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Supporting Adolescent English Language Learners' Reading in the Content Areas

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Adolescent English language learners (ELLs) with learning difficulties face many challenges when reading in the content areas. In this article, we review what research tells us about how best to support ELLs' reading comprehension and content learning. We draw from recent research syntheses as well as individual studies. We highlight one multi-strategy approach for teaching reading comprehension strategies, Collaborative Strategic Reading (CSR), and point out aspects of CSR that make it appropriate for use with ELLs with learning difficulties in secondary school classrooms. We compare the components of CSR with sheltered English techniques.

Keywords: Reading Difficulties, Verbal Memory, Learning Strategies, List Learning

ELLs are the fastest growing segment of the U.S. school-age population, and by some estimates, within the next 15 years, one in four children will be an English Language Learner (National Education Association [NEA], 2008). Between 1995 and 2005, ELL enrollment in public schools grew by 56 % whereas the entire student population grew by only 2.6 % (Batalova, Fix, & Murray, 2007). As with any learner, ELLs bring with them to the classroom an array of cultural backgrounds and a range of individual, educational, and language experiences.

The English Language Learner (ELL) designation is generally acquired through the school system and is used to identify a student whose native language is not English and who is in the process of acquiring the English language. Through a series of evaluations including home language surveys, teacher nominations, language assessments, and comparison to grade level standards in English, students are considered ELL when they do not meet criteria for proficiency in English. Some ELLs are "simultaneous bilinguals," meaning that they speak both English and Spanish or another language in their homes and they are learning two languages at once (McLaughlin, 1995). Others are "sequential bilinguals." They are from homes where they and their families almost exclusively speak their native language and they are learning English as a second or additional language. Approximately 70% of ELLs in grades 6-12 speak Spanish as their first language, followed by Vietnamese, spoken by only about 3% of the total ELL population in secondary schools (Batalova et al., 2007). About two-thirds of ELLs come from low income families (NEA, 2008). Though commonly thought to be immigrants, the majority of ELLs are born in the U.S. and may be second and third generation U.S. citizens. Even by middle school,

over half of ELLs were born in the U.S. and continue to develop their English language skills (Batalova et al., 2007).

Despite the growing number of ELLs in the U.S. school system and increased attention to providing appropriate educational opportunities, adolescent ELLs continue to underachieve in English literacy. Only a very small percentage of eighth-grade ELLs are considered to be proficient in reading (Aud et al., 2011); 74% of eighth-grade ELLs scored below basic on reading achievement tests compared to only about a quarter of their non-ELLs peers (National Center for Educational Statistics [NCES], 2009). U.S schools seem to be making little progress in improving reading scores and closing the achievement gap. For example, when comparing 2009 eighth-grade NAEP reading scores with those from 1998, the eighth-grade reading gap between Hispanic and other students did not change significantly in any state (Hemphill, Vanneman, & Rahman, 2011).

Since language and reading share many of the same basic competencies and the development of both are interrelated (August & Shanahan, 2006), it is not surprising that ELLs are generally less successful at meeting standards for basic proficiency in those very skills they are in the process of developing. Yet this means that ELLs with reading difficulties are underprepared to gain access to the text and content they need to succeed in school, to earn a diploma, and to be competitive in a workforce that requires individuals to apply levels of academic literacy that are well beyond basic. Approximately 7.6% of the ELL population have diagnosed disabilities compared to 13.4% of the total school-aged population (Peña, Bedore, & Gillam, 2011; National Center for Educational Statistics [NCES], 2009). Similar to their non-ELL peers, most of these students are identified in the learning disabled (LD) and Speech and Language categories (Peña et al., 2011). The eligibility process for establishing whether an ELL has a disability must determine that the difficulties a student is experiencing are not due to the normal language acquisition process (IDEA, 2004). Yet, determining whether or not an ELL has a disability has been challenging: some students are misdiagnosed while others are overlooked and do not receive the special education support they require (Klingner, Artiles, & Méndez Barletta, 2006). Most school districts do not have specialized programs for ELLs with disabilities (Zehler et al., 2003). As a result, ELLs who have been identified as LD (1) may be taught by special educators who do not have the training to provide instruction appropriate to their language and learning needs, (2) lack understanding of cultural responsive teaching practices, and (3) fail to collaborate and coordinate various services provided to ELLs (Barker & Grassi, 2011; Klingner & Soltero-Gonzales, 2009; Ruiz, 1995; Zehler et al., 2003). Further, when ELLs are identified for special education, they often lose access to specialized language instruction that is required by law including for example, English Language development (ELD) or Structured English Immersion (SEI) programs (Zehler, et al., 2003). With or without a special education label, by middle school, most ELLs participate in content area classes with English-proficient students and may struggle to gain access to grade level curricula.

Challenges Faced by Adolescent ELLs Who Struggle with Reading in Content Classrooms

As ELLs move out of elementary schools, the task of reading becomes more complex, as does the level of required English proficiency. Whether they are newly arrived to the U.S. or long-time U.S. students, many ELLs are not reaching their potential in secondary-content classrooms. Adolescent ELLs who immigrated recently (i.e., newcomers) may struggle in content-area classrooms for a number of reasons including English language ability, lack of knowledge of U.S. school and classroom norms, and the amount and quality of literacy instruction they received prior to entering U.S. schools. Perhaps the most salient factor is that many newcomers are placed in grade-level content-area classrooms beyond the time when basic literacy is taught and they are expected to use literacy skills they do not yet possess to comprehend content area material (Short & Fitzsimmons, 2007). In other words, some newcomers have not yet been taught to read and write in English.

Struggling ELLs who have been educated in U.S. schools face other challenges. They are more likely to be long-term ELLs, students who have been classified as ELLs for seven years or more (Menken & Kleyn, 2009). As one example of this phenomenon, one third of all ELLs in grades 6-12 in New York City Schools are long-term ELLs (New York City Department of Education, 2008). Relative to their English-proficient peers, they are less likely to attend schools with highly qualified teachers, more likely to have high mobility rates, and may lack continuity of instruction as a result of participating in various language programs (Short & Fitzsimmons, 2007). Long-term ELLs require evidence-based intensive instruction that meets their specific language and learning needs, instead of more of the same ineffective instruction they have received in the past.

In this article, we highlight components of effective reading comprehension instruction that include research-based best practices in reading and language development for struggling ELLs in content area classrooms. We draw from research studies in English as a Second Language (ESL) education and in reading and special education. All of the research studies we cite included participants who were ELLs. Though some of the ELLs had learning disabilities, most did not. However, many were struggling readers.

After an extensive review of the literature, we organized research-based best practices associated with improved literacy outcomes for adolescent ELLs into three areas of instruction. In practice, these areas are often interconnected. We describe some of the challenges associated with each area, and we portray promising practices. Then, we highlight one specific multi-component approach to supporting ELLs' language acquisition, reading comprehension, and content learning, Collaborative Strategic Reading (CSR).

Promising Practices for Ells in Content Classrooms: Supportive, Culturally Responsive Learning Environments

Challenges

Culture can be defined in multiple ways. As Rogoff (2003) and others have described, culture reflects who we are, where we come from, the conventions and language of communication, the way we approach social and classroom interactions, and most important, how we learn. Still, culture is an individual characteristic and there is great variation in the representations of culture in classrooms, even among students from similar "cultural backgrounds." The Teachers of English as a Second Language Standards TESOL (Genesee & Harper, 2008) state that "effective instruction is culturally appropriate," (p. 6). School and classroom environments that utilize culturally appropriate or culturally responsive teaching practices are those in which a student's culture is recognized and valued; learning is student-centered; and educational and assessment practices take into account students' cultures within the scope of high quality instruction (Gay, 2000; Nieto, 2002, Ladson-Billings, 1995).

Many ELLs face a mismatch between their culture and the culture of the classrooms in which they participate (Klingner & Soltero-Gonzalez, 2009). Being in classrooms with teachers who do not infuse culturally relevant teaching practices into their instruction may lead to missed educational opportunities and intensify the lack of access to subject area material for struggling ELLs. For instance, in a study of reading comprehension with adolescent second-language learners (in this case Arab students learning Hebrew), students who read culturally familiar texts were more motivated to read the materials and scored higher in reading comprehension than students who read culturally unfamiliar texts (Abu-Rabia, 1998). Imbedding core content into culturally familiar texts is just one example of using culturally responsive pedagogy to support ELLs. Yet, teachers are not always prepared to address student learning in culturally relevant ways, and some have suggested that this may in part account for the high attrition rate of teachers in urban schools (Chizhik, 2003; McKinney, Haberman, Stafford-Johnson, & Robinson, 2008).

Promising Practices

While there is theoretical consensus about the importance of culturally responsive teaching practices, the research base of practices that promote academic achievement is still emerging (August & Shanahan, 2006; Goldenberg & Coleman, 2010). Below we describe several practices that have been associated with positive academic outcomes for students.

Supportive school environments. Central to creating instructional environments supportive of ELLs is the understanding and belief that the linguistic and cultural diversity students and families bring to classrooms are assets. Their experiences need to be valued and built upon such that school can be an "additive" not a subtractive process (August & Hakuta, 1997). Effective education programs for ELLs view bilingualism and multiculturalism as assets upon which to develop linguistic proficiency and critical thinking, and educators need to be aware of how the sociopolitical context shapes their cultural views and their decisions for ELLs (Miramontes, Nadeau, & Commins, 1997).

Lucas, Henz and Donato (1990) studied six "outperforming" high schools with high percentages of ELLs. They indentified four salient features in these high schools that could account for ELL success: a) students' native languages and cultures were valued, b) teachers had high expectations for students, c) parents were highly involved, and d) students had access to a challenging, coherent academic curriculum while learning English. The authors reported that although most of the school personnel were not from the same cultural backgrounds as their students, "the staff at the schools we visited celebrated diversity. They gave language-minority students the message that their languages and cultures were valued and respected, thus promoting the self-esteem necessary for student achievement" (p. 323). Components that encouraged cultural respect included treating students as individuals, not as members of a group; learning about students' backgrounds; having teachers learn students' languages; providing opportunities for students to develop their primary language skills; and hiring bilingual staff with cultural backgrounds similar to those of the students. In supportive environments, educators have high expectations for all students that are combined with practices that value and respect students as individuals. The belief that all students can learn is clearly communicated and the supports needed for them to do so are made available by the school in collaboration with students' local communities (Cummins, 1989; Ortiz, 2001; Jiménez, 2005).

Another important feature related to supportive environments reported by Lucas et al., (1990) and echoed in the research literature is the involvement of parents and families in school and academics. Schools and educators often underestimate the willingness and availability of parents of ELLs to support their students to succeed academically (Goldenberg, Rueda, & August, 2006. Several studies have found that while many parents of ELLs are interested in helping their students academically, they may not know what that engagement should look like or how to navigate school communication structures (Goldenberg & Coleman, 2010). They may feel uncertain about their own abilities. Goldenberg et al. concluded that schools should cultivate opportunities for parents of ELLs to participate in the literacy development of their students and also more broadly, that schools should increase opportunities for school-home collaboration. Another important recommendation is that educators should be provided with professional development to help increase appreciation for and understanding of the cultural and linguistic backgrounds of their students and their families. Unfortunately for our purposes here, much of the research on home-school connections has been conducted with young children (e.g., Huss-Keeler, 1997; Mulhern, 1997), but results are promising. More research is needed that explores best practices in home-school connections with older ELLs and their families, and the associated academic outcomes.

Curricular connections to students' lives. There is a growing theoretical and empirical basis for the notion that students achieve more when classroom identities reflect the cultural variability of their students (e.g., Nieto, 2002; Rogoff, 2003; Ladson-Billings, 1995). ELLs may struggle academically in an environment that does not match their home language or cultural background when efforts are not made to include them in the classroom environment (e.g., Schmidt, 1995). "Culturally responsive literacy instruction focuses on helping students access and connect with

their prior knowledge, build on their interests, and connect what they are learning in school to their lives" (Klingner & Soltero-Gonzalez, 2009, p. 3).

Focusing on ELLS with LD, Ortiz (2001) cautioned educators to go beyond basic cultural recognition of food, clothing, and traditions to engage students in more substantive learning experiences such as presenting both minority and majority perspectives within the curriculum that are relevant to students. Connecting academic literacy and learning to students' everyday literacies and funds of knowledge (Moll, Amanti, Neff, & Gonzalez, 1992) is a way to respond to the lack of relevance in traditional secondary curricula. Adolescent failure and dropping out of school can, in part, be attributed to their lack of engagement in school learning (Alvermann, 2002). Allowing students to explore how content learning informs and connects with their own lives and local community can increase interest and motivation in authentic critical thinking and problem-solving in content area classes. Brozo and Simpson (2007) state that

> Adolescents in secondary classrooms make meaning of and create written and spoken texts based on the various discourse communities they inhabit (Hull & Schultz, 2002; Kelly and Green, 1998)… Viewed as funds of knowledge (Valdes, 1998), these networks of relationships shape ways of talking, reading, writing and knowing (Gee, 2000). (p.24)

In addition to making the curriculum more relevant and inclusive, providing ELLs with texts that are validating of their identities is another way of connecting the curriculum to students' lives. Culturally relevant literature has been integrated successfully into both language arts and content area curricula (Freeman & Freeman, 2009). Goldenberg and Coleman (2010) report two significant factors associated with using culturally relevant—or perhaps better termed—"content-familiar," literature. The first is related to background knowledge. Students learn and remember more when they are familiar with the content they are reading. Here the term *culture* is expanded to include a student's knowledge base and interests, a concept that is more individualized than traditional notions of culture. Thus, appropriate texts contain information, characters, and context that are known to students. In one study, Garcia (1991) found that the reading comprehension scores for a group of fifth- and sixth-grade ELLs were influenced by students' knowledge of the passage topics. Students had higher comprehension scores for passages with familiar content than for passages with unfamiliar content. When content is unfamiliar, teachers should provide additional support to make connections and build background knowledge. In addition, teachers need to be cautious when interpreting assessment results for ELLs. Measuring reading comprehension by asking students to read texts with unfamiliar topics may confuse comprehension skills with issues related to background knowledge and language proficiency, providing misleading information about how to best support students instructionally.

Second, students are more interested in reading texts with engaging and relevant topics (Goldenberg et al., 2006). In a study of reading comprehension strategy instruction with middle school ELLs and struggling readers, teachers reported that students were more engaged and better able to understand when reading meaningful and familiar content that provided context for the concepts they were learning

(Klingner & Boardman, 2012). For example, to help students learn about the concept of rate in middle school mathematics classrooms, the teachers in one school elected to have students read an article about text messaging rates (something with which students were familiar) rather than using the examples from the textbook that focused on a bike race. The teachers reported that bike racing was an unfamiliar activity and therefore an uninteresting topic for students that did not provide relevant context to support understanding of the mathematics concept they were teaching.

Each student is an amalgamation of his or her identity, language, knowledge, skills, culture, interests, and beliefs. Fostering awareness, acceptance and appropriate school and learning experiences can contribute to success at school and in life.

Oral Language Development and Vocabulary Learning

Challenges

English oral language proficiency is associated with higher reading levels for ELLs (August & Shanahan, 2006). Yet, despite this evidence, oral language development is rarely attended to in content area classrooms, even when sheltered instruction approaches are used. In a study of four middle school sheltered social studies classrooms, discourse analyses of classroom interactions revealed that most of the teacher talk focused on tasks and content with only about 20% of the teacher talk focusing on language development (Short,1994). Attention to language was primarily related to vocabulary acquisition and pronunciation, but not to the development of oral language skills such as grammar, language learning strategies, or instruction in listening or speaking skills.

Adolescent ELLs who struggle with literacy vary in their oral language abilities. Second language acquisition is an uneven process (Bialystok, 1991). There are many dimensions of oral language:

- grammar/syntax
- morphological skills (understanding word forms and parts)
- semantic skills/vocabulary (understanding the meaning of words and phrases)
- phonological skills (e.g., phonological awareness)
- pragmatics (understanding the social rules of communication)

ELLs develop some language skills more quickly than others, depending on many factors, such as whether they primarily have learned English in an academic setting or in an informal, natural environment. For example, some ELLs might have a relatively strong understanding of grammar but struggle with pragmatics. Others might have a solid understanding of pragmatics, yet have a relatively limited vocabulary. Students present a range of conversational abilities, with some ELLs appearing to be native-like in their social language production but much lower in their ability to comprehend oral language instruction, particularly when new topics are presented or when technical academic language is utilized (Short & Fitzsimmons, 2007; Valdés, Bunch, Snow, Lee, & Matos, 2005).

Vocabulary knowledge. Most ELLs develop accurate word identification skills without any significant delays, though typically they cannot rely on context clues to help them figure out words as well as their English-speaking peers (Lesaux,

Koda, Siegel, & Shanahan, 2006). Their English vocabulary knowledge often lags behind their word reading ability. Vocabulary knowledge is closely related to reading comprehension and affects the extent to which students can learn from text (Fitzgerald, 1995; August & Shanahan, 2006). Garcia (1991) found that vocabulary knowledge was more important than prior knowledge in predicting reading comprehension in 104 fourth- through sixth grade ELLs.

Many ELLs have broad vocabularies that lack depth. They might understand the most common meaning of words that have multiple meanings, but not the less common or more abstract meanings (such as understanding "draw" to mean "illustrate" and being confused when asked to "draw a conclusion"). The words and phrases that most mislead ELLs may not be key vocabulary terms for which the book and/or teacher provide explicit instruction, but rather common words teachers might not realize are problematic, such as prepositions, pronouns, referents, cohesions markers, and words with multiple meanings (August & Shanahan, 2006).

Oral language skills and vocabulary knowledge intersect with reading because textbooks are written with high level content-specific academic language that may be particularly difficult to understand *and* to talk about. In these situations, many struggling ELLs find it hard to express opinions about academic topics, to challenge others ideas, or to explain their thinking (Valdés et al., 2005). For example, the following after-reading discussion question was posed in a seventh-grade science classroom: "How do genetic and environmental factors influence the health and behavior of monozygotic twins?" Even ELLs who understood the text on which this discussion question was based may still not have the academic language abilities to engage in a high-quality discussion about this topic without additional language supports.

Academic language. Many adolescent ELLs lack proficiency in academic language, hindering their comprehension as they try to read middle and high school texts or making it challenging to express themselves in content classes (Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006; Snow, Lawrence, & White, 2009). Academic language acquisition involves more than just learning content area vocabulary, sentence structure, and text structure. It also requires the ability to process language at high levels and apply skills such as synthesizing, evaluating, reasoning, and inferring. Snow (2010) defines academic language as follows:

> Academic language is one of the terms . . . used to refer to the form of language expected in contexts such as the exposition of topics in the school curriculum, making arguments, defending propositions, and synthesizing information. There is no exact boundary when defining academic language; it falls toward one end of a continuum (defined by formality of tone, complexity of content, and degree of impersonality of stance), with informal, casual, conversational language at the other extreme. There is also no single academic language, just as there is no single variety of educated American English. Academic language features vary as a function of discipline, topic, and mode (written versus oral, for example), but there are certain common characteristics that distinguish highly academic from less academic or more conversational language and that make

> academic language—even well-written, carefully constructed, and professionally edited academic language—difficult to comprehend and even harder to produce. (p. 450)

The defining features of academic language include conciseness and precision. These are achieved by avoiding redundancy, using a high density of information-bearing words, and relying on grammatical processes to compress complex ideas into few words (Snow, 2010). In contrast, less academic language more closely resembles oral language forms. Sentences often begin with pronouns or animate subjects, verbs refer to actions rather than relations, and long sentences are characterized by sequencing of information rather than embeddings. In addition, Snow and Uccelli (2009) explained, academic language includes self-presentation as someone with a position on a topic.

Oral language and vocabulary instruction strengthen ELLs' reading and writing skills (August & Shanahan, 2006). Thus, it is helpful when teachers understand students' oral language abilities and challenges and attend to oral language and vocabulary development in content classrooms. But just how teachers should go about providing opportunities for the oral language development of ELLs has not been clearly established (Genessee, Lindhoml-Leary, Saunders, & Christian, 2006). Below, we report on strategies that are gaining consensus, though we acknowledge that more research is needed in the area of promoting oral language during content learning.

Promising Practices

Provide instruction in oral language in content classes. Growth in oral language facilitates English literacy development, reading comprehension, and content learning (August & Shanahan, 2006; Genesee, Lindholm-Leary, Saunders, & Christian, 2006). Thus, oral language goals should be included as part of content instruction. These goals might pertain to teaching grammatical structures, academic vocabulary, or norms of language usage in content area classes. Whereas certain language demands are similar across content areas, others are more pertinent to one content area. To be successful, ELLs need to learn and apply the subject specific discourse in each content area. For instance, in a study of middle schools social studies classrooms, Short (1994) described features of language that were integral to social studies content—including the ability to sequence events; interpret maps, charts, and time lines; compare and contrast; evaluate; justify; and present oral reports. Sheltered English strategies provide a variety of ways to help ELLs acquire English while also learning new content (Echevarria & Graves, 2010; Short, 1999).[1] Teachers highlight key language features and include language objectives along with content objectives in their lessons. Many content-specific language objectives can be found in content-area standards. An example of a middle grade Language Arts standard that contains

1 We use "sheltered English" as the more generic term to refer to a set of strategies designed to support students English and content learning. SIOP (Sheltered Instruction Observation Protocol) is a specific application of sheltered English that includes the use of a protocol for assessing whether sheltering techniques are present in a lesson (Echevarria, Vogt, & Short, 2010). Sheltered English is also referred to as "Specially designed academic instruction in English" (SDAIE) (Becijos, 1997).

multiple language objectives reads, "Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions" (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010). To teach the language objective related to clarifying and verifying conclusions, teachers would incorporate ESL or "sheltering" techniques to provide explicit instruction and modeling, teach strategies, and provide opportunities for students to practice oral language production of these skills with support and feedback

Another example of teaching oral language through the content areas is Quality English and Science Teaching (QuEST) (August, Branum-Martin, Cardenas-Hagan, & Francis, 2009).Middle school science teachers used QuEST to develop the academic language and science knowledge of their ELLs. Lessons included visuals, graphic organizers, hands on experiments, demonstrations, modeling, discussions among teachers and students, guided reading activities, and explicit vocabulary instruction. Students learned general academic vocabulary (e.g., *structure, function*) and discipline specific vocabulary (e.g., *organism, cell*).

An additional feature of instruction that supports oral language development is to increase wait time. Wait time refers to the length of time when a teacher asks a question to a student and the time when the teacher interrupts or moves on to another student. ELLs require more time to process in English, and thus increasing wait time, by even small amounts (1 sec to 3 sec) has been shown to increase the number and length of student responses (e.g., Jiménez, Garcia, & Pearson, 1995; Tobin, 1987).

Encourage ELLs to engage in meaningful conversations about content. Students benefit from multiple opportunities to engage in meaningful conversations about what they are reading and the content they are learning (Echevarria, Vogt, & Short, 2010; Genesee, 2004). As Kelley, Lesaux, Kieffer, & Faller (2010) point out, "Language is social, and so are kids" (p. 10). Meaningful conversations are those that are related to the content of instruction and provide opportunities for students to hear and practice the use of academic language to facilitate content learning. Examples include sharing expertise, explaining tasks to one another, giving an opinion, responding to others' ideas, or practicing an oral presentation with peers prior to standing up in front of the class. Discussions might occur in pairs, small groups, or with the whole class. Bilingual peers can help explain difficult concepts, drawing on first-language resources (Klingner & Vaughn, 2000). Fluent English-speaking peers are able to model appropriate uses of language.

Allow students to use native language to discuss and process higher order content. Concepts learned in one's first language transfer to English when the appropriate English vocabulary is learned (August & Shanahan, 2006; Cummins, 1991). Students can capitalize on their first language by using strategies such as identifying cognates and that could facilitate comprehension (Goldenberg, 2008; Nagy, Garcia, Durgunoglu, & Hancin-Bhatt, 1993). Students can discuss concepts first in their native language and then produce written or oral responses in English to support the transfer of language skills. Another use of native language in content class-

rooms is facilitated by small group discussion. Students can be encouraged to define or restate vocabulary or ideas in their native language when confusion arises during discussions in English. As Jiménez (2005) wrote:

> Effective teachers of ELLs understand that their students need to access their own linguistic and cultural strengths to become fully literate. These teachers encourage and facilitate students to recognize the benefits of instruction that helps students become strategic translators, users of cognate-vocabulary relationships (words that are very similar across languages like *picante* and *piquant*) and to appreciate how such linguistic resources give them an understanding of how to make maximum use of their bilingualism and biculturalism. (p.12)

Provide explicit vocabulary instruction. Explicit vocabulary instruction along with opportunities for meaningful interactions with peers to reinforce learning seems to be the most powerful way to increase vocabulary knowledge (August et al., 2009; Genesee et al., 2006; Gersten & Baker, 2000; Goldenberg, 2008). Explicit vocabulary instruction requires students to focus consciously on learning new terms. The teacher draws students' attention to new words and teaches their meanings in various ways [e.g., providing definitions, showing pictures or realia (i.e., real objects), demonstrating, drawing concept maps]. The teacher also provides opportunities for meaningful practice. Explicit vocabulary instruction includes attention to general, specific, and technical academic vocabulary. Explicit instruction does not take the place of implicit vocabulary learning through natural exposure, but rather complements it. In content classes, focusing on domain-specific vocabulary is linked to content learning. For example, when students learn the meaning of the word *magnetism*, they are also mastering the concept of *magnetism*. Other features of effective instruction include videos to build background knowledge and conceptual understanding (Vaughn et al., 2009), and reading engaging texts that include multiple exposures of the target vocabulary words (Lesaux, Kieffer, Faller, & Kelley, 2010).

Vaughn and colleagues (2009) conducted two experimental studies to improve ELLs' vocabulary knowledge and comprehension in seventh-grade social studies classes. The researchers provided students with multi-component social studies instruction that included explicit vocabulary instruction and videos to build concepts and promote discussion, as well as graphic organizers. Students also had opportunities to work collaboratively with peers. ELLs who participated in this instruction outperformed other ELLs who received typical instruction on curriculum-based vocabulary and comprehension measures. Vaughn et al. concluded that the combination of explicit vocabulary and concept instruction provided context for promoting students' vocabulary and understanding of content. See Table 1 for more information about this study.

In another vocabulary-based intervention, Lesaux and colleagues (2010) developed and studied a teacher-delivered intervention with 476 students in sixth-grade classrooms, 346 of whom were ELLs (see Table 1). The vocabulary instruction consisted of reading short, engaging texts with selected academic vocabulary words and a variety of reinforcement activities that varied across lessons over several days.

These activities included:

- brainstorming definitions,
- discussing contextual information and new words, in pairs and with the whole class,
- creating class definitions,
- developing and recording personal definitions,
- sketching representations,
- engaging in morphology practice,
- playing word games,
- using the words in new contexts, and
- writing, editing, and sharing paragraphs.

Students in the intervention condition outperformed students receiving typical classroom instruction in both vocabulary and reading comprehension. Findings suggest that content area classes with struggling readers and ELLs should include regular academic vocabulary instruction to improve both language skills and reading comprehension. These researchers also note that "any vocabulary instruction should be designed in a manner that makes delivering instruction easy and clear for teachers, as well as structured and supported for students" (Kelley et al., 2010, p. 12).

Reading Comprehension Strategies

Challenges

Perhaps the most pressing concern in content area classrooms is the difficulty that ELLs with learning difficulties face comprehending grade-level texts. When students have impairments with basic decoding and fluency, out of necessity they devote the majority of their attention to processing text at the word level, making comprehension all the more challenging. However, by middle school many ELLs can read fluently (Lesaux et al., 2006), yet still have difficulty learning content-area material because of (1) prior knowledge different from that needed to understand the text, (2) limited English vocabulary, (3) unfamiliarity with syntax and text structure, and (4) few metacognitive strategies to access when understanding breaks down (e.g., Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006).

In addition, the readability level of typical texts used in secondary classrooms may be too high for below-grade-level readers, and the "unfriendliness" of many texts can result in comprehension challenges for students (Mastropieri, Scruggs, & Graetz, 2003). Textbooks tend to be written with figurative or technical language and vocabulary that is not commonly understood, using text structures that may not be readily apparent (Harniss, Dickson, Kinder & Hollenbeck, 2001; Jitendra et al., 2001). Connections among ideas are often obscure (Meyer, 2003). The vocabulary demands of textbooks go well beyond understanding the content-specific bold or highlighted words that are commonly presented (Hiebert, 2005). Many essential academic words that deliver content in textbooks (e.g., *compare*, *analyze*, *consequently*) may be unknown to ELLs (Kelley et al., 2010). In an examination of middle school social studies textbooks, Short (1994) found that the vocabulary critical to comprehension was not commonly understood by ELLs and that additional instruction was needed to support ELLs to understand grade-level texts. Furthermore, many texts are written from

cultural perspectives unfamiliar to ELLs. In describing American history texts, Short (1994) noted, "Overall, the books present a Eurocentric focus, largely ignoring the roles and contributions of non-Europeans to the development of the U. S." (p. 594). Educators cannot expect textbooks to be written from perspectives that recognize diversity and the contributions of people from different cultures, and may need to supplement the texts to make learning more meaningful to students.

Whereas some reading comprehension difficulties may be more common for ELLs, in a recent study, Lesaux and Kieffer (2010) found that while there is quite a bit of variance among students who struggle with reading comprehension, ELLs and English-proficient students are more alike than different. In their study of 581 sixth grade students from high poverty schools, 60% of ELLs had limited vocabulary compared to 40% of the native English speakers. However, within the subset of struggling readers (313 or 54% of the total sample), ELLs and native English speakers were evenly represented across three areas of reading difficulties: slow word callers, automatic word callers, and globally impaired readers. The majority of struggling readers had developed basic fluency skills but demonstrated low vocabulary knowledge. The authors concluded that ELLs do not require categorically different reading comprehension instruction. Instead, instructional techniques should be targeted to the nature of a student's reading comprehension difficulties and should not be based solely on a student's language proficiency. Teachers should parse out the areas of the reading difficulty in order to consider best options for instruction.

Yet, it is important to consider that there seem to be some ELLs with disabilities for whom even intensive instruction is insufficient. Denton, Wexler, Vaughn, and Bryan (2008) investigated the effectiveness of a multi-component reading intervention with middle school students with severe reading difficulties, all of whom had received remedial and/or special education for several years with minimal response to intervention. Most of Denton et al.'s participants were Spanish-speaking ELLs with disabilities. Nearly all seemed to have "severely limited vocabularies," in both English and Spanish (p. 79). Students in the treatment group did not outperform comparison students. The researchers concluded that adolescent ELLs with the most severe reading difficulties may require more intensive interventions of a longer duration, or perhaps a more individualized approach (see Table 1).

Promising Practices

Research on adolescent literacy has focused on teaching students to develop the use of reading strategies before, during, and after reading to support understanding. These include establishing a purpose for reading based on the type of text, making connections, and previewing the text before reading. During and after reading, students can learn to build meaning from text, monitoring comprehension, clarify misunderstandings, generate questions, and summarize what they have learned (August & Shanahan, 2006). Students should receive instruction in text structure as well as reading strategy instruction (Fitzgerald, 1995; Jiménez, 2005). Allison and Harkau (2010) recommend that comprehension strategy instruction at the secondary level focus on higher-level reading and thinking skills. See Table 1 for a description of the reading comprehension studies we review.

Table 1. ***Interventions for Adolescent English Language Learners***

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
August et al. (2009)	ELLs	Experimental study (20 sections received intervention); (n=890) 562 ELLs; pre post measures on GRADE (standardized) and researcher-developed measure	Yes	6th	Yes	Yes	No	Project QuEST Quality English and Science Teaching—designed to develop the science knowledge and academic language of middle grades English language learners studying science; (intervention included: visuals, preview, explicit vocabulary instruction, structured pair groupings)	Positive effects for students receiving intervention (both ELLs and monolinguals) in science vocabulary and knowledge	Yes
Berkeley, Mastropieri, & Scruggs (2011)	Students with learning disabilities	Pre-Post experimental Students randomly assigned to: RCS+ AR, RCS, or Read Naturally RN	No	7th-9th	Yes	Yes	Yes	Reading Comprehension Strategy (RCS) with and without attribute retraining (AR)	both strategy instruction groups performed better on a summarization measure of comprehension; only the RCS+AR group maintained a large effect size	No

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
Bryant et al. (2000)	Students with reading disabilities	Quasi-experimental: Students with reading disabilities, low achievers, and average achievers	Yes	6th	Yes	Yes	Yes	Multi-component reading intervention focus on 3 strategies: word ID, fluency, content area comprehension. Included CSR instruction	Most made gains in all 3 areas except for subgroup of poor readers made no gains	No
Carlo et al. (2004)	ELL and English Only (EO) students	Quasi-experimental. Pre-post tests of word knowledge and reading comp. 254 bilingual & monolingual students.	No	5th	No	Yes	No	Word analysis & vocabulary learning strategies to enhance academic vocabulary	Effective in improving reading comprehension outcomes for both ELLs and English only students.	Yes
Denton et al. (2008)	Middle school students with severe LD	Experimental design. Pre-post measures of vocabulary, fluency, & comprehension. 38 students	No	6th-8th	Yes	Yes	Yes	Small-group phonics-based remedial program with ESL practices, explicit instruction in vocabulary, fluency, and comprehension.	No growth	Yes

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
Jiménez (1997)	Bilingual students at risk and with LD	Qualitative case study of 5 Latino/a students responding to cognitive strategy intervention.	Yes	7th	Yes	Yes	Yes	8 cognitive strategy lessons: -resolving unknown vocabulary, -asking questions, making inferences, -using culturally relevant text	Students used cognitive strategies with instructional support and used their native language to enhance reading comprehension.	Yes
Kim et al. (2006)	Students with LD	Quasi-experimental; pre-post test of reading strategies and comprehension; 2 language arts teachers and their 34 students with disabilities	Yes	6th-8th	Yes	Yes	Yes	Computer assisted CSR (CACSR) implemented 50 minutes (10-12 weeks)	Significant results in proximal measures (main idea, question generation) and distal (Woodcock reading mastery)	No
Klingner & Vaughn (1996)	ELL students with LD	Experimental design; 26 students randomly assigned to one of 2 different but related interventions	Yes	7th-8th	Yes	Yes	Yes	Comparison of reciprocal teaching with cooperative grouping and reciprocal teaching with cross-age tutoring	No differences between groups; students in both groups made gains in reading comprehension	Yes

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
Klingner et al. (1998)	CLD general classroom	Quasi-experimental study; (n=85) received researcher led CSR intervention for 11 weeks; (n=56) received researcher led typical instruction	Yes	4th	Yes	Yes	Yes	Collaborative Strategic Reading (CSR) in social studies	Students in the CSR condition made greater gains in reading comprehension and equal gains in content knowledge	No
Klingner & Vaughn (2000)	ELLs	Mixed Methods study of cooperative grouping interactions (n=37)	Yes	5th	Yes	Yes	Yes	Collaborative Strategic Reading (CSR)	Students spent almost all of their time on academic discussions and assisted one another	Yes
Klingner et al. (2004)	Inclusive classrooms	Quasi-experimental design (n=211 students) 10 teachers (5 treatment/5 control)	Yes	4th	Yes	Yes	Yes	Collaborative Strategic Reading (CSR)	Reading comprehension improved significantly for students in CSR classrooms; comprehension gains associated with quality of implementation	Yes

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
Lesaux et al. (2010)	Low performing language minority students (LM)	Quasi-experimental, mixed-methods study; 21 classes (13 treatment matched to 8 control) in seven middle schools with 476 sixth-grade students	Yes	6th	Yes	Yes	Yes	Implemented ALIAS-Academic Language Instruction for All Students	Significant effects on aspects of vocabulary knowledge, marginally significant effects on depth of word knowledge and reading comprehension	Yes
Saenz et al. (2005)	ELLs with LD	Randomized pre-post test experimental study of reading comprehension.	No	3rd-6th	Yes	Yes	Yes	PALS strategies: review, read, sequence info, summarize paragraphs, state main idea, predict/ check outcomes	Improved reading comprehension of ELL students with and without LD	Yes
Snow, Lawrence, & White (2009)	Language minority students (LM)	Quasi-experimental study; Pre-Post vocabulary test; Total 1016 students-438 LM	Yes	6th-8th	No	Yes	Yes	District-wide Vocabulary intervention	All students grew on CBM, LM students benefitted more than EOs; CBM predicted performance on state language arts assessment	Yes

Study	Target	Study Design	Participants					Intervention	Findings	
			SES	Grade level	Ethnicity provided	ELLs	LD		Summary	Disaggregated for ELLs?
Vaughn et al. (2009)	ELLs in social studies classes	2 experimental studies; (n=381; n=507) pre-post test measures for vocabulary and comprehension	Yes	7th	Yes	Yes	No	Multi-component social studies instruction	Positive effects for all students including ELLs on curriculum vocabulary measures and comprehension measures	Yes

Self-questioning strategy. Berkeley, Marshak, Mastopieri, and Scruggs (2011) investigated the effects of using a self-questioning strategy on students' reading comprehension of grade-level social studies text materials. This study included 57 seventh graders: 15% of the students were identified for special education services and 23% were identified as ELLs. For the self-questioning intervention, during each 20-minute lesson, the teacher followed three scripted lessons in which the researcher-designed self-questioning strategy was explicitly introduced and taught. This involved a strategy sheet that moved students through the following steps: (1) turn headings and subheadings into questions, (2) read the section, (3) stop, and (4) answer your questions. Students also learned to re-read a section, check understanding of vocabulary, look for text features to help understanding—such as illustrations and maps—and to write down questions they might need to ask their teacher. The students in the self-questioning training outperformed the students in a typical practice condition.

Comprehension strategies with culturally familiar text and native language. Jiménez (1997) found cognitive strategy instruction to be effective in improving the reading comprehension of struggling ELL Latinas in middle school. Using culturally familiar readings, the strategies involved students in learning (1) how to figure out the meaning of unknown words, which included searching for cognates, (2) how to integrate their prior knowledge with information in text, (3) how to formulate questions, and (4) how to incorporate thinking aloud to monitor their comprehension. Instruction occurred in either a special education classroom or an at-risk bilingual classroom. Jiménez's study suggests that a strategic approach to comprehension instruction using students' bilingual abilities and culturally relevant text can be effective in improving ELLs' reading comprehension at middle school grades.

Peer Assisted Learning Strategies (PALS). PALS is a set of classwide peer tutoring strategies adapted for a variety of grade levels (Fuchs, Fuchs, Mathes, & Simmons, 1997). Strategies focus on increasing reading strategy use, reading fluency, and reading comprehension through partner reading with re-tell, paragraph shrinking (a main idea strategy), and prediction activities (predicting and checking outcomes). Though not widely studied with adolescent ELLs, promising results were reported in a study of 132 native Spanish-speaking ELLs in 12 transitional bilingual third through sixth grade classrooms (Saenz, Fuchs, & Fuchs, 2005). Students were randomly assigned to participate in three PALS sessions per week for 15 weeks or to receive instruction typically provided by their teachers. Significant effects from pretest to posttest were found for ELLs with and without learning disabilities in the transitional bilingual classrooms in the PALS condition.

Modified Reciprocal Teaching. Klingner and Vaughn (1996) found that a modified version of Reciprocal Teaching (Palinscar & Brown, 1984) was effective in improving the reading comprehension of seventh- and eighth-grade Spanish-speaking ELLs with LD. They added the following two features to Reciprocal Teaching to make it more appropriate for ELLs: (1) a brainstorming strategy to help ELLs recall relevant background knowledge before reading a passage, and (2) encouragement to discuss passages using both Spanish and English, drawing from their full linguistic repertoire. All 26 students participated in modified reciprocal teaching 40 minutes a day for 15 days in either cross-age tutoring or within a cooperative learning group.

Findings indicate that both groups made growth on reading comprehension. Also, students with high oral language proficiency in both languages showed more improvement than students with low oral language skills. This study suggests that explicit reading comprehension strategies for ELLs with LD is an effective instructional approach. It also demonstrates the potential for oral language skills to contribute to reading comprehension development.

Reading comprehension strategy instruction with attribution retraining. Berkely, Mastopieri, and Scruggs (2011) examined the effects of reading comprehension strategy instruction with and without attribution retraining relative to fluency-based reading instruction using Read Naturally (Ihnot, 1991) with seventh-, eighth-, and ninth-graders with learning disabilities from culturally and linguistically diverse backgrounds.

Students in the reading comprehension strategies instruction condition learned six reading comprehension strategies: (1) setting a purpose, (2) previewing, (3) activating background knowledge, (4) questioning, (5) summarizing, and (6) strategy monitoring. The attribution retraining component focused on helping students to understand and develop beliefs about their reading success, including positive self-talk. Students in the Read Naturally condition were involved in making predictions, repeated reading techniques, answering explicit and implicit comprehension questions, and graphing their fluency progress. Using measures in reading comprehension and strategy usage, researchers found significant positive effects for the groups receiving reading comprehension strategy instruction with or without attribution retraining compared to students who received Read Naturally instruction without any comprehension strategy instruction.

Collaborative Strategic Reading (CSR)

Collaborative Strategic Reading (CSR) is a multi-component reading instruction model that explicitly teaches reading strategies and develops routines to monitor and enhance comprehension through cooperative grouping and peer discussion. CSR has combined modified reciprocal teaching components (Palincsar & Brown, 1984) and cooperative learning (Johnson & Johnson, 1989) strategies to form a unique reading comprehension model. CSR was originally designed to improve access to grade-level expository text for students with LD, struggling students, and ELLs. In addition to improving metacognitive and reading strategies for students, it has the potential-added benefit for ELLs of facilitating their language acquisition through discourse with peers and of helping to make content more comprehensible. CSR was not intended to be a pre-packaged curriculum program, but it was developed by researchers with the intent of improving teachers' abilities to increase student success in reading comprehension.

In implementing CSR, the teacher models procedures for the whole class through explicit strategy instruction using think-alouds in addition to explaining the rationale for the strategies. Students then transition to working in cooperative, heterogeneous groups where each student has a specific role to monitor use of one of the strategies. The learning during cooperative group work is scaffolded using cue cards, learning logs, and teacher feedback. CSR is intended to be used with grade-level expository text that is segmented by the teacher into smaller sections or chunks of text.

Students practice using reading strategies section by section while teachers provide explicit feedback.

The structure of CSR is divided into before, during, and after reading activities. Before reading, the teacher and students *preview* the text together to activate and build background knowledge, make predictions, and state the purpose of the reading. During this phase, the teacher guides students to brainstorm and connect the topic to their own experiences. The teacher uses this opportunity to build background knowledge that may help students access the text. Students are encouraged to use the visual cues, as well as the headings, subheadings and title in previewing the text, predict what will happen, and set the purpose for reading. The preview phase is intended to be teacher-led.

During reading, students work on their groups using comprehension monitoring strategies. The *click and clunk* strategy is used to identify confusing words or concepts, and then students are taught to apply fix-up strategies. When the text makes sense it *clicks*; when it doesn't it *clunks*. The students then work through the following fix-up strategies to understand the clunks:

1. Reread the sentence with the clunk in it and determine whether you can find the meaning from the context clues.
2. Reread the sentence with the clunk and the sentences before or after, looking for clues to help figure out the clunk.
3. Break the word apart and look for a prefix, suffix or for a root word.
4. Look for a cognate that makes sense.

Students practice *Get the Gist* as they read, where they synthesize information by restating the main idea of a section in their own words. They are taught to look for the most important "who" in the reading and the most important "what" information about the "who." After reading, the students engage in summarizing and questioning strategies.

While in the *Wrap Up* phase, students review main ideas and formulate questions about what they read. They are encouraged to use three levels of questions. *Right There Questions* are ones that seek information in the text. *Think and Search Questions* and *Author and You Questions* require more critical thinking beyond the text and require using their own background knowledge (Rafael, 1986). Finally, students write down one or two of the most important ideas from the passage. Teachers often use the last portion of the lesson to complete a whole class wrap up using student examples to extend strategy instruction.

While students are working in groups, teachers communicate to their students that the students' responsibility in the group is to understand the text and to support peer comprehension (Boardman, Klingner, Boele, & Swanson, 2010). Students are assigned specific roles when working in their groups—Leader, Clunk Expert, Gist Expert, and Question Expert—and can use cue cards that specify the responsibilities for each role. All students implement each strategy and utilize individual learning logs to record their ideas before sharing with the group. The goal is for the strategies to help students engage in meaningful discussions about the content they are reading.

Research on CSR. A number of quasi-experimental and experimental studies of CSR have been conducted over the past 12 years indicating CSR's effectiveness in supporting growth in reading comprehension for culturally and linguistically diverse middle school and upper elementary students (Klingner &Vaughn 2000; Klingner, Vaughn, & Schumm, 1998; Klingner, Vaughn, Argüelles, Hughes, & Ahwee, 2004; Vaughn et al., 2011). Although research results have not yet been disaggregated for ELLs, we are currently involved in two randomized control trial studies investigating the effectiveness of CSR in social studies, science, and language arts classrooms, with the express goal of addressing ELLs with learning difficulties within mainstream middle school classrooms.

Researchers have investigated CSR with upper elementary students demonstrating positive results. In an early study (Klingner et al., 1998), researchers implemented CSR instruction with a group of fourth-grade ELLs. These students received daily strategy CSR instruction for 11 days during a social studies content class and were compared to control classes not receiving the strategy instruction. The researchers found that CSR had a moderate effect on student reading comprehension measures. In a subsequent study (Klingner & Vaughn, 2000), researchers taught fifth grade students how to use CSR strategies 2-3 times per week for four weeks over the course of two science units. This study focused on how bilingual students helped their ELL peers during cooperative grouping. Researchers found ELLs made gains in target vocabulary development over time. In a later study (Klingner et al., 2004), researchers trained five fourth-grade teachers in CSR strategy instruction using social studies texts while five teachers continued with typical practice instruction. The students in the CSR class performed higher on reading comprehension measures.

In a study of middle school classrooms (Bryant et al., 2000), researchers investigated CSR as one of several reading comprehension interventions. The study included 10 sixth-grade teachers teaching content and language arts classes and focused on 60 students that included LD and ELL students. The results showed that students demonstrated gains on word identification, but not reading comprehension. In a study of sixth- and eighth grade students with LD (Kim et al., 2006), researchers implemented a computer adapted CSR intervention over the course of 10-12 weeks. Students receiving the CSR intervention performed higher on reading comprehension measures than students in the comparison group.

Currently researchers are conducting two research studies in diverse middle schools, one in school districts in Texas and Colorado, and the other only in Colorado. The studies' main objective is to validate CSR with ELLs, students with LD, and struggling readers in middle school content area and language arts classrooms. Both studies are experimental in design with classes being randomly assigned to the intervention and teachers acting as their own control. In collaboration between two universities and area school districts, the teachers receive professional development throughout the school year in strategy instruction, student feedback, and facilitating cooperative group. The teachers are also assigned instructional coaches who conduct observations, give feedback, model lessons, and provide resources. The outcomes are measured through pre-and post assessments in reading comprehension, language proficiency, and metacognitive strategies (Gates-MacGinitie Reading Comprehension Test, Stanford English Language Proficiency Test, Metacognitive Strategy Index).

Results have been analyzed for the first year of the study conducted in Texas and Colorado. The focus of this study was on seventh- and eighth-grade English/Language Arts classes across three school districts. Participants included 61 classes, 34 received CSR instruction and 27 received typical practice instruction, over the course of 18 weeks. The findings suggest significant differences in reading achievement scores on the Gates MacGinitie Reading Comprehension Test with students receiving CSR instruction achieving more gains. Additionally, researchers found that students in CSR classes who demonstrated similar scores on metacognitive strategies in reading, scored significantly better on reading comprehension than comparison students (Vaughn et al., 2011).

Sheltered English and CSR

CSR aligns well with sheltered English techniques for supporting ELLs and helping them acquire English through the content areas (Echevarria et al., 2010). Students learn grade-appropriate, cognitively demanding core content. When using CSR, teachers cover less material, but in more depth. A basic principle of sheltered English instruction is that instead of "watering down" the curriculum, teachers should make it more accessible for students or, in other words, more comprehensible. CSR includes various components that support ELLs' understanding. The first and perhaps most obvious component of sheltered English included in CSR is the teaching of strategies (August & Shanahan, 2006; Echevarria & Graves, 2010). But there are many additional components that assist ELLs. During Preview, the teacher helps students make connections with their prior knowledge and outside of school learning (Jiménez et al., 1995). The teacher also builds new knowledge necessary for understanding a novel topic. In addition, the teacher pre-teaches key vocabulary words and/or words that potentially might be confusing for ELLs, such as words with multiple meanings (Carlo et al., 2004; Gersten & Baker, 2000). To do this, the teacher provides explicit instruction and uses pictures, realia (i.e., real objects), diagrams, and even short video clips to help students learn new word meanings (Goldenberg, 2008). Students also learn how to use cognates to figure out the meanings of English words (August & Shanahan, 2006).

While working in CSR groups, ELLs have frequent opportunities to use academic language in meaningful ways. CSR integrates lesson concepts with language practice opportunities. The structure of CSR helps ELLs to be active participants in their groups. Cue cards guide them in how to perform their roles. Jotting down ideas in learning logs before sharing them aloud provides ELLs with "wait time" to think about what they would like to say. Peers collaborate and support one another by translating and offering explanations in their classmates' first language (Goldenberg, 2008). CSR builds on the idea that interactions between ELLs and fluent English speakers lead to gains when focused on negotiation of meaning or efforts to elicit comprehensible input (Saunders & Goldenberg, 2010).

Also, CSR facilitates higher-level thinking, particularly as students determine the main ideas in sections of text, generate and answer "think and search" and "author and you" questions to check their understanding of a passage, and figure out the most important ideas they have learned (Genesee et al., 2006). One of the most important features of CSR is the routine teachers follow. As students become com-

fortable using reading comprehension strategies before, during, and after reading, teachers also practice and internalize the importance of routinely integrating effective ESL strategies into their instruction.

Conclusion

We described some of the challenges adolescent ELLs face in middle school content classes and offered suggestions based on a review of the research on how to support ELLs' language acquisition, reading skills, and content learning. We organized this review around three broad recommendations:

1. Create supportive, culturally responsive learning environments.
2. Support oral language development and vocabulary acquisition.
3. Teach reading comprehension strategies.

As our center-piece, we featured CSR and noted many of the ways CSR integrates ESL strategies and sheltered English principles.

A few caveats are in order. There are several limitations to the research to date on adolescent ELLs with learning difficulties. While all of the studies we reviewed included ELLs and some also included students with disabilities, researchers did not always specify whether any of the participants were ELLs with disabilities. Similarly, ELLs were not always characterized as experiencing difficulties with reading (though one could usually surmise that at least some of them were). Nor were data always disaggregated for ELLs. Although we described several promising practices, we do not know the extent to which these interventions might be effective for ELLs with the most significant learning challenges, as suggested by the research of Denton et al., 2008.

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