



Improving Reading and Social Studies Learning for Secondary Students With Reading Disabilities

Philip Capin and Sharon Vaughn

As a special education teacher, you may wonder: Are middle school and high school too late to improve reading outcomes for students with reading disabilities? Many secondary students with learning disabilities have significant reading disabilities that interfere with their success in school and potentially with their postsecondary success, yet the emphasis of instruction is on content learning rather than basic reading instruction. Ms. Laura Jacobs, a second-year middle school special education teacher, frets, “I realize that content area learning is so critical for students’ success. I worry I might have to choose content learning over reading instruction—even though I know many of my students would benefit if I could provide them with additional opportunities to improve their reading.”

Significant numbers of adolescents and young adults do not adequately understand complex texts, impeding their school success, access to postsecondary learning, and opportunities within an increasingly competitive work environment (Faggella-Luby, Graner, Deshler, & Drew, 2012; What Works Clearinghouse, 2008; Morsy, Kieffer, & Snow, 2010). National data (National Assessment of Educational Progress [NAEP], 2015) have shown improvements among fourth- and eighth-grade students in reading comprehension from 1992 through 2015. However, improvement in reading comprehension performance has not occurred for students in 12th grade.

The literacy challenge is even greater for students with disabilities. In 2013, 67% of fourth graders and 63% of eighth graders with disabilities scored below the basic level on the NAEP reading test (NAEP, 2014). The basic level of performance indicates “partial mastery” of the essential skills and knowledge required for proficiency (NAEP, 2015). Thus, below-basic performance is well below grade-level expectations. In contrast, for students without disabilities, only 26% of fourth graders and 19% of eighth graders scored below basic. These data suggest that instruction through current

educational programming might not be sufficiently robust to meet the educational needs of many students with disabilities.

These results may not be surprising, given current educational practices. Observational research shows that students with and without learning disabilities in secondary social studies classes spent approximately 10% of the instructional time accessing text (Swanson, Wexler, & Vaughn, 2009). Teachers spent the majority of classroom time discussing slide-show presentations that summarized important ideas. Moreover, when teachers used text, they often read aloud and summarized information for students. This approach to content learning may be an efficient method for teachers to cover information; however, it is unlikely to develop students’ reading comprehension skills.

How might special education teachers address this problem within content-area instruction? Two evidence-based practices—Promoting Adolescents’ Comprehension of Text (PACT; Vaughn et al., 2013) and collaborative strategic reading (CSR; Klingner, Vaughn, Dimino, Schumm, &

- They support the gradual release of responsibility.
- They can be easily integrated within a variety of educational settings.

One important distinction between the programs relates to the use of cognitive strategy instruction. CSR aims to improve reading comprehension by teaching students several reading strategies that can be applied before, during, and after text reading. Alternatively, PACT is a content-based approach that uses text and discussions about text as the means for improving understanding. Given the strong theoretical foundations (e.g., see Flavell, 1992, for CSR; Kintsch, 1974, for PACT) and evidence (e.g., see Alfassi, 1998, for CSR; McKeown, Beck, & Blake, 2009, for PACT) to support the use of both approaches, we describe and provide tips for implementing these programs.

Promoting Adolescents’ Comprehension of Text (PACT)

PACT is a fully developed text-based approach to content acquisition and

Promoting Adolescents’ Comprehension of Text (PACT) and collaborative strategic reading (CSR) directly address the need for teachers to build students’ content knowledge and reading comprehension skills.

Bryant, 2001)—directly address the need for teachers to build students’ content knowledge and reading comprehension skills. These programs share several important qualities:

- They are supported by high-quality research.
- They allow teachers in inclusive settings to dedicate time to improving reading comprehension instruction without sacrificing content learning.
- They use cooperative learning techniques.

reading comprehension development that has been tested in middle and high school social studies classrooms. Many teachers are rightfully concerned that research-based practices have not been adequately tested on the students they teach. This is particularly true for students with disabilities. With funding from the Institute of Education Sciences, we developed and tested the efficacy of PACT for all general education students, including students with disabilities in general education settings (see Table 1 for a summary of studies). In these experimental and quasi-experimental

Table 1. Summary of Findings From PACT Efficacy Studies

| Study: Sample | Research design | Measures | Effect size | Meets WWC standards |
|---|---|---|--|--------------------------------|
| Effects of PACT intervention | | | | |
| Vaughn et al. (2013): 419 8th-grade students | Randomization at the class level; within-teacher experimental design; 16 PACT classes, 11 BAU classes | Content acquisition Content reading comprehension Broad reading comprehension | $g = 0.17$ $g = 0.29$ $g = 0.20$ | Without reservations |
| Vaughn et al. (2015): 1,487 8th-grade students | Replication of above study; within-teacher experimental design; 47 PACT classes, 38 BAU classes | Content acquisition 4-week follow-up 8-week follow-up Content reading comprehension Broad reading comprehension | $g = 0.32$ $g = 0.29$ $g = 0.26$ $g = 0.02$ $g = 0.01$ | Without reservations |
| Swanson, Wanzek, Vaughn, Roberts, & Fall (2015): 130 8th-grade students with disabilities | Quasi-experimental design based on data on students with disabilities from the Vaughn et al. (2013, 2016) samples | Content acquisition Content reading comprehension Broad reading comprehension | $g = 0.26$ $g = 0.34$ $g = 0.09$ | With reservations ^a |
| Wanzek, Swanson, Vaughn, Roberts, & Fall (2016): 148 8th-grade students with disabilities | Quasi-experimental design; data on students with disabilities in classes with many English language learners from Vaughn et al. (2016) sample | Content acquisition Content reading comprehension Broad reading comprehension | $g = 0.51$ $g = 0.04$ $g = 0.02$ | With reservations ^a |
| Effects of team-based learning portion of PACT intervention | | | | |
| Wanzek et al. (2015): 358 8th-grade students | Within-teacher experimental design; 13 PACT classes, 11 BAU classes | Content ideas in written essay Content details in written essay | $g = 0.31$ $g = 0.16$ | Without reservations |
| Wanzek et al. (2014): 465 11th-grade students | Within-teacher experimental design; 15 TBL classes, 11 BAU classes | Content acquisition | $g = 0.19$ | Without reservations |
| Kent, Wanzek, Swanson, & Vaughn (2015): 24 11th-grade students with disabilities | Within-teacher quasi-experimental design; 15 TBL classes, 11 BAU classes | Content acquisition Vocabulary subset Content subset | $g = 0.50$ $g = 1.01$ $g = 0.38$ | With reservations ^a |

Note. BAU = business as usual; PACT = Promoting Adolescents' Comprehension of Text; TBL = team-based learning; WWC = What Works Clearinghouse.

^aThe highest WWC rating for quasi-experimental studies is "meets evidence standards with reservations."

studies, the effects of PACT have been disaggregated for students with disabilities, yielding equivalent or higher effects for students with disabilities than for the sample as a whole. Research findings reveal that the

impact of the PACT implementation for students with disabilities is greater than for typical students in reading comprehension. PACT is theoretically substantiated by text-processing theories of reading comprehension (Kintsch,

1974; Symons, Snyder, Cariglia-Bull, & Pressley, 1989), which posit that readers gain understanding by building coherent representations of text and integrating these representations with previous learning. To teach essential content and

improve reading comprehension, PACT consists of four instructional components that teachers implement over a 10-day instructional unit: comprehension canopy, essential words, content acquisition, and team-based learning (TBL).

Comprehension Canopy

The comprehension canopy helps students build background knowledge and motivation around the content they are learning. Before reading the day's text, students watch a brief engaging video (3–7 minutes) that introduces the topic and serves as a springboard for discussion and learning. Before watching, teachers provide a purpose for viewing. For instance, a teacher may say, "As you watch the video, write two reasons why a person might immigrate to America." Then, after students view the video, teachers can direct student partners to have a short discussion (2–3 minutes) of why people immigrated to America. On the first day of each unit, teachers introduce one overarching question, or a "canopy," for all content in the unit. Teachers can develop their comprehension canopy questions by asking themselves, "What are the most important things that I want students to know in this unit of study?" For example, during a study of the American Revolution, comprehension canopy questions might include:

1. Why were the American colonists willing to fight for their independence from the British?
2. How did the colonial regions develop differently?
3. Was the American Revolution inevitable? Why or why not?
4. How did the colonists win the Revolutionary War?
5. What were the similarities and differences between the earliest civilizations of the New World?
6. What challenges did America face in creating state and federal governments after declaring independence?

Experienced PACT teachers often post the comprehension canopy questions in

their classroom, so they can easily refer to the questions throughout the unit.

Essential Words

Teachers introduce and review six to 10 high-utility words or concepts each week to build background knowledge related to the content of the unit and comprehension canopy. Teachers introduce all words on Day 1 of the unit; on subsequent days, at least one essential word is part of a warm-up activity that reviews the definition and requires students to apply the meaning of the word. Beginning teachers are often concerned about selecting the "right" words to teach. Because students need to learn more words than teachers can directly teach, the best way to select essential words is to identify words that are central to the meaning of the current unit and are likely to be useful in future units. Students continue to receive exposure to the word in text and knowledge application activities. An example of instructional materials for teaching essential words is provided in Figure 1, and sample units with examples of essential words are available for viewing or download from The Meadows Center (www.meadowscenter.org/projects/detail/promoting-adolescents-comprehension-of-text-pact).

Content Acquisition

The purpose of the content acquisition phase is to establish a routine for using texts as sources to expand knowledge and for improving comprehension. This step is the central vehicle for students to access and process text.

How might a beginning teacher implement this routine?

Step 1: Identify a chunk of text that is meaningful and related to content learning.

This text section might be two paragraphs, an entire page, or a few sentences—in other words, the amount of text can vary, but the text should be relevant to the knowledge being developed.

Step 2: Ask students to read the text section silently and to be prepared to identify a key idea from the text and connect it to what they are learning.

Adaptations such as reading the text with a peer can be used for students with disabilities who cannot adequately read the text.

Step 3: Ask students whether they have any questions, and pose at least one question to check understanding.

This is an important step because secondary social studies texts are frequently beyond the reading proficiency of many students (Shanahan & Shanahan, 2008); this step allows the teacher to clarify any difficult concepts before calling on students to identify the essential ideas of the text section. The following is an example of a comprehension check question: "The text described *urbanization*: What was urbanization, and what was one of the consequences of urbanization?"

Step 4: Call on students to take notes on their key ideas and connections to past learning and essential words.

This step allows students to extend and respond to ideas presented by other students.


Team-Based Learning (TBL)

The goal of TBL is to encourage students to discuss concepts with peers and think critically about the content, consider multiple perspectives, solve problems, and apply new content. TBL consists of four key elements: (a) heterogeneous permanent teams of students, (b) a readiness assurance process to incorporate individual and group accountability for content learning, (c) a peer evaluation process for evaluating the team's success, and (d) a knowledge application activity that provides teams a problem-solving task to complete by

Figure 1. Examples of PACT essential words instructional materials

revenue

Money collected by a government in the form of **taxes**, fees, or fines



Related Word: *income*

Example Usage:
Britain needed more **revenue** to meet its expenses and pay the debt incurred while fighting the French and Indian War.

The majority of government **revenue** is raised through income taxes.

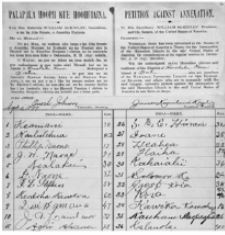
Examples: *Taxes, parking fines, driver's license fees*
Nonexamples: *Payments, refunds, donations*

Turn and Talk: Choose one of the following:

- How do you and your family contribute to the **revenue** of our government?
- How does the government use the **revenue** that it collects?

petition

A formal, written request of an official person or group for a specific action



Related Words: *appeal, plea*

Example Usage:
American colonists sent many **petitions** to King George III, pleading with him to end his government's abusive policies.

Example: *A letter from neighborhood residents requesting that city officials build a park nearby*
Nonexample: *A letter to the editor of the newspaper complaining about the price of gas*

Turn and Talk: Choose one of the following:

- What is the difference between a petition and "liking" a Facebook cause?
- Do you think petitions are a useful way for people to persuade leaders? Why or why not?

Note. PACT = Promoting Adolescents' Comprehension of Text. From "PACT U.S. history teacher lessons (8th grade)," by The Meadows Center for Preventing Educational Risk, 2013. Copyright 2013 by The Meadows Center for Preventing Educational Risk. Reprinted with permission.

using the newly learned content. There are many effective approaches for organizing students to work together. In PACT, we use an approach to TBL in which students work in small groups of three to four students. We recommend that teachers create heterogeneous groups in terms of gender, academic performance, language proficiency, and leadership skills.

For the TBL readiness assurance process, students complete a comprehension check independently and turn it in to the teacher during two lessons per 10-day unit. The comprehension check is a set of questions related to what students have been learning in the unit. The set of multiple-choice questions can be 5 to 20 items, depending on the grade (fewer questions typically associated with lower grades), amount of content covered, and teacher judgment. Students first complete the comprehension check independently, so teachers are aware of students'

learning progress up to this point. Next, students complete the same comprehension check as a team, this time using their text and notes. Teams discuss each question and justify their answers. An answer sheet is provided to help teams self-correct. If the answer is incorrect, the team repeats the process. Then, the teacher provides whole-class targeted instruction to address gaps in student understanding. Because teams are of mixed ability, it is essential that teachers monitor the teams to ensure that all members contribute and learn from the process.

At the end of each unit of instruction, teams participate in a TBL knowledge application activity to extend their learning. For example, an eighth-grade TBL application activity may call for teams to determine the most important cause of the American Revolution. Using a game board similar to a sports tournament bracket (see Figure 2), each team compares two causes, selects the more influential

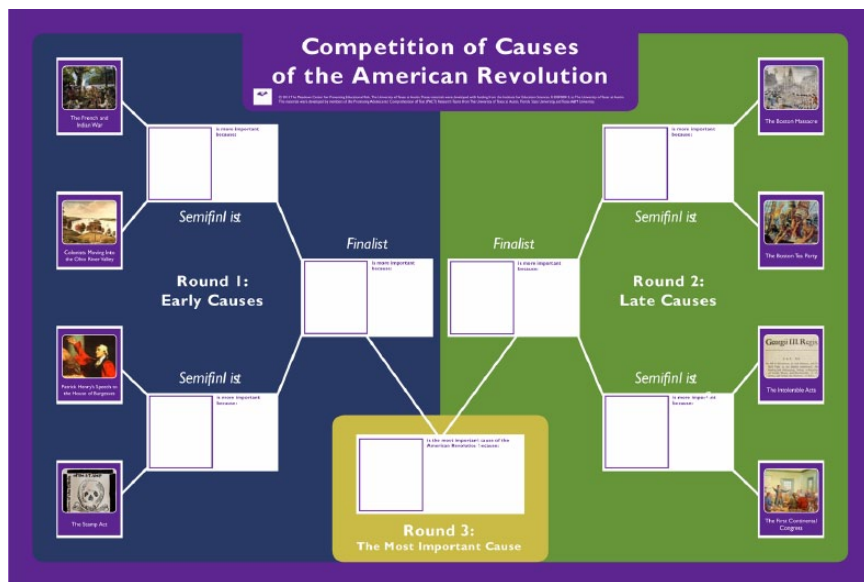
cause, and provides its explanation for each decision in writing until it selects the "champion cause." As teams work, the teacher monitors progress, facilitates discussion, and provides feedback. At the end of the activity, each team presents its conclusions to the class. The lesson ends with a discussion of the unit's overarching question—this comes from the comprehension canopy previously discussed.

Video examples of the PACT instructional components—including comprehension canopy, essential words, content acquisition, and TBL—are available from The Meadows Center website (www.meadowscenter.org/projects/detail/promoting-adolescents-comprehension-of-text-pact).

Processes and Materials

When the PACT studies were conducted, teachers were provided professional development on how to implement the

Figure 2. Team-based learning application activity: Competition of causes of the American Revolution



Note. PACT = Promoting Adolescents' Comprehension of Text. From "PACT U.S. history lessons," by The Meadows Center for Preventing Educational Risk, 2013. Copyright 2013 by The Meadows Center for Preventing Educational Risk. Reprinted with permission.

program, as well as materials that aligned with their routine instruction in history.

What would a beginning special educator need to do to successfully implement PACT?

Step 1: Identify the setting and group of students for implementing PACT.

This setting may be a general education classroom or a special setting.

Step 2: Identify the unit of study, initially a 2- or 3-week unit of material.

Step 3: Develop an overarching question or theme that represents the essential learning of that unit.

Step 4: Identify the unit's essential words or constructs that are necessary for all students to know to succeed.

Consider identifying about six to 10 words a week to teach about two to three words per day and review previously taught words. See the essential words materials in Figure 1 as a sample of how to develop instruction.

Step 5: Provide a mix of primary and secondary sources related to the unit, and have students read and answer questions about these texts at least 10 minutes a day or 50 minutes a week.

Use information from these texts to further answer the overarching question (Step 3).

Step 6: Develop an assessment that relates to the essential learning of the unit, including essential words and key knowledge and understanding.

Allow students to initially take the test independently, and then move to Step 7. These questions are similar to those for ongoing assessments. Include questions that focus on essential words, such as "What does the word *equilibrium* mean in our unit? Be sure to provide an example of equilibrium in your response."

Step 7: Have students work in teams of about four, and use data sources including text, notes, and other resources to answer the assessment questions.

Provide answers so that teams can self-check their responses.

Step 8: Reteach any essential words or other information that teams did not adequately understand.

Step 9: Extend students' learning through a knowledge application activity.

Collaborative Strategic Reading (CSR)

Like PACT, CSR is a fully developed and tested set of instructional practices shown to be successful in supporting inclusive classrooms of diverse students in fourth grade and beyond. CSR was initially designed to improve the reading comprehension of students with learning disabilities, but research findings have demonstrated the efficacy of CSR for average- and high-achieving students, struggling readers, and English learners. When implementing CSR, beginning teachers gain experience in several methods that enhance text comprehension and content acquisition, and students benefit by learning how to use strategies to improve their reading performance. CSR is beneficial for teachers and students because it blends multiple comprehension (Palincsar & Brown, 1984) and cooperative learning (Johnson & Johnson, 1999) strategies in a cohesive set of instructional practices.

There is strong theoretical and empirical support for CSR. Sociocultural theories (e.g., Pérez, 2004) provide underlying support for cooperative learning, and cognitive theories (e.g., Bandura, 1986) support strategy instruction. Moreover, several studies have shown that students with disabilities in classrooms implementing CSR as intended outperform comparison students on measures of reading comprehension (Boardman et al., 2016; Klingner, Vaughn, Arguelles, Hughes, & Leftwich, 2004; Klingner, Vaughn, & Schumm, 1998; Vaughn et al., 2011). These studies showed that low-achieving students and students with learning disabilities made the

greatest relative gains (see Table 2 for a summary of CSR studies).

Strategy Instruction

Reading comprehension strategy instruction aims to develop more active and intentional readers by instilling routines and methods for understanding text. According to practice guides from the What Works Clearinghouse, there is “strong evidence” that strategy instruction improves reading comprehension in the elementary (2010) and adolescent (2008) grades.

CSR incorporates several reading strategies associated with improved reading outcomes: (a) previewing text and building background knowledge (*preview*), (b) monitoring and improving comprehension (*click and clunk*), (c) determining the main idea (*get the gist*), and (d) reviewing and synthesizing information (*wrap-up*). These strategies occur before, during, and after reading (see Figure 3). Given

our experiences implementing CSR in classrooms, we encourage teachers to begin training students on the reading comprehension strategies through teacher-led activities before introducing the cooperative learning activities involved in CSR. Teachers can support students’ understanding and ability to apply the reading comprehension practices by delivering direct instruction and opportunities for guided practice with teacher feedback. Once students are able to apply the reading comprehension strategies with text, teachers can progressively release responsibility to students by teaching them how to work in small groups to collaboratively apply the strategies.

Preview

Before reading, students preview the day’s text for 2 to 3 minutes to stimulate relevant background knowledge (or build background knowledge when needed), connect the lesson’s subject matter to prior

learning, make predictions, and set a purpose for reading. Teachers lead the previewing step of CSR lessons because students do not always have adequate background knowledge on a given topic to productively preview text. By directing students to headings, figures, bolded words, and other key information and by asking them to share what they know about the subject and make predictions about what they will learn, teachers stimulate background knowledge. When students lack background knowledge, teachers can briefly explain key vocabulary and describe pictures, graphs, and other figures. Figure 4 provides a model lesson for introducing the preview strategy to students.

Click and Clunk

Many struggling readers and students with learning disabilities read without sufficiently monitoring their comprehension of text (Dermitzaki, Andreou, & Paraskeva, 2008; Paris &

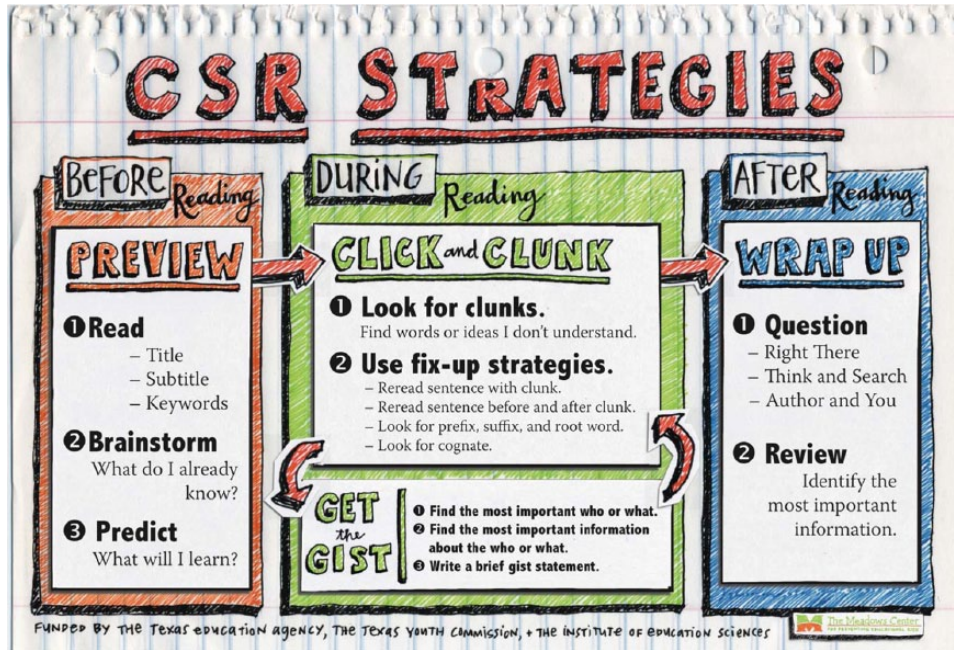
Table 2. Findings From CSR Research Studies

| Study: Sample | Research design | Measure | Effect size |
|--|---|-------------------------------|---|
| Klingner, Vaughn, and Schumm (1998): linguistically and culturally diverse fourth-grade students | Within-teacher quasi-experimental design | Gates-MacGinitie Reading Test | $d = 0.44$ for total sample ^a |
| Klingner, Vaughn, Arguelles, Hughes, & Leftwich (2004): fourth-grade students of all ability levels | Within-teacher quasi-experimental design (CSR or typical practice) | Gates-MacGinitie Reading Test | $d = 0.19$ for total sample, ^a 0.25 for high- and average-achieving students, ^a 0.51 for low-achieving students, 0.38 for students with learning disabilities |
| Vaughn et al. (2011): linguistically and culturally diverse seventh- and eighth-grade students with a large proportion of struggling readers | Experimental design with students randomly assigned to classes and classes randomly assigned to condition (CSR or typical practice) | Gates-MacGinitie Reading Test | $g = 0.12$ for total sample, ^a 0.36 for struggling readers |
| Boardman et al. (2016): students with disabilities in fourth- and fifth-grade classrooms | Within-teacher randomized design (CSR or typical practice) | Gates-MacGinitie Reading Test | $g = 0.52^a$ |

Note. CSR = collaborative strategic reading.

^aStatistically significant effect.

Figure 3. CSR comprehension strategies



Note. CSR = collaborative strategic reading. From “CSR strategies,” by The Meadows Center for Preventing Educational Risk, 2009. Copyright 2009 by The Meadows Center for Preventing Educational Risk. Reprinted with permission.

Paris, 2001; Pressley, 2002; Pressley & Hilden, 2006). Implemented during reading, the click-and-clunk strategy helps students to identify when a word or concept makes sense to them (clicks) and when something does not make sense to them (clunks). After introducing the concepts of clink and clunk and providing examples, teachers can facilitate comprehension monitoring by asking, “Who had clunks in the section we just read?” Students who identify a clunk use “fix-up” strategies to resolve the clunk and then reread the sentences to facilitate comprehension. The following are the four fix-up strategies for resolving a clunk.

1. Reread the sentence with the clunk and look for clues to help figure out the word.
2. Reread the sentences before and after the clunk, looking for key ideas.
3. Analyze the word and look for a prefix, a suffix, or a root word.
4. Look for a cognate.

Get the Gist

Identifying the most important idea is essential to comprehension and content

learning. In CSR, students learn to identify the essential idea (gist) and concisely restate this idea in their own words for each text section read. To scaffold learning for students, teachers break a passage into smaller sections (e.g., a nine-paragraph passage could be broken into three three-paragraph sections) and ask students to respond to the following questions after each section: (a) Who or what is this section about? (b) What is the most important idea about the “who” or “what”? (Fuchs, Fuchs, Mathes, & Simmons, 1997).

When introducing *get the gist*, veteran CSR teachers have found it helpful to “think aloud” to demonstrate the routine for students. For instance, a sixth-grade teacher may say:

To get the gist, first, I need to ask myself: “Who or what is this about?” When I look back to the text, Christopher Columbus was the subject in almost every sentence, and the heading for this section reads, “Was Columbus a failure?” So I will write in my learning log that Columbus was the main “who” of this section. Next, I ask myself, “What is the most important idea about Columbus?” Well, I know that

Columbus wanted to go to Asia. However, this idea was mentioned in only the first of the three paragraphs, so it cannot be the gist. The first paragraph is about his wish to travel to Asia, and the second and third paragraphs describe Columbus’s meetings with the queen. So when I think about all three paragraphs together, I can say the gist is “Columbus asked for money from the queen for his trip to Asia.”

See Figure 5 for an example gist statement that a fourth-grade student wrote in her learning log.

Wrap-Up

After students finish reading the text, they wrap up the lesson by asking and answering questions and reviewing the most important information learned. Learning how to create and respond to difficult questions is an excellent way for students to improve their comprehension (Klingner, Vaughn, & Boardman, 2015). Teachers implementing CSR introduce students to different question types, including (a) questions answered

Figure 4. Model lesson: Introducing the preview strategy

| | |
|--|---|
| Purpose: | Introduce the preview step—present the topic, access and build background knowledge, and set a purpose for reading |
| When: | During the first lesson before reading the text passage |
| Time: | 5–8 minutes |
| 1. Introduce the Topic | “We will learn about how European countries competed to colonize the New World, which resulted in early American settlements.” |
| 2. Preteach Key Proper Nouns and Vocabulary | “This word is <i>territory</i> .” Point to the word. “An area of land controlled by a country or ruler is a territory. Look at this picture. This is a map of the United States, and you can see there are five different colors representing the five major territories. These territories are controlled by other countries.” |
| 3. Preview the Text | “Previewing text helps us to connect to the key ideas of what we read. Let’s look at the title, headings, and graphics to familiarize ourselves with the text.” |
| 4. Access and Build Background Knowledge | “Write two to three things that you know about colonies in America.” Students write their responses, and the teacher provides feedback and builds background knowledge, as needed. |
| 5. Make Predictions | “Now we will make predictions about the text. Good predictions use clues from the text preview to make an informed guess about what the passage will be about. First, I’ll make a prediction, and then you all will have an opportunity to make your own predictions.” |
| 6. Set a Purpose for Reading | “You all made very good predictions. You are right that we will learn about European countries with communities in the New World. As we’re reading, think about this question: Why did European countries race to set up colonies in the New World?” |

with information explicitly in the text (right-there questions), (b) questions answered with information in more than one place in the text (think-and-search questions), and (c) questions answered with information from the text and background knowledge (author-and-you questions).

Asking and answering good questions can be a difficult skill for students, especially students with below-average comprehension skills. Students often benefit when teachers model effective question generation through a think-aloud. Like the other strategies, teachers introduce this strategy using direct instruction and then provide guided practice. As students show proficiency with the

strategy, teachers gradually release responsibility to the students and play the role of facilitator. As a facilitator, a teacher may help students generate author-and-you questions—which are often more challenging for students to formulate—by providing question stems, such as “Why do you think that . . . ?” or “What are the similarities and differences between . . . ?” In addition to asking and answering questions, students wrap up each lesson by writing a review statement or a short summary of the entire text in one to two sentences.

Cooperative Learning

Cooperative learning is a powerful mechanism for increasing students’

strategic reading with support. Teachers have reported significant benefits to using cooperative learning with students at risk or diagnosed with learning disabilities, including (a) increased success on classroom tasks, (b) improved quality of work, (c) improved self-esteem, and (d) greater participation in classroom activities (Jenkins, Antil, Wayne, & Vadasy, 2003). When using CSR, teachers typically group students in heterogeneous teams of four students and assign a specific role to each student. Although for many new teachers implementing cooperative learning in their classroom can seem like a daunting task, setting up cooperative CSR groups can be distilled into four steps:

Figure 5. Example of a fourth-grade gist statement

Date: _____

Studies Weekly, Week 9

Lesson 8: Christopher Columbus Was a Failure?

| | |
|--|--|
| Unit Big Idea | The early civilizations of Texas included Paleoamericans, American Indians, and European settlers. |
| Vocabulary | disgrace, convince |
| Gist 1 | |
| Gist Questions | |
| Who or what is this about? <u>Christopher Columbus</u> | |
| What's the most important idea about the main "who" or "what"? | |
| <u>Tried to convince the King and Queen to pay for his journey to Asia</u> | |
| Gist Statement | |
| <u>Christopher Columbus convinced the King and Queen to pay for his journey to Asia.</u> | |

Step 1: Set the purpose and norms of cooperative learning.

The purpose of cooperative learning is for each member of the team to contribute to meeting a common goal. Teachers can help students reach their common goals by establishing cooperative learning norms: (a) All group members are responsible for their assigned roles; (b) students receive support from their team members and the teacher; and (c) the group's task is specific, and (d) all members of the team are responsible for keeping the team focused. Visually displaying and referring to these norms when modeling and providing positive reinforcement encourages students to meet these expectations.

Step 2: Intentionally assign students to groups based on important factors.

Like PACT, our experiences with CSR reveal that cooperative learning works

best in groups of three or four students of mixed academic, linguistic, and leadership skills. Although teachers can use many methods to assign students to groups, some teachers find it helpful to rank students by a recent reading-related measure and then identify two students each from the top half and bottom half of the lists. Teachers then review and make changes to the groups to ensure that each group reflects the diversity of their classes (e.g., English learners are equally distributed among the groups) and includes at least one leader.

We also recommend that teachers pay attention to the composition of groups that include students with disabilities. Past research suggests that, for students with disabilities, assignment to groups with supportive members is a significant contributing factor to the success of collaborative learning (O'Connor & Jenkins, 1996). In addition, teachers can seat leaders next to struggling students and train the leaders to support their peers (e.g.,

remind their peers when it is their turn to participate).

Step 3: Model CSR roles and routines.

CSR typically uses four student roles: leader, clunk expert, gist expert, and question expert. The leader shepherds the group through the CSR activities by keeping track of time and helping the transition between activities. The clunk expert helps students use fix-up strategies when they struggle with an unknown word or idea and confirms that all students write their clunks and fix-up strategies in their learning logs (student workbook associated with CSR). The gist expert's job is to direct students to write their individual gist statements in their learning logs, lead a discussion of the gist statements, and write a "super gist" (identifying the best individual gist statement or writing a new gist statement to reflect the most important information). The question expert prompts students to write different types of questions (e.g., right-there, author-and-you) in their learning logs and leads a discussion about the questions and answers generated.

Step 4: Support group work through targeted feedback.

After describing and modeling each CSR role, teachers provide specific feedback while students practice the CSR roles and routines. Research has shown that high-quality performance-oriented feedback has a powerful effect on student achievement (Hattie & Timperley, 2007). A teacher could support a struggling student and encourage group members to take on their CSR roles by asking, for example, "Finley, since you are the clunk expert, would you please remind Johnny of our fix-up strategies, so he can figure out the meaning of the word *resolution*?" A teacher could promote higher levels of peer discussion by saying, "It sounds like your group agrees that Camden's main idea is on target. Why do you all think this is the most important idea? Andy, as the gist

expert, please lead this discussion.” Over time, teachers can gradually release responsibility (Pearson & Gallagher, 1983); however, it is important to remember that students differ in the extent of support that they need to become independent.

Students with learning disabilities may require additional explicit description of strategies, more frequent teacher modeling, and higher levels of peer support. One way that teachers can support students with learning disabilities during CSR is to actively monitor groups when students are working cooperatively. Teachers can clarify difficult vocabulary, check for understanding, encourage participation by acknowledging successes, provide corrective feedback, and model appropriate strategy use. In addition, teachers can model ways that advanced students can support struggling students during cooperative learning.

Processes and Materials

Cue cards that detail the procedures of each CSR job and present relevant scripting can provide organization and

support to students while they are learning the strategies and procedures. See Table 3 for resources related to PACT and CSR, including printable CSR cue cards and other teacher tools. It may be helpful to provide sentence stems on the cue cards to help students

well as gist statements while reading, write questions and answers, and review statements during the wrap-up. Learning logs are particularly helpful for students when preparing for content-area assessments. Additional resources to help teachers implement

When both reading comprehension and content knowledge instruction are based on research-based instructional principles, students with learning disabilities become increasingly independent and more likely to succeed in the secondary grades and beyond.

with disabilities respond appropriately. Most often, students phase out their use of cue cards once they feel confident that they can perform their role.

Student learning logs (Figure 5) provide students a place to record important content and further develop their comprehension through writing. In the learning logs, students often write predictions before reading, identify clunks and clarifications as

CSR can be found online (The IRIS Center, 2008, p. 11).

Final Thoughts

Progressive state standards, such as the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010), call for improvements in students’ content knowledge and reading

Table 3. Recommended Reading for Teachers Implementing PACT and CSR

| Resource | Description |
|--|---|
| Swanson, E., & Wanzek, J. (2014). Applying research in reading comprehension to social studies instruction for middle and high school students. <i>Intervention in School and Clinic, 49</i> , 142–147. | This article details each of the PACT practices and provides specific tips for how to begin implementing PACT in greater detail than the space provided here allows. With a specific focus on implementing PACT in secondary classrooms, middle and high school teachers will find the specific examples of teacher and student dialogue particularly helpful. |
| Klingner, J. K., Vaughn, S., Boardman, A., & Swanson, E. (2012). <i>Now we get it! Boosting comprehension with collaborative strategic reading</i> . San Francisco, CA: Jossey-Bass. | Written by the creators of CSR, this book provides a comprehensive account of CSR with numerous practical tips and resources for implementing teachers. |
| The IRIS Center for Training Enhancements. (2008). <i>CSR: A reading comprehension strategy</i> . Retrieved from http://iris.peabody.vanderbilt.edu/module/csr/ | The online IRIS modules, an invaluable tool for beginning special educators, include a brief training on CSR to help teachers understand the purpose, components, and implementation of CSR and effectively teach CSR in the classroom. One powerful element of the CSR module is the use of short videos showing the CSR practices applied in real classrooms. |

Note. PACT = Promoting Adolescents’ Comprehension of Text; CSR = collaborative strategic reading.

comprehension. In this article, we discuss two research-based approaches to integrate reading comprehension and content knowledge instruction. Improving reading comprehension skills and content knowledge are difficult goals for beginning and experienced special education teachers alike. Understanding and learning from content-area texts is a complex process that requires students to read purposively, activate and build background knowledge while reading, constantly monitor their understanding, apply strategic effort, and focus attention on key information in the text (RAND Reading Study Group, 2002).

Students with good reading comprehension may instinctively use many of the practices taught in CSR and PACT when reading; however, students with disabilities often need explicit instruction, modeling, and teacher feedback. Both PACT and CSR use effective instructional features while providing students with extensive access to text and opportunities to build important reading comprehension processes. Although both instructional approaches require teachers to commit time to introducing and implementing procedures for structured small-group learning, these techniques help students take on higher levels of responsibility for reading and learning content from text. When both reading comprehension and content knowledge instruction are based on research-based instructional principles, students with learning disabilities become increasingly independent and more likely to succeed in the secondary grades and beyond.

References

- Alfassi, M. (1998). Reading for meaning: The efficacy of reciprocal teaching in fostering reading comprehension in high school students in remedial reading classes. *American Educational Research Journal*, 35, 309–332. doi:10.3102/00028312035002309
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Boardman, A. G., Vaughn, S., Buckley, P., Reutebuch, C., Roberts, G., & Klingner, J. (2016). Collaborative strategic reading for students with learning disabilities in upper elementary classrooms. *Exceptional Children*, 82, 409–427. doi:10.1177/0014402915625067
- Dermitzaki, I., Andreou, G., & Paraskeva, V. (2008). High and low reading comprehension achievers' strategic behaviors and their relation to performance in a reading comprehension situation. *Reading Psychology*, 29, 471–492. doi:10.1080/02702710802168519
- Faggella-Luby, M. N., Graner, P. S., Deshler, D. D., & Drew, S. V. (2012). Building a house on sand: Why disciplinary literacy is not sufficient to replace general strategies for adolescent learners who struggle. *Topics in Language Disorders*, 32, 69–84. doi:10.1097/TLD.0b013e318245618e
- Flavell, J. H. (1992). Perspectives on perspective taking. In H. Beilin & P. Pufall (Eds.), *Piaget's theory: Prospects and possibilities* (pp. 107–139). Hillsdale, NJ: Erlbaum.
- Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C. (1997). Peer-assisted learning strategies: Making classrooms more responsive to diversity. *American Educational Research Journal*, 34, 174–206. doi:10.3102/00028312034001174
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77, 81–112. doi:10.3102/003465430298487
- The IRIS Center. (2008). *CSR: A reading comprehension strategy*. Retrieved from <https://iris.peabody.vanderbilt.edu/module/csr/>
- Jenkins, J. R., Antil, L. R., Wayne, S. K., & Vadasy, P. F. (2003). How cooperative learning works for special education and remedial students. *Exceptional Children*, 69, 279–292. doi:10.1177/001440290306900302
- Johnson, D. W., & Johnson, R. T. (1999). *Learning together and alone: Cooperative, competitive, and individualistic learning* (5th ed.). Boston, MA: Allyn & Bacon.
- Kent, S., Wanzek, J., Swanson, E. A., & Vaughn, S. (2015). Team-based learning for students with high-incidence disabilities in high school social studies classrooms. *Learning Disabilities Research & Practice*, 30, 3–14. doi:10.1111/ldrp.12048
- Kintsch, W. (1974). *The representation of meaning in memory*. Oxford, England: Erlbaum.
- Klingner, J. K., Vaughn, S., Arguelles, M. E., Hughes, M. T., & Leftwich, S. A. (2004). Collaborative Strategic Reading “real-world” lessons from classroom teachers. *Remedial and Special Education*, 25, 291–302. doi:10.1177/0741932504025050301
- Klingner, J. K., Vaughn, S., & Boardman, A. (2015). *Teaching reading comprehension to students with learning difficulties* (2nd ed.). New York, NY: Guilford Press.
- Klingner, J. K., Vaughn, S., Dimino, J., Schumm, J. S., & Bryant, D. (2001). *Collaborative strategic reading: Strategies for improving comprehension*. Longmont, CO: Sopris West.
- Klingner, J. K., Vaughn, S., & Schumm, J. S. (1998). Collaborative strategic reading during social studies in heterogeneous fourth-grade classrooms. *The Elementary School Journal*, 99, 3–22. doi:10.1086/461914
- McKeown, M. G., Beck, I. L., & Blake, R. G. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. *Reading Research Quarterly*, 44, 218–253. doi:10.1598/RRQ.44.3.1
- The Meadows Center for Preventing Educational Risk. (2009). *CSR strategies*. Austin, TX: Author.
- The Meadows Center for Preventing Educational Risk. (2013a). *PACT U.S. history lessons*. Austin, TX: Author.
- Morsy, L., Kieffer, M. J., & Snow, C. (2010). *Measure for measure: A critical consumers' guide to reading comprehension assessments for adolescents*. New York, NY: Carnegie Corporation of New York. Retrieved from https://www.carnegie.org/media/filer_public/32/11/3211dffc-7986-42fb-ae1-8d379664f3c6/ccny_report_2010_tta_morsy.pdf
- National Assessment of Educational Progress. (2014). *The nation's report card: Reading 2014*. Washington, DC: National Center for Education Statistics.
- National Assessment of Educational Progress. (2015). *The nation's report card: Reading 2015*. Washington, DC: National Center for Education Statistics.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors.

- O'Connor, R. E., & Jenkins, J. R. (1996). Cooperative learning as an inclusion strategy: A closer look. *Exceptionality*, 6, 29–51. doi:10.1207/s15327035ex0601_3
- Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, 1, 117–175. doi:10.1207/s1532690xci0102_1
- Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, 36(2), 89–101. doi:10.1207/S15326985EP3602_4
- Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary Educational Psychology*, 8, 317–344. doi:10.1016/0361-476X(83)90019-X
- Pérez, B. (Ed.). (2004). *Sociocultural contexts of language and literacy* (2nd ed.). Mahwah, NJ: Erlbaum.
- Pressley, M. (2002). Metacognition and self-regulated comprehension. In A. Farstrup, & S. Samuels (Eds.), *What research has to say about reading instruction* (3rd ed., pp. 291–309). Newark, DE: International Reading.
- Pressley, M., & Hilden, K. (2006). Cognitive strategies. In W. Damon, R. Lerner, D. Kuhn, & R. Siegler (Eds.), *Handbook of child psychology: Cognition, perception, and language* (6th ed., Vol. 2, pp. 511–556). Hoboken, NJ: Wiley.
- RAND Reading Study Group. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND. Retrieved from http://www.rand.org/content/dam/rand/pubs/monograph_reports/2005/MR1465.pdf
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78(1), 40–59. doi:10.17763/haer.78.1.v62444321p602101
- Swanson, E. A., Wanzek, J., Vaughn, S., Roberts, G., & Fall, A. M. (2015). Improving reading comprehension and social studies knowledge among middle school students with disabilities. *Exceptional Children*, 81, 426–442. doi:10.1177/0014402914563704
- Swanson, E. A., Wexler, J., & Vaughn, S. (2009). Text reading and students with learning disabilities. In E. Hiebert (Ed.), *Reading more, reading better* (pp. 210–230). New York, NY: Guilford Press.
- Symons, S., Snyder, B. L., Cariglia-Bull, T., & Pressley, M. (1989). Why be optimistic about cognitive strategy instruction? In C. McCormick, G. Miller, & M. Pressley (Eds.), *Cognitive strategy research* (pp. 3–32). New York, NY: Springer.
- Vaughn, S., Klingner, J. K., Swanson, E. A., Boardman, A. G., Roberts, G., Mohammed, S. S., & Stillman-Spisak, S. J. (2011). Efficacy of collaborative strategic reading with middle school students. *American Educational Research Journal*, 48, 938–964. doi:10.3102/0002831211410305
- Vaughn, S., Martinez, L. R., Wanzek, J., Roberts, G., Swanson, E. A., & Fall, A. M. (2016). Improving content knowledge and comprehension for English language learners: Findings from a randomized control trial. *Journal of Educational Psychology*, 109, 22–34. doi:10.1037/edu0000069
- Vaughn, S., Roberts, G., Swanson, E. A., Wanzek, J., Fall, A. M., & Stillman-Spisak, S. J. (2015). Improving middle-school students' knowledge and comprehension in social studies: A replication. *Educational Psychology Review*, 27, 31–50. doi:10.1007/s10648-014-9274-2
- Vaughn, S., Swanson, E. A., Roberts, G., Wanzek, J., Stillman-Spisak, S. J., Solis, M., & Simmons, D. (2013). Improving reading comprehension and social studies knowledge in middle school. *Reading Research Quarterly*, 48, 77–93. doi:10.1002/rrq.039
- Wanzek, J., Kent, S. C., Vaughn, S., Swanson, E. A., Roberts, G., & Haynes, M. (2015). Implementing team-based learning in middle school social studies classes. *Journal of Educational Research*, 108, 331–344. doi:10.1080/00220671.2014.893224
- Wanzek, J., Swanson, E., Vaughn, S., Roberts, G., & Fall, A. M. (2016). English learner and non-English learner students with disabilities: Content acquisition and comprehension. *Exceptional Children*, 82, 428–442. doi:10.1177/0014402915619419
- Wanzek, J., Vaughn, S., Kent, S. C., Swanson, E. A., Roberts, G., Haynes, M., . . . Solis, M. (2014). The effects of team-based learning on social studies knowledge acquisition in high school. *Journal of Research on Educational Effectiveness*, 7, 183–204. doi:10.1080/19345747.2013.836765
- What Works Clearinghouse. (2008). *Improving adolescent literacy: Effective classroom and intervention practices (NCEE 2008-4027)*. Washington, DC: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/adlit_pg_082608.pdf
- What Works Clearinghouse. (2010). *Improving reading comprehension in kindergarten through 3rd grade (NCEE 2010-4038)*. Washington, DC: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc/PracticeGuide/14>

Philip Capin, *Researcher, The Meadows Center for Preventing Educational Risk, and Sharon Vaughn*, *Executive Director, The Meadows Center for Preventing Educational Risk, Manuel J. Justiz Endowed Chair in Education, The University of Texas at Austin.*

Address correspondence concerning this article to Philip Capin, 1912 Speedway D4900, Austin, TX 78712-1284, USA (e-mail: pcapin@utexas.edu).

TEACHING Exceptional Children, Vol. 49, No. 4, pp. 249–261. Copyright 2017 The Author(s).