge, background knowledge, making inferences, and the self-regulation of comprehension (or metacognition).

Linguistic Knowledge

Comprehension builds on linguistic knowledge, or knowledge of the language system: its phonology, semantics (including morphology and word meaning), and syntax, or grammatical structure.

Phonology refers to knowledge of how the sounds of language are used to convey differences in meaning. Despite dialect differences, most secondary students have a common knowledge of the phonology and syntax of their native language. The importance of semantic knowledge shows up in the strong correlations between comprehension and the size and degree of both general and passage-specific word knowledge, or vocabulary (Beck & McKeown, 1991). Proficient readers acquire new words by wide reading and repeated exposures to words in varying contexts (Blachowicz & Fisher, 2000). A striking gap in word knowledge differentiates proficient from struggling readers (Baker, Simmons, & Kameenui, 1995) who have read less.

- **Building linguistic knowledge.** To build linguistic knowledge, struggling readers need more than opportunities for incidental learning. A meta-analysis by Stahl and Fairbanks (1986) shows traditional instruction in word definitions has little effect. Word study and explicit instruction that includes orthography, morphology, and spelling can strengthen the effects of vocabulary learning (Templeton & Morris, 2000). Students should have opportunities for active learning of words, for making personal connections, and for exposure to words in multiple sources (Blachowicz & Fisher, 2000). All students benefit from learning about how language works: the cultural connotations of words, changes in spelling over time, and dialect rules and consistencies.

- **Implications for second language learners.** Opportunities for social interaction can help struggling second language learners acquire linguistic knowledge of English. Additionally, a sight word vocabulary of high-frequency words (estimates range from 2,000 to 10,000 words) prepares them to learn English from context (Grabe, 1991). Syntactic knowledge also bears on the teaching of second language learners. For example, Nagy, McLure, and Montserrat (1997) found that bilingual middle school students made transfer errors of applying Spanish syntax not found in English, impairing their comprehension. Finally, struggling second language learners likely will need instructional assistance in applying their knowledge of cognates to English vocabulary (Garcia & Nagy, 1993).

Background Knowledge

The background knowledge of how environments operate (as explained by schema theory) makes a contribution to comprehension that can be separated from word-level knowledge, though both affect how well and how much is comprehended (Stahl, Hare, Sinatra, & Gregory, 1991). Background knowledge can be categorized as world knowledge and domain-specific knowledge that is both declarative and procedural.
By the secondary grades, students have amassed background knowledge of the world and its social and cultural contexts, much of which is external to the reading tasks of school. These tasks are likely to be more familiar to those students who have acquired knowledge from thousands of hours of being read to. Studies of background knowledge have been primarily of the strong effects of declarative and procedural domain knowledge (as of baseball, or of school subjects such as math or history) on comprehension (Gaultney, 1995; Gough, Hoover, & Peterson, 1996). The domain of schooling includes knowledge of social and cultural expectations and discourse, the ignorance of which may differentially affect the language comprehension of struggling CLD readers.

- **Contexts for building background knowledge.** Wide reading, typically avoided by the struggling secondary reader, builds background knowledge and can be encouraged by allowing self-selection of personally interesting and relevant texts. The building of background knowledge should not be limited to print, but expanded to include other contexts. Struggling readers also benefit from explicit instruction in strategies for activating and connecting what they know in the context of reading. Fragmented knowledge can be connected and shallow understanding deepened by readers reflecting upon and communicating their learning to others in a social setting.

  Before concluding a student lacks background knowledge, teachers should look for what may already have been learned in a first language that is inert, unconnected knowledge, and for culturally-related knowledge ("funds of knowledge") that can be activated and connected to a reading task.

**Making Inferences**

Comprehension beyond the word level requires the comprehender not only to activate background knowledge but also to use it in integrating meaning across sentences. As the message becomes less familiar, inferencing demands increase. Many poor comprehenders have difficulty making inferences, even when they decode fluently. The language comprehension ability to draw inferences develops as children move beyond the primary grades (Beal, 1990; Chikalanga, 1993) and is aided by long-term memory for sentences as well as background knowledge (Wilson & Hammill, 1982). In order to read to learn from text (and thus acquire new background knowledge) readers need to actively construct a mental model of the text that draws upon the text and their own background knowledge (Graesser, Millis, & Zwan, 1997). This active construction of meaning from text is consistent with popular constructivist views of learning. Secondary students for whom reading comprehension has been a "search and find" response to literal level questions may not believe they are permitted to construct meaning from text.

- **Building inferencing skill.** Struggling secondary readers are often remediated with well-structured or "considerate" text that reduces the requirement for making inferences. Although this practice can build fluency, it does not help struggling readers move beyond literal levels of understanding. Readers with sufficient prior knowledge, who are forced to infer unstated relationships, engage in deeper processing and comprehension (McNamara, Kintsch, Songer, & Kintsch, 1996; McNamara & Kintsch, 1996). In addition to opportunities to read more complex text, struggling secondary readers need
support in how to use background knowledge and text structure to determine relationships among ideas and to draw conclusions. Instructional support can come from teacher modeling, such as "think alouds" (Davey, 1983), and mapping.

- **Implications for second language learners.** Struggling second language learners may fail to apply strategies for making inferences in their first language to reading in English (National Research Council, 1997). Teachers should look for opportunities to demonstrate how inferences based on cultural differences in background knowledge can lead to differences in comprehension.

**Self-Regulated Comprehension**

Proficient reading requires the metacognitive processes of evaluating comprehension and regulating difficulties (Snow et al., 1998). This self-regulated comprehending (Hacker, 1998), often called executive control or metacognition, involves activating knowledge, making predictions about meaning, reflecting on what has been comprehended, and revising understanding. In maturing readers, self-regulated comprehending emerges with reading practice and the acquisition of knowledge about reading (Cooper, 1998), a development that further widens the gap between proficient readers and those who are struggling. Proficient readers expect to comprehend. They have strategies for decoding and comprehending. A weak knowledge base can limit the use of effective comprehension strategies, as Carr and Thompson (1996) found with struggling middle school readers. Readers need sufficient background knowledge to be able to monitor whether meaning is a guess or a certainty (Oakhill & Yuill, 1996; Ruffman, 1996).

- **Building self-regulated comprehension.** Teachers can help students develop these skills by explicitly modeling expert reading through think-alouds (Davey, 1983; Wade, 1990), by guiding strategy practice, and by ensuring that students independently apply strategies to authentic reading tasks. When taught such strategies as self-questioning, secondary students improved in comprehension (Gaultney, 1995; Haller, Child, & Walberg, 1988). Strategy instruction was more effective for students in higher grades and also when done in small groups (Chiu, 1998).

- **Implications for second language learners.** Successful bilingual readers have been found to view reading as unitary across languages. They transfer to L2 the metacognitive strategies of questioning, rereading, and evaluating as well as use such bilingual-specific strategies as code mixing, searching for cognates, and translating. Metacognitive benefits seem to accrue for second language learners when the second language is additive (the first language remains strong) rather than when it is subtractive (at the expense of the first language) (Garcia, Jimenez, & Pearson, 1998; National Research Council, 1997). The implications of this work are potentially powerful for struggling bilingual readers, who can be led to use these strategies for constructing meaning and to view their bilingualism as an asset.

**Transaction with Text**

Proficient readers engage in dialog with text (Alexander, 1997; Henk, Stahl, & Melnick, 1993; Molinelli, 1995). In Rosenblatt's (1978) theory of reader response, the interchange of ideas between the reader and the text, or the speaker and the listener, is called transaction. The
transaction occurs from two stances, which Rosenblatt describes as the reader's focus of attention during reading. In classrooms beyond the elementary grades, students typically assume the information-gathering "efferent" stance. This stance characterizes reading strategies that utilize background knowledge in neutral and objective ways. In contrast, the "aesthetic" stance allows for a personal response, in which emotions, experiences, and appreciations (such as an appreciation of beauty) are called to mind as the reader engages in transaction. Although usually associated with and modeled instructionally through the reading of narrative text, the aesthetic stance can also be taken with informational text. For example, while reading factual information about Paris, the reader might imagine a personal visit (Alexander, 1997). Transaction enables readers to negotiate the meanings of the texts they read, toward the acquisition of "critical literacy" (Shannon, 1995). Moreover, when students are aware of the social processes of production and interpretation of text, they can gain in comprehension (Hinchman & Moje, 1998).

**Contexts for Building Transaction with Text**

Transaction with text supports engaged and motivated reading. Through modeling by a teacher or peer, as with the think-aloud strategy, struggling secondary readers can see how they might contribute their own response to reading. Related work by O'Brien (1998) describes a transactive approach in which teachers help adolescent readers connect their language environments outside of school to reading. The practice of developing literacy histories can also help students connect the personal and the academic.

Struggling secondary readers can become engaged and proficient readers when motivation, decoding, language comprehension, and transaction with text build in ways that are appropriate for the reading context and are responsive to their cultural and linguistic diversity. One example of how the factors are interrelated is when transaction with text motivates reading practice, which further develops comprehension and decoding, which enables deeper transaction.

**Questions for reflection and/or discussion with colleagues:**

1. Have you observed “funds of knowledge” that your learners bring to school from reading contexts outside of school? (See p.1, paragraph 4.)

2. Have your learners discussed with you their experiences with reading and how these experiences might affect their motivation?

2. Have you assessed any of your learners for decoding and fluency? Do you think it is important to assess learners for these skills?

3. What activities do you do to build linguistic knowledge?

4. What strategies do you use to build background knowledge?

5. What strategies do you use for learners to practice self-regulated comprehension?