What is Collaborative Strategic Reading?

Collaborative Strategic Reading (CSR) is a peer-mediated reading comprehension instructional model informed by the methods in reciprocal teaching (Palincsar & Brown, 1984), cooperative learning (Johnson, Johnson, & Stanne, 2000), and transactional strategies instruction (Pressley et al., 1992). The strategies in CSR are designed to teach students with diverse abilities comprehension strategies for use with expository text (Klingner, Vaughn, & Boardman, 2015). CSR explicitly uses strategy instruction to teach meta-cognitive and self-monitoring skills theorized to lead to improved reading comprehension (Klingner, Vaughn, & Schumm, 1998). The approach uses a mix of whole class instruction and small cooperative peer learning groups. Whole group instruction in CSR begins with teacher modeling, role playing, and teacher think-alouds. These steps are followed by the formation of heterogeneous cooperative learning groups in which students employ four comprehension strategies before, during, and after reading: (a) preview, (b) click and clunk, (c) get the gist, and (d) wrap up (Bremer, Vaughn, Clapper, & Kim, 2002; Klingner et al., 2015; Klingner, Vaughn, Boardman, & Swanson, 2012).

For Whom is CSR Intended?

Collaborative Strategic Reading was developed to improve reading comprehension skills for students with learning disabilities (LD) and students at risk for reading difficulties. The early implementation of CSR was conducted in linguistically diverse classrooms with both English language learners (ELL) and non–ELL students (Klingner & Vaughn, 1996). Early studies suggested that CSR had positive effects for both ELL and non–ELL students (Klingner et al., 1998). Some early research suggested that the peer-mediated group learning aspect of CSR may support ELL students due largely to cooperative learning aspects that allow linguistically diverse students to have support in their native language from peers who are bilingual (e.g., Klingner & Vaughn, 2000; Saenz, Fuchs, & Fuchs, 2005). In contrast, a large-scale study (Hitchcock et al., 2011) revealed that neither ELL nor non–ELL 5th graders benefited from CSR (though implementation fidelity of the intervention may have been a confounding issue). However, across two decades of research, CSR has demonstrated positive outcomes for elementary and middle school students at risk for reading difficulties; students with LD; average and high achieving students; and, in most cases, ELL students (e.g., Boardman, Vaughn, et al., 2016; Bryant et al., 2000; Klingner et al., 1998; Vaughn et al., 2000). Thus, CSR is an appropriate strategy for elementary and middle school struggling readers, students with LD, and linguistically diverse students.

How Does It Work?

In CSR, teachers provide explicit instruction to students in meta-cognitive strategy use and then facilitate peer-mediated learning within mixed-ability cooperative learning groups (Klingner & Vaughn, 1998). An important aspect of CSR is that it “rejects dominant notions of literacy as an isolated act and instead, emphasizes peer interaction which reflects the cultural practices of many students in urban schools” (Boardman, Klingner, Buckley, Annamma, & Lasser, 2015, p. 1259). The implementation of CSR involves teachers providing explicit instruction and modeling in four comprehension strategies: (a) preview, (b) click and clunk, (c) get the gist, and (d) wrap up. When introducing CSR to students, the teacher first models all the steps in whole group instruction. After students demonstrate competency in the strategies, they employ the strategies in small student groups. Each strategy is described in Figure 1, on page 2.

In CSR, the students have specific roles in the cooperative learning groups that are rotated across lessons. After students demonstrate the ability to apply the four strategies through teacher-led activities, they are taught the different roles they will perform while using CSR in the peer-mediated groups. Student roles in CSR groups can include:

- **Leader**: This student leads the group in the implementation of CSR by identifying the order of text to be read and which strategy to apply. The leader may ask the teacher for assistance, if necessary.
- **Clunk expert**: This student uses “clunk cards” to remind the group of the steps to follow when trying to figure out a difficult word or concept. Each clunk card describes a fix-up strategy. Fix-up strategies include (a) use context clues; reread the sentence with the clunk and look for key concepts to figure out the word, (b) reread the sentences before and after the clunk to look for clues, (c) identify an affix in the word to help with comprehension, and (d) break the word apart to look for root words.
- **Reporter**: During the class wrap-up, this student reports to the class the main ideas (the gist) learned in the small groups.

**continued on page 2**

ABOUT THE AUTHORS

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As early as 1998, Klingner and colleagues reported on the effectiveness of CSR. Almost 20 years of research has examined the effectiveness of CSR for students at risk for reading failure, as well as for average achieving students and ELL students. The research on CSR for students with LD is a bit more limited in that several studies have not reported disaggregated findings for students with LD specifically. Other research on CSR that disaggregated findings for or focused solely on ELL students. For example, Kim et al. (2006) implemented a computer-assisted CSR intervention with middle school students with LD in two classrooms, and found statistically significant gains in reading comprehension for students with LD receiving computer-assisted CSR, compared with the control group. Kim and colleagues reported improved reading comprehension on the Woodcock Reading Mastery Test (standardized mean difference [SMD] effect size = 0.50) and improved performance on researcher-designed “Get the Gist” (SMD effect size = 0.95) and “Questioning” (SMD effect size = 1.18). Boardman et al. (2015) examined the effects of CSR among students in classrooms assigned to one of three conditions: full CSR intervention, partial CSR intervention, or control classrooms and 22 control group classrooms, and did not find a main effect for CSR on student outcomes, nor that CSR implementation fidelity was significantly related to student outcomes.

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Other research on CSR that disaggregated findings for or focused solely on poor readers and students with disabilities, including LD, has been consistent in finding positive effects of CSR for these students. For example, Kim et al. (2006) implemented a computer-assisted CSR intervention with middle school students with LD in two classrooms, and found statistically significant gains in reading comprehension for students with LD receiving computer-assisted CSR, compared with the control group. Kim and colleagues reported improved reading comprehension on the Woodcock Reading Mastery Test (standardized mean difference [SMD] effect size = 0.50) and improved performance on researcher-designed “Get the Gist” (SMD effect size = 0.95) and “Questioning” (SMD effect size = 1.18). Boardman et al. (2015) examined the effects of CSR among students in classrooms assigned to one of three conditions: full CSR intervention, partial CSR intervention, or control classrooms and 22 control group classrooms, and did not find a main effect for CSR on student outcomes, nor that CSR implementation fidelity was significantly related to student outcomes.

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group (business as usual in reading instruction). They reported significant effects (g = 0.18) for students receiving the full CSR intervention, including for all students who began the study as low readers (i.e., ELL, LD, other disabilities).

The studies outlined in Table 1 represent the empirical base over 20 years for the efficacy of CSR for improving reading comprehension skills for elementary and secondary students with LD. Although two of the seven studies (i.e., Boardman, Buckley et al., 2016 and Vaughn et al., 2011) described in Table 1 did not report disaggregated data specifically for students with LD (just special education status), they did include students with LD in both experimental and control groups. The studies involved a range of research designs and used a variety of reading measures. All studies found support for the effectiveness of CSR.

### Table 1: Summary of Studies Supporting Collaborative Strategic Reading

<table>
<thead>
<tr>
<th>Research Design</th>
<th>Sample</th>
<th>Outcome Measure</th>
<th>Finding(s)</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest-posttest quasi-experimental</td>
<td>141 4th grade students: 85 experimental group &amp; 56 in control group, 12 with LD and 71 ELL</td>
<td>Gates-MacGinitie Reading Test-comprehension, 50-question unit posttest</td>
<td>Students in the intervention group (including students with LD and ELL students) had significantly greater growth in Gates-MacGinitie reading comprehension scores (effect size=0.34) than control group. No statistically significant difference in unit posttest scores.</td>
<td>Klingner, Vaughn, &amp; Schumm, 1998</td>
</tr>
<tr>
<td>(with classes randomly assigned) control group design</td>
<td>111 3rd grade students: 55 in CSR group &amp; 56 in PR group, 16 students with reading LD</td>
<td>Gray Oral Reading Test, Test Of Reading Fluency</td>
<td>No statistically significant group (CSR vs. PR) effects. Reading rate increased significantly from pretest to posttest for both PR and CSR groups for participants with LD on all outcomes.</td>
<td>Vaughn et al., 2000</td>
</tr>
<tr>
<td>Pretest-posttest quasi-experimental</td>
<td>34 middle school students with disabilities (16 in intervention group; 18 in control group); 28 with LD, 6 other disabilities</td>
<td>Researcher-developed measure (finding main idea, question generation), Woodcock Reading Mastery Test-passage comprehension</td>
<td>Treatment (computer-assisted CSR) group outperformed the control group on the Woodcock Reading Mastery Test-posttest (SMD effect size = 0.50). On the researcher-developed measure, CSR group also outperformed the control group (for main idea, SMD effect size=0.95; for the question generation, SMD effect size=1.18).</td>
<td>Kim et al., 2006</td>
</tr>
<tr>
<td>control group design</td>
<td>782 7th and 8th grade students, 400 CSR (34 classes) and 382 (27 classes) control group, 95 struggling readers</td>
<td>AIMSweb reading curriculum based measure, Gates-MacGinitie Reading Test-comprehension, TOWRE, TOSREC, &amp; MSI</td>
<td>On Gates-MacGinitie, participants in CSR significantly outperformed nonparticipants (g=0.36) when effects of clustering and pretreatment differences were explicitly modeled. Significant interaction indicated that when student performance on the MSI was controlled for, CSR group made significantly greater gains than comparison group. No significant group differences on AIMSweb and TOSREC. Results for struggling readers were similar to those for the total sample.</td>
<td>Vaughn et al., 2011</td>
</tr>
</tbody>
</table>

Notes. CSR=Collaborative Strategic Reading. ELL=English Language Learners. g = Hedge’s g. LD=Learning disabilities. MSI=Metacomprehension Strategy Index. PR=Partner Reading. SMD=standard mean difference. TOSREC=Test of Silent Reading Efficiency and Comprehension. TOWRE=Test of Word Reading Efficiency.
How Practical Is It?

Collaborative Strategic Reading is a teacher-modeled, peer-mediated strategy for reading comprehension that can be applied to any content area text. Therefore, teachers may integrate models like CSR in core content subjects without sacrificing instructional time. Because CSR can be implemented in a variety of content areas, students may also be more likely to generalize the reading comprehension strategies across academic areas/courses. This may be particularly important for struggling readers in secondary school (Bremer et al., 2002). In addition, CSR instruction requires no special tools or resources outside of a typical classroom. Although some teachers may find it challenging to implement a multi-component reading intervention such as CSR with high fidelity (e.g., Klingner, Vaughn, & Schumm, 1998), one recent study reported a strong relationship between fidelity of implementation and improved reading outcomes for students with disabilities (Boardman, Buckley, et al., 2016). Teachers who do not use peer-mediated instruction (i.e., small groups) as part of their current instructional practices may also find CSR implementation challenging (Vaughn et al., 2011).

Kim et al.'s (2006) study on computer-assisted CSR with middle school students with LD also examined students' perceptions of CSR. Most of the students (12 out of 16) perceived the CSR intervention positively. The four students who did not report positive perceptions noted that they found the CSR program "boring." The two participating teachers also reported positive perceptions and reported that the CSR program was an effective instructional tool. Klingner, Vaughn, Hughes, and Arguelles (1999) examined teacher implementation of CSR (as one of 3 interventions) over three years, as well as teachers' perceptions of the sustainability of CSR. They reported that teachers found that schools' standardized testing focus led to a lack of instructional time for non-test-preparation instruction, but also that adequate training, access to materials, and students' acceptance of the CSR strategy were factors that facilitated sustained use of CSR.

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TABLE 1 (CONT): SUMMARY OF STUDIES SUPPORTING COLLABORATIVE STRATEGIC READING

<table>
<thead>
<tr>
<th>RESEARCH DESIGN</th>
<th>SAMPLE</th>
<th>OUTCOME MEASURE</th>
<th>FINDING(S)</th>
<th>STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest-posttest randomized control group design</td>
<td>19 middle school teachers; 1,074 students (394 in Full CSR group, 261 in Partial CSR group, and 419 in control group), 544 ELL, 122 in special education, 81 with LD</td>
<td>Gates-MacGinitie Reading Test-comprehension; State standards-based assessment in reading &amp; writing</td>
<td>Gates-MacGinitie comprehension scores significantly higher for Full CSR than for control group (g=0.18). No differences on the Gates-MacGinitie between Partial CSR and control group. Reading and writing state assessment scores were not statistically different between groups. All students who received CSR made similar gains, including ELL students and students with LD.</td>
<td>Boardman, Klingner, Buckley, Annamma, &amp; Lasser, 2015</td>
</tr>
<tr>
<td>Multi-site cluster, pretest-posttest randomized control design</td>
<td>60 teachers; 1,372 4th &amp; 5th grade students (686 CSR &amp; 686 control group), 342 ELL, 128 in special education, 87 with LD</td>
<td>Gates-MacGinitie Reading Test-comprehension</td>
<td>No significant main effect of CSR on student outcomes; a significant interaction effect between condition and posttest scores for students with LD. Students with LD scored 4.86 points higher on Gates-MacGinitie in CSR condition (g=0.52).</td>
<td>Boardman, Vaughn, et al., 2016</td>
</tr>
<tr>
<td>Multi-level, single-group pretest-posttest design</td>
<td>Study 1: 597 middle school students (61 in special education) Study 2: 552 middle school students (67 in special education)</td>
<td>Gates-MacGinitie Reading Test-comprehension; fidelity checklist</td>
<td>No main effects for quality or amount of CSR instruction, but significant interaction effects between quality of implementation and special education status in both studies. Higher quality CSR instruction associated with higher reading outcomes for students with disabilities.</td>
<td>Boardman, Buckley, et al., 2016</td>
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continued on page 5
What Questions Remain?

CSR has been found effective for improving reading comprehension for students at risk for reading failure, students with LD, and average-achieving students in elementary and middle school grades. Most of the research base also demonstrates gains for ELLs; however, a recent, large-scale study did not find improved gains for ELL students receiving CSR compared with their non-ELL peers (Hitchcock et al., 2011). Thus, additional research on the efficacy of CSR for ELLs is warranted. Further, there is limited research on CSR with high school or post-secondary students (e.g., Zoghi, Mustapha, & Maasum, 2010). Additional research with high school and college students with LD would bolster the strong evidence base for CSR.

How Do I Learn More?

There are several websites and support resources that teachers can use to learn more about CSR and how to implement it in classrooms for diverse students and students with LD. Listed below are resources and a brief description of each resource.


This article describes how to teach CSR to mixed-ability students using examples from an upper elementary school classroom.

http://toolkit.csr.colorado.org/

A comprehensive website that includes on-line learning modules, video examples, and instructional resources for teachers. Access to the site’s resources is free but requires registration.


This website offers a teacher-friendly outline of the CSR strategies.

http://iris.peabody.vanderbilt.edu/module/CSR/

The Iris Center at Vanderbilt University provides a 5-step learning module for teachers on CSR.

http://www.adlit.org/strategies/22355/

An adolescent literacy website that provides classroom strategies on CSR, along with graphic organizer templates for use as CSR learning logs.


The Meadows Center at University of Texas-Austin provides a webinar resource on CSR led by Dr. Vaughn.

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About the Alert Series

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Each Alerts issue focuses on a single practice or family of practices that is widely used or discussed in the LD field. The Alert describes the target practice and provides a critical overview of the existing data regarding its effectiveness for individuals with learning disabilities. Practices judged by the Alerts Editorial Committee to be well validated and reliably used are featured under the rubric of Go For It. Those practices judged to have insufficient evidence of effectiveness are featured as Use Caution.

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