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Strategy Instruction Shifts Teacher and Student Interactions During Text-Based Discussions

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ABSTRACT

This study examined how teacher and student interactions were influenced by a multistrategy reading model, Collaborative Strategic Reading (CSR), where students learn to apply before-, during-, and after-reading strategies in small cooperative learning groups. Five middle school English language arts teachers and their students (N = 184) participated as part of a two-year efficacy trial of CSR. Discourse analysis was used to compare the differences in teacher-student talk when the teacher and the text remained the same across typical instruction and CSR lessons. Results indicated that strategy-based collaborative practices offered opportunities for discourse patterns that were not observed in typical lessons. Overall, a higher proportion of talk in CSR lessons focused on discussing the text when compared with lessons without CSR. Features of student-teacher interactions during strategy-based instruction included more student and teacher academic talk turns, a higher ratio of student talk to teacher talk, longer sequences of student-student exploratory talk, less teacher talk focused on giving information, and the use of reading strategies to facilitate discussion about text content. Findings suggest that strategy instruction models can increase the dialogic nature of classrooms by resituating the location of knowledge as distributed among students, with talk and strategies as tools to improve comprehension.

Over time, students are taught and acquire a host of reading skills and strategies ultimately intended to support reading comprehension. As text becomes more complex, so too will good readers' savvy at unpacking difficult content as they combine knowledge, motivation, strategies, and metacognitive awareness (Duke, Pearson, Strachan, & Billman, 2011). Yet, comprehension is challenging for many students and becomes even more difficult as they progress through school (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Inasmuch as finding ways to support textual understanding in classrooms has long been a goal of reading research, minimal growth on national test scores suggests that comprehension instruction needs continued attention (National Center for Education Statistics, 2012).

Recommendations for providing effective instruction in reading comprehension include teaching students to use before-, during-, and after-reading strategies that support active engagement with text, facilitate comprehension monitoring, and enhance understanding (Deshler, Palincsar, Biancarosa, & Nair, 2007; Kamil et al., 2008; National Reading Panel, 2000; Scammacca et al., 2007; Scammacca, Roberts, Vaughn, & Stuebing, 2015; Shanahan et al., 2010). These models frequently include a discussion component (Pressley, 2000). This pairing is also reflected in new standards, as in the Common

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Core's Comprehension and Collaboration Standards within the Speaking and Listening strand.

To date, much of the focus of comprehension research has been on the effectiveness of strategy instruction for improving reading outcomes (see, e.g., Edmonds et al., 2009; Flynn, Zheng, & Swanson, 2012; Gajria, Jitendra, Sood, & Sacks, 2007; Scammacca et al., 2007; Solis et al., 2012; Vaughn, Gersten, & Chard, 2000) and more recently on whether discussion mediates learning outcomes within strategy-based models (see, e.g., Lawrence, Crosson, Paré-Blagoev, & Snow, 2015). Fewer studies have examined the contributions of teachers and students to text-based discussions during strategy-focused reading activities (Klingner & Vaughn, 2000; Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009; Palincsar & Magnusson, 2001), with some research even suggesting that student talk is negatively influenced by strategy approaches (McKeown, Beck, & Blake, 2009). With recommendations around the use of both reading strategies and discussion, we were interested in exploring further whether reading strategies facilitate the types of discourse likely to support meaning construction in text-based discussions. The purpose of this study is to describe how teacher-mediated small-group discussions about text were influenced by a specific reading strategy model, Collaborative Strategic Reading (CSR; Klingner, Vaughn, Boardman, & Swanson, 2012; Klingner, Vaughn, & Schumm, 1998), when compared with reading instruction without CSR.

CSR

CSR is one of a handful of multicomponent reading comprehension instructional models that teaches students to implement reading comprehension strategies and also includes opportunities for peers to discuss text (for other examples, see Palincsar & Brown, 1984; Pressley et al., 1992; Vaughn, Swanson, et al., 2013). In CSR, students use reading strategies before, during, and after reading in small student-led heterogeneous groups, guided by roles and student cue cards that structure both individual processing and group discussion. The collaborative group structure in CSR is informed by cooperative learning models (e.g., Johnson & Johnson, 1989) built on social interdependence theory, including the notion that the success of a group depends on the positive interdependence of group members. In many cooperative learning models, assigning unique roles to each group member is a practical application of this theory, a way for students to rely on the contributions of individual group members (Johnson & Johnson, 1989).

Throughout CSR, the teacher moves among groups to facilitate meaning construction and strategy use, joining in conversations, offering feedback, and encouraging students to use embedded discussion scaffolds. For example, each strategy cue card provides discussion frames that guide student sharing and feedback. Teachers can promote the use of the role cards during visits to small groups. Teachers might also bring the class back together periodically to summarize or lead a whole-class discussion.

The teacher's role in CSR evolves as instruction progresses. Initially, teachers provide explicit instruction in the strategies, one at a time. As students become more familiar with the CSR process, they move to student-led groups, where they negotiate reading and applying strategies by individually recording responses in learning logs and then engaging in small-group discussions grounded in the text and supported by their written responses. In this way, both individual and group accountability are integrated into the small-group process (Johnson & Johnson, 1989).

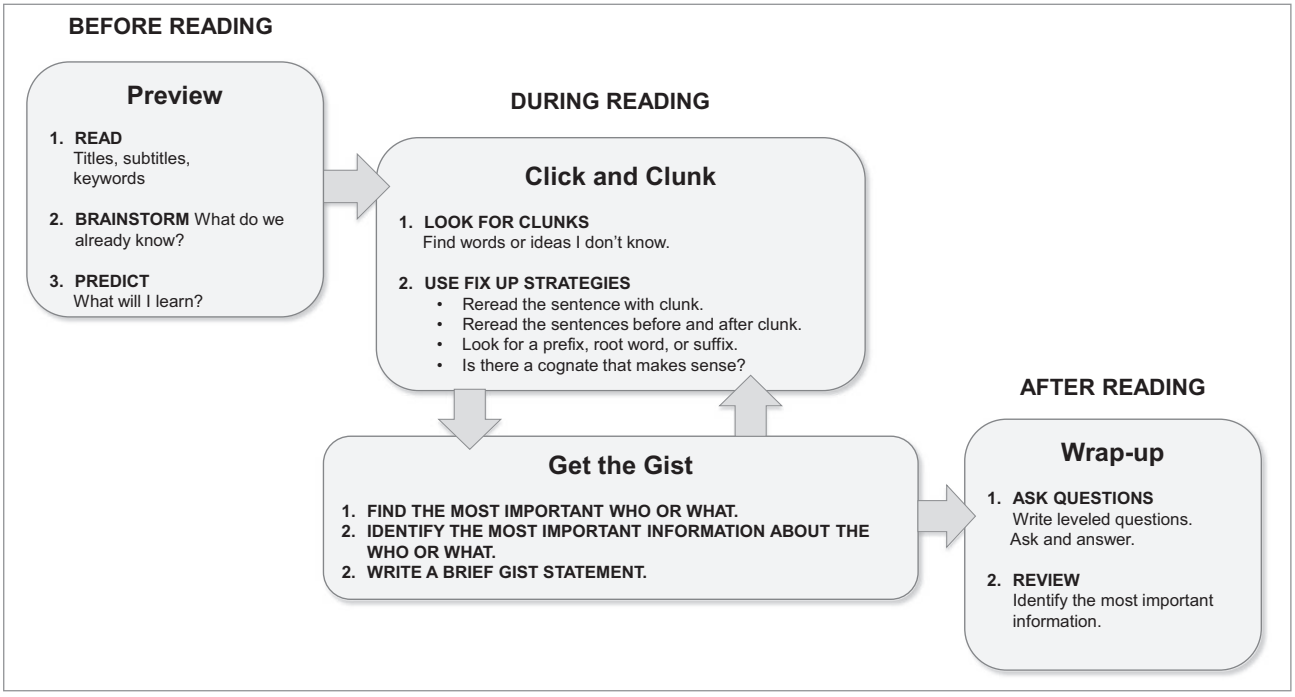
Prior to reading, students preview a passage by identifying the topic, brainstorming what they already know, and predicting what they will learn. Students monitor their understanding during reading and stop after reading short sections of text (usually a few paragraphs) to figure out the meanings of clunks, or unknown words or concepts that they encounter while reading, using fix-up strategies to resolve misunderstandings. Students also write a brief gist, or main idea statement, for each section. After reading, students wrap up by generating, asking, and answering questions and by summarizing the most important ideas from the passage (see Figure 1).

Theoretical Framework

With mutually informing foundations in cognitive psychology (Flavell, 1979) and sociocultural theory (Vygotsky, 1978), both of which are helpful for reconciling the social and individual nature of literacy learning (McVee, Dunsmore, & Gavelek, 2005), CSR includes explicit strategy instruction, scaffolding, and peer-mediated learning. Strategy instruction has at its core the principle that readers who are metacognitive (Flavell, 1979)—those who can think about their thinking and are aware of their process as readers—will monitor understanding and access solutions when comprehension breaks down. We also draw from the sociocultural concept of mediation (Vygotsky, 1978; Wertsch & Toma, 1995) as an underlying foundation that considers strategies, discourse, and the text as interconnected tools that readers use when constructing meaning.

Mediational tools, which are socially, culturally, and historically situated (Cole & Wertsch, 1996), not

FIGURE 1
Collaborative Strategic Reading



only facilitate mental processes but also transform them and shape the activity in which they are applied. These tools are not necessarily used for efficiency and ease, but they "create possibilities for action that would not have existed otherwise" (Collins, 2003, p. 10). In this way, collaborative approaches (Chi & Menekse, 2015; Johnson & Johnson, 1989) that use both discussion and strategies offer students multiple opportunities to make sense of text in ways that might not be available without them.

A common critique, or possible misapplication of strategy instruction, is that it is overly procedural or process based (Aukerman, 2008; McKeown et al., 2009). Indeed, mediational tools have the potential to both constrain and facilitate (Gee, 2001). Yet, the theoretical foundation of strategy instruction promotes the use and flexible application of strategies to facilitate meaning construction for the purpose of knowledge building over merely acquiring knowledge of the strategies (Brown & Dewitz, 2014; Palincsar & Schutz, 2011).

As with any tool, effective strategy use is tolerant of ambiguity and appropriated for one's own use. We theorize strategy users as problem solvers who employ heuristics to the act of reading, oftentimes with others, to construct meaning thoughtfully and to engage critically with ideas. In the ideal, strategy users are agentic and tenaciously working; however, in practice, being strategic often requires a framework to guide the process. Effective strategy use is not rote or random, but applied judiciously across contexts to serve the end goal of knowledge building (Palincsar & Schutz, 2011). Thus, it is essential to consider the ways in which strategy instruction may and may not be useful and how application is enacted in practice.

In complex processes, multiple tools are called on. A sensemaking process with text integrates both strategies and discussion with others. Luria described language as the tool of tools (as cited in Cole & Engeström, 1993) in mediation. As tools, discourses are the predominant ways of thinking, believing, valuing, reading, listening, and understanding the world and are inherent means through which individuals learn (Michaels, O'Connor, & Resnick, 2008; Wells, 2007). Talk is arguably the dominant tool of teaching and learning. Through talk moves, teachers purposefully and strategically employ discursive actions, with consideration that talk moves, as tools for both teachers and students, may be dependent on the activity in which they are instantiated (Michaels et al., 2008).

Literature Review

Reading Strategy Instruction

A number of studies and research syntheses have reported positive reading outcomes for adolescents

with and without learning disabilities who are taught to apply reading comprehension strategies (see, e.g., Biancarosa & Snow, 2006; Edmonds et al., 2009; Gajria et al., 2007; Kamil et al., 2008; Solis et al., 2012). Recommended strategies include paraphrasing, generating main ideas, or summarizing; asking and answering student-generated questions; visualizing, using the text to predict or make inferences; making connections within the text and beyond; and using graphic organizers. Further, evidence-based instructional models commonly incorporate a focus on teaching learning strategies with explicit instruction and modeling (see, e.g., Biancarosa & Snow, 2006), attending to student engagement and motivation (Guthrie & Wigfield, 2000), and integrating a discussion component either in teacher-facilitated or student-led groups (Almasi, 1995). Evidence also suggests that strategies work best when used flexibly and in combination; the use of multiple strategies appears to be more important than a focus on any one particular set of strategies (see, e.g., Brown, 2008; Brown & Dewitz, 2014; Kamil et al., 2008).

A gradual release of responsibility (Pearson & Gallagher, 1983) is foundational to many strategy instruction models, including reciprocal teaching (Palincsar & Brown, 1984), CSR (Klingner et al., 1998, 2012), and transactional instruction of reading strategies (Pressley et al., 1992). This method allows students to eventually carry out the routine of the strategies independently and across contexts. The routine and structure built early on by the teacher allow students to take a greater role in initiating interactions and applying the strategies while the teacher takes on the role of facilitator.

In multiple studies, CSR, the reading strategy–based instructional model implemented in the current study, has resulted in reading comprehension gains for students with learning disabilities, students with reading difficulties, and English learners, as well as for average- and high-achieving students, in upper elementary and middle school classrooms (Boardman, Klingner, Buckley, Annamma, & Lasser, 2015; Klingner et al., 1998; Klingner, Vaughn, Arguelles, Hughes, & Ahwee, 2004; Vaughn et al., 2011). Effect sizes have ranged from .12 to .51 on the Gates–MacGinitie Reading Tests (MacGinitie & MacGinitie, 1989; MacGinitie, MacGinitie, Maria, Dreyer, & Hughes, 2000), a group-administered standardized distal measure, with CSR students outperforming peers in comparison conditions across different subgroups with relatively higher effect sizes for low-achieving students. These effect sizes are similar to those demonstrated by studies of reciprocal teaching (Rosenshine & Meister, 1994).

Yet, despite the potential influence on student reading outcomes, implementing multicomponent reading strategy models with high quality can be challenging (see, e.g., Hilden & Pressley, 2007; Klingner et al., 2004). These challenges are often related to classroom management, deciding how much explicit instruction to offer, and monitoring student learning (Hilden & Pressley, 2007). Further, Hilden and Pressley, as well as others, noted that strategies take time to master instructionally and that teachers typically improve after a second year of teaching them. Some of the critiques of strategy use have come from studies in which teachers or their students were inadequately prepared or supported. For instance, in McKeown and colleagues' (2009) study, in which strategies were not found to support reading comprehension or effective instructional practices, students were taught to use five different strategies in only three 45-minute lessons, an amount of time that may have been insufficient for students to learn to apply the strategies.

Text-Based Discussions

The importance of a teacher's role in facilitating meaningful interactions with a text cannot be overstated. Broadly speaking, some models focus primarily on enhancing the types of teacher moves that encourage shifts in student talk and higher level reasoning about text (e.g., Question the Author: McKeown, Beck, & Worthy, 1993; instructional conversations: Goldenberg, 1992), and others focus on the types of teacher scaffolding and instruction that students will need to shift their discourse patterns, most often in small-group discussions (e.g., Alvermann & Hayes, 1989; Klingner et al., 2012; Maloch, 2002). From this work, a number of talk moves have been shown to increase discussion quality and comprehension. For instance, authentic teacher questions give rise to deeper comprehension processes, and encouraging elaborated student talk yields an understanding of text at a higher level (Soter et al., 2008; Wells, 2007). In contrast, in a seminal study on classroom discourse, Mishler (1978) found that when teachers posed questions, students gave short responses, but when students posed questions to one another, the students responded with more elaboration. Regardless of who is asking the questions, discussion styles that move away from recitation models toward models of shared reasoning garner greater levels of engagement in discussions from students, higher quality of discourse, and greater equity in participation across various levels of achievement (Chinn, Anderson, & Waggoner, 2001).

With appropriate teacher scaffolding, students will begin to use moves similar to those modeled or promoted by the teacher. For example, when a teacher affirms students' use of evidence, they begin to use more evidence and also request that other students provide textual evidence for ideas (Gillies & Khan, 2009; Jadallah et al., 2011). Instructional timing, explicit instruction in

how to maintain coherence and resolve conversational dilemmas, and modeling are also important features of a teacher's role during text-based discussions (Almasi, O'Flahavan, & Arya, 2001; Goldenberg, 1992). Yet, shifting discussion patterns is a complex task. For instance, student discourse in groups often mirrors the typical Initiation-Response-Evaluation recitation discourse structures modeled by teachers and may thus limit the depth of discussion in student-led groups (Webb, Nemer, & Ing, 2006). Others have shown how difficult it is to change long-standing patterns and beliefs about how and what constitutes a text-based discussion (Alvermann & Hayes, 1989), even with extensive support for teachers and students.

Much of the literature examining the teacher's role during text-based discussions has provided microanalyses of group interactions and identified specific discursive moves that the teacher makes to support dialogic conversations, which shift the interpretive authority from the teacher to the students. In many studies examining the teacher's role during text-based discussions, the teacher sits with the group of students for the duration of the discussion (Almasi et al., 2001; Chinn et al., 2001; Jadallah et al., 2011; Maloch, 2002), even when acting as a satellite member and interjecting as necessary (Almasi et al., 2001). Although these detailed analyses are important for understanding a teacher's discursive role in the context of small-group instruction, none have been in the context of a collaborative strategy model, in which the teacher interacts with multiple small, heterogeneous groups applying comprehension strategies as they read.

Whereas discussion has long been considered integral to the structure and application of reading comprehension strategies (Palincsar & Brown, 1984), no studies have examined how teacher and student interactions shift during strategy instruction. The few studies that examined discussion during multicomponent comprehension strategy models focused on student–student interaction (see, e.g., Klingner et al., 1998). With peer-mediated strategy-based approaches, students engage in helping and teaching behaviors to support one another's learning, such as bilingual students providing clarification and explanation in Spanish (Klingner & Vaughn, 2000; Palincsar, Brown, & Martin, 1987). Yet, when examining transcripts of student talk during CSR, Klingner and colleagues noted that the discussion was more procedural than desired, and thus changes to the CSR model were implemented for future studies, resulting in increased student talk about content (Klingner & Vaughn, 2000). Given similar critiques about the extent to which strategy instruction constrains or facilitates talk about the content of a text (McKeown et al., 2009), coupled with the lack of targeted examinations of the teacher's contribution to discourse during reading strategy instruction, our study explores classroom discourse when the teacher is present, comparing the talk during the implementation of a collaborative strategic model to that same teacher's typical classroom discussions about the same text.

Purpose and Research Questions

We examined how a collaborative reading strategy instruction approach, CSR, influenced student and teacher text-based discourse in seventh- and eighth-grade language arts classrooms. We wanted to understand how CSR and comparison reading activities afforded or constrained opportunities for students to collectively construct meaning from text through discussions, as well as the role that teachers played in that process. We asked two research questions:

1. How does teacher and student discourse vary between lessons using CSR and lessons using teachers' typical instructional practices?
2. In what ways does CSR influence teacher-mediated talk about text?

Method

Research Design

This project was part of a larger randomized controlled trial study investigating the efficacy of CSR to improve student outcomes in reading comprehension in middle school language arts and reading classrooms in two states (for study details and findings, see Vaughn et al., 2011; Vaughn, Roberts, et al., 2013). Using a within-teacher design, random assignment occurred at the classroom section level, such that teachers taught some classes using CSR (CSR condition) one or two times each week throughout the year, and in other classes, they used their typical instructional practices (TYP condition) to teach the language arts content. In this way, the study design moderated effects of individual teacher differences, such as classroom management, expertise, and rapport with students. To avoid crossover of CSR methods into lessons without CSR, we described the study design and rationale to teachers during initial and follow-up professional development. We also monitored instruction in both CSR and comparison classrooms and talked with teachers in cases where crossover was evident.

Crossover of CSR strategies occurred with only a few teachers, none of whom were included in the present study. In those few instances, new teachers who had not yet established their core instructional routines and practices were most likely to want to use CSR in their

comparison classes. In cases where teachers' typical instruction included reading strategies, teachers knew that they were free to continue with existing practices. Although it is impossible to know whether ideas about instruction were shifted as a result of CSR professional development and whether some of those shifts were represented in some form in their TYP instruction, analysis of classroom observation data previously reported and the current study's analysis suggest that CSR and TYP lessons were distinct from each other.

During the two years of the study, teachers received ongoing professional development, coaching, and the materials needed to integrate CSR into their curricula. Professional development consisted of an introductory workshop (two days in the first year and one day in the second year) and after-school booster sessions (four in the first year and two in the second year). Teachers learned the CSR strategies, their rationale, and how to teach them to students. Text selection, cooperative learning, and meeting the needs of individual students were also incorporated into professional development sessions. Booster sessions offered opportunities for teachers to deepen their understanding of the instructional strategies and reflect on and fine-tune implementation. Coaching included in-class observations with modeling, coteaching, written feedback, and debriefing sessions. Coaching visits occurred approximately once each month and varied according to each teacher's needs and willingness to participate in coaching activities.

Teachers also received any school or district professional development and support that was required or that they chose to participate in. Typical instruction, therefore, varied according to teacher style, preference, and the practices promoted at each school. For example, in one school, teachers had received professional development in previewing strategies, and those strategies were occasionally reflected in teachers' typical instruction. However, in the other school, we were not aware of an emphasis on any one model or set of instructional practices, and instructional activities varied widely across teachers. In both schools, teachers had the freedom to select texts and activities and to meet state standards as they saw fit. Outside of the recommended CSR use and support in their CSR condition, there were no additional specifications in either condition related to the amount or type of reading activities that teachers should use.

Participants

We examined lessons from seventh- and eighth-grade reading and language arts teachers who were in their second year of CSR implementation and considered to be experienced teachers of CSR. We looked for cases in one study site in which the teacher chose to use the same text in CSR and typical instruction comparison lessons, resulting in data from five teachers (see Table 1) and 10 lessons in two schools in the same suburban school district, contiguous to a large urban area.

A total of 184 students participated in the study (CSR n = 94; TYP n = 90). Because assignment was at the section level, students either received CSR instruction one or two times weekly or received their teacher's typical practice instruction with no CSR. Student characteristics were representative of the schools, although demographic data were only available for students with returned parental consent forms (see Table 2). Chi-square analyses indicated that there were no significant differences in demographic characteristics between students in CSR and typical instruction classrooms.

Data Sources

We observed each teacher four times in their CSR classes and four times in their TYP classrooms across the school year. To capture similar content across conditions, observations occurred either on the same day or during the same full-day cycle if classes were split across two days. From the full observation data set, we

TABLE 1
Teacher Characteristics

School	Pseudonym	Grade level(s)	Content	Race/ethnicity	Teaching experience	Certifications
1	Denise	7	ELA	White	11 years	MA, Elementary ELA
1	Joan	7/8	Reading	White	21 years	MA, Elementary, Reading Specialist, Special Education
1	Matt	8	ELA	Asian	2 years	BA, Secondary ELA
2	Anita	7	ELA	White	11 years	MA, Elementary
2	Carl	8	ELA	White	14 years	MA, Secondary ELA, Speech

Note. ELA = English language arts.

TABLE 2
Student Demographic Data: Percentages in Each Condition

Demographic information	Typical instruction	Collaborative Strategic Reading instruction	*p*
Gender			
• Male	46	21	<.132
• Female	34	27	
Ethnicity			
• African American	0	1	<.281
• Asian	3	0	
• Latino/a	20	10	
• White	57	37	
Receiving free or reduced-price lunch			
• No	52	26	<.224
• Yes	28	22	
Receiving special education services			
• No	73	47	<.131
• Yes	7	1	
State reading assessment level			
• Advanced	6	1	<.534
• Proficient	55	37	
• Partially proficient	16	9	
• Unsatisfactory	3	1	
State writing assessment level			
• Advanced	2	0	<.344
• Proficient	42	30	
• Partially proficient	36	18	
• Unsatisfactory	0	0	
Total	80	48	

Note. Demographic data were available for 70% of the students in our sample. Chi-square analysis was used to establish equivalency of student characteristics across conditions.

examined two lessons for each teacher who chose to use the same text across conditions (one TYP and one CSR). Raters completed an observation protocol, the Implementation Validity Checklist (IVC; Vaughn et al., 2011), for each observation. The IVC contains four subsections to assess the quality of instruction and alignment to the CSR model: procedural fidelity for each CSR component (0 = *low*, 4 = *high*), teacher behaviors (1 = *low*, 4 = *high*), student behaviors (1 = *low*, 4 = *high*), and global ratings of instruction and class management (1 = *low*, 7 = *high*). The same protocol was used in CSR and non-CSR lessons to provide a detailed account of instruction across conditions, to rate the alignment with the CSR model in CSR lessons, and to rate the alignment with potential CSR-like instruction in TYP classrooms. Observers wrote detailed field notes during the lesson that included such elements as contextual features, activities, and grouping structures. Observers participated in training sessions that resulted in an inter-rater agreement of 90% on all IVC items. This training process has been followed in other studies that reported on classroom observations of CSR using the IVC (e.g., Vaughn et al., 2011; Vaughn, Roberts, et al., 2013).

Teachers wore lapel microphones during observations to capture their voice and the voices of students with whom they were speaking. Classroom talk that occurred when students were working in small groups without the teacher present was not recorded. From transcribed recordings, we coded the portion of the lesson that contained activity around the target text, initiating at the introduction of the text, inclusive of all talk within the text segment, and terminating at the completion of any text-related activity. Activities that occurred outside of the inclusive text segment were not analyzed as part of this study. The resulting coded segments, referred to hereafter as lessons, ranged in length from 23.23 to 80.11 minutes. (For class length, reading lesson length, and number of students for each observation, see Appendix A, which is available as supporting information for the online version of this article.)

Reading Environment in CSR and TYP Lessons

Text

CSR and TYP lessons revolved around the first read of a single text. All teachers chose their own text and elected to use it in both CSR and TYP lessons. Three readings linked to the teachers' curriculum, one text aligned with the social studies curriculum, and one text was selected from a *Weekly Reader* magazine. Texts were nonfiction in four of the five classes, and in the fifth class, the teacher used a reading from Homer's "The Odyssey" that was part of a unit on Greek mythology. Texts ranged in topic and included Anne Frank, the Klondike Gold Rush, Darth Vader, and Frederick Douglass.

Lesson Objectives

Teachers in the CSR condition were encouraged to integrate the use of reading strategies into their instruction. Although teachers wrote their own learning objectives, an implied objective of any CSR lesson was to

understand and learn content from the text. Using descriptors of the varied purposes of text-based discussions defined by Murphy and colleagues (2009), CSR lessons are efferent by design, with a focus on understanding and knowledge attainment. In all but two lessons, no learning objectives were stated. In these classes, comments such as "We are going to continue working through 'The Odyssey' today" (TYP lesson) were present in both TYP and CSR lessons, suggesting that the lesson objective was to read and understand the text.

In Anita's (all names are pseudonyms) typical lesson, using a previewing strategy, the purpose that students came up with was to learn about the Klondike Gold Rush (the title of the text). Broader essential questions in which students use the text to connect to important themes, big ideas, and thought-provoking concepts (McTighe & Wiggins, 2013) or to conduct a critical analysis, although perhaps present as part of larger units, were not apparent to observers in eight of the 10 observations. The exceptions were in Carl's TYP and CSR lessons, in which the posted essential questions in both CSR and TYP lessons were as follows: "Does setting a purpose and re-reading truly help create understanding when reading? What's the difference between reading a text and viewing one? What is a hero, really?" These essential questions were aligned with reading activities, although the teacher did not revisit the questions formally after introducing them at the start of class and integrating them into the preview. In general, each teacher's TYP and CSR lessons operated with the same objectives.

Instructional Quality and Classroom Management

Using CSR global ratings as measured by the IVC (on a Likert-type scale: 1 = *lowest quality*, 7 = *highest quality*) for observations in the areas of instructional quality and classroom management, the instructional quality (mean [*M*] = 5.6, standard deviation [*SD*] = 0.6) and classroom management ratings (*M* = 5.6, *SD* = 1.6) for the five teachers when teaching CSR lessons were higher, on average, than when these same teachers were observed using their business-as-usual instructional practices (instructional quality *M* = 4.6, *SD* = 1.1; classroom management *M* = 4.8, *SD* = 2.2). The standard deviations and observation field notes also indicated greater variation in instructional quality and classroom management across TYP lessons.

CSR Lessons

Overall, the CSR lessons that were the focus of this study were representative of the interactions and activities that were observed for these teachers throughout the yearlong observation cycle. In all CSR classes, teachers and students followed the CSR process, first previewing the text and then reading short sections of text aloud in small student-led groups of three to five students (one to eight groups depending on class size), stopping to identify and figure out the meanings of unknown words and to generate and discuss main ideas. In three lessons, the class did not get to the after-reading strategies (question generation and review), one class completed all but the review, and the fifth class completed all strategies; these variations were consistent throughout the year. There were differences in how teachers handled prereading strategies. Some teachers used a whole-class setting to introduce the reading, and others had students do prereading activities in small groups. Several teachers spent 15–30 minutes on previewing the text (the recommended time for preview is typically under 10 minutes).

Typical Lessons

The activity structures in TYP lessons did not follow a predictable pattern across or within teachers throughout the year. In the focus lessons, reading strategies were used in some form in four of the five typical classes. However, these predominantly occurred as prereading activities to access prior knowledge, to brainstorm what students knew about the topic, and to predict or set a purpose for reading. Two teachers (Anita and Carl) used a previewing strategy that was being implemented schoolwide. One teacher asked students to generate questions individually with no discussion, and in another class, students and the teacher orally co-constructed main ideas in a discussion format.

In TYP lessons, both grouping structures and reading formats varied. In three classes, students worked on their own or participated in whole-class teacher-led activities. Students worked in pairs in another class, and in the fifth class, students moved between small-group and whole-class activities. This variable grouping structure mirrored typical instruction in all of our observations, which generally favored individual work and whole-group activities or discussion led by the teacher. One teacher read the text to the class, students read on their own or with a partner in two classes, and students volunteered to read in a whole-class round-robin format in the other two classes. (For a summary of activities that occurred in each TYP lesson, see Appendix B, which is available as supporting information for the online version of this article.)

Data Analysis

To investigate instruction that had adequate or stronger fidelity to CSR, we chose lessons that occurred in the second half of year 2 of the study in classrooms where teachers received average or higher ratings in the

quality of their CSR implementation. Because we were also interested in comparing instruction in typical lessons with instruction in CSR lessons, we chose instances in which teachers used the same text in both a CSR and a TYP lesson. The data sources for this study were 10 transcriptions (five TYP and five CSR) of audio-recorded language arts and reading class periods ranging in length from 50 to 90 minutes, the IVC observation ratings, and associated field notes. Class length remained constant within teachers' TYP and CSR lessons but varied across teachers. For all but one teacher (Anita), the reading lessons within the class period across conditions were approximately the same (see Appendix A). To equate coding across lessons of varying length, we calculated codes both per hour and as percentages of total talk in the classroom.

Our approach to data analysis was primarily inductive (Thomas, 2006), although we drew from previous literature as we formulated codes. This approach was used to condense large amounts of transcript data and to make connections within and across data sources. To prepare for analysis, we first created classroom case descriptions of each lesson, describing the apparent lesson objectives, activity structures, distribution of talk and activities across reading components (preview, vocabulary, main idea, questions, and review), text, room setup, and contextual features.

Next, we analyzed the discourse to understand the characteristics of the talk during text-based discussions across both lesson types. We drew in particular from Gee (1999), Wells (2007), Michaels, O'Connor, and Hall (2010), and Soter and colleagues (2008), all of whom are also interested in the ways that talk, as a tool that is situated within specific activities, mediates what is said, how, to whom, and for what purpose. We divided interactions first into episodes (Wells, 2007) that occurred around the teacher talk either in small groups or when a teacher led a series of large-group turns. We chose to analyze episodes in their entirety because each consisted of a series of turns that could contain one or more sequences of talk moves organized around a task or subtask and marked by the shifting of the task or the participants (Wells, 2007), in this case, the entry or exit of the teacher to the conversation. For example, a teacher might approach a group; comment, ask, or answer a question; engage in discussion with students (teacher and students); and possibly evaluate the responses (teacher and sometimes students). Episodes were either marked with a distinct closure from the teacher (e.g., "Yes, that's fine") or the student (e.g., "Oh! Now I see") or during an activity shift (i.e., students reading text or writing responses). We also looked for other turn departures that closed the episode when the Initiation-Response-Evaluation pattern (Cazden, 2001) was not used by the teacher (e.g., "OK, guys, keep going," before moving to another group). Occasionally, the teacher would exit an interaction midway while students were discussing, which would also end our analysis episode.

We divided the transcripts among the three of us. We individually parsed the transcripts first to identify the reading lesson and then into episodes, using field notes to understand the context if needed. Each parsed transcript was checked by a second author. Any discrepancies were discussed until consensus was reached.

To gain an understanding of how talk was represented in the CSR and TYP lessons, we coded student and teacher utterances within episodes at several levels. First, we established sequences within episodes, or the moves that were meaningfully bound to an initiation move (Wells, 2007). We then coded for domains (talk domains) to determine how much academic talk occurred in lessons relative to other occasions of discourse, such as procedures and redirecting behavior. We also looked at the class configuration in which these utterances occurred, whether in whole-class teacher-directed discussions, in small student-led groups, or in exchanges that occurred between the teacher and one student. Next, we determined the purpose of academic talk (talk functions). We then coded the nature of the utterance as it related to text and to reading strategy application (content and strategy).

To establish inter-rater reliability, one CSR and one TYP class were coded by the three of us separately and then compared. Codes were refined and agreed upon based on initial coding discussions, and then each rater coded additional sets of transcriptions. We revised our coding scheme and recoded the transcripts in three iterations. Each transcript had a first and second coder. We discussed any discrepancies in coding until agreement was reached, and we referred to the literature on discussion as an additional guide.

Talk Domains

We categorized turns as academic, organizational, behavioral, or off task. Within academic talk, the teacher and students discussed the lesson concepts, text content, word meanings, or other talk related to academic ideas or skills. Academic talk can be contrasted to organizational talk (Wells, 2007), which was coded specifically to distinguish talk that focused on management- and process-oriented aspects of classroom activity such as getting and using materials, on task or timing checks, on decisions about roles, and on moving students along (e.g., "OK, there should be one person from each team at the board"). Organizational talk as a domain did not include procedures related to strategy use and application, but rather were discussions of larger classroom procedures that could be found in a classroom with any instructional type. The behavioral code included any talk that focused on negotiating student behavior (e.g.,

"Stop, stop, stop. Everyone be quiet"), and we coded comments as off task when there appeared to be no connection to the class or content (e.g., "Are you going to the school dance?"). We used a series of fixed-effects logistic regression models in which the outcome was a binary indicator (1 = *yes*, 0 = *no*) for each talk type for each of the 3,387 turns in the study. We evaluated teacher turns and student turns separately. The fixed-effects specification allowed us to compare CSR and TYP lessons within each teacher and ruled out any unobserved differences across teachers as confounding factors.

Talk Functions

Next, we coded teacher and student moves within sequences for the purpose, or function, of the utterance. Whereas some talk functions were used by both teacher and students, others were unique to the individual role. The shared function codes included text reference, give information, and elicit information. The teacher-specific function codes were promote peer interaction, synthesis, and general evaluation. The unique student function codes were explore and confirm. The codes were chosen because they are indicators of degrees of high-quality discussion, according to prior research (see, e.g., Gillies & Khan, 2009; Soter et al., 2008), or were common moves that we identified during teacher and student interactions. In addition, all academic utterances were coded for their connection to the content of the reading, to a particular strategy, or to both the content and a strategy. (For additional descriptions of each code, see Appendix C, which is available as supporting information for the online version of this article.) Examples are presented in Table 3 for teachers and in Table 4 for students.

TABLE 3
Teacher Function Codes

Code	Description	Example
Text reference	The teacher provides a reference to the text.	"It says…."
Give information	The primary function is to give/transmit information and might include direct instruction, a lecture, suggestions, or telling information.	"___ means to ___."
General evaluation	The teacher provides a generally positive or negative evaluation.	"Great job."
Promote peer interaction	The teacher turn encourages students to address other student(s).	"Tell Ana what you think about her idea."
Synthesis	The teacher paraphrases, summarizes, restates students' ideas, or revoices.	"I hear you saying that…."
Elicit information	The teacher asks for information, which could be part of a series of scaffolding hints.	"What is the most important idea in that section?"
	The teacher requests elaboration, clarification, or justification to either a verbal or written response.	"Can you say more about that?"
	The teacher poses a question about a particular strategy.	"What strategies can you use to find out?"

TABLE 4
Student Function Codes

Code	Description	Example
Text reference	A student provides a reference to the text.	"Let's reread. It says…."
Give information	The primary function is to give/transmit information, whether in response to the teacher or to share among students.	"I know. It's a type of volcano."
Explore	Students engage in coreasoning, evaluating evidence, considering options, or collective thinking as a shared or individual contribution.	Student 1: "I think it's mostly about ___." Student 2: "That's part of it, but I think that ___ is also important."
Elicit information	A student asks for information or assistance from the teacher or another student.	"What does *sublunary* mean?"
Confirm	A student confirms his or her understanding.	"Oh, I get it."

Results

Results indicated that strategy-based practices provided an organizing structure for text-based conversations in lessons and offered opportunities for discourse patterns that were not observed in typically instructed lessons. Findings are organized by research question.

How Does Teacher and Student Discourse Vary Between Lessons Using CSR and Lessons Using Teachers' Typical Instructional Practices?

Quantity of Talk

Overall, there was more student–teacher interaction in CSR lessons, with the gain in both teacher and student turns most frequently resulting from an increase in academic talk (teacher CSR turns per hour: M = 155.8, range = 80.7–195.5; teacher TYP turns per hour: M = 133.6, range = 42.7–214.5; student CSR turns per hour: M = 164.7, range = 71.3–252.7; student TYP turns per hour: M = 117.1, range = 29.3–221.3). There was more variation across teachers in TYP lessons than in CSR lessons overall. Table 5 presents the results from a series of fixed-effects logistic regression models in which we report the probability of specific turn types for teachers and students during CSR lessons compared with TYP lessons. We evaluated teacher turns and student turns separately, controlling for teacher and lesson length. As described earlier, the majority of turns were academically oriented, with a significant difference across lesson types (probability of .72 for CSR lessons and .61 for TYP lessons, $p < .000$). Although the quality of academic talk varied, these utterances were most often imbedded in episodes that supported or were intended to support learning. We observed the same association, a higher probability of academic turns, when considering students (probability of .78 for CSR lessons and .67 for TYP lessons, $p < .000$).

Although the probability of behavioral turns was much lower, there was a statistically significant difference between CSR and TYP lessons for both teacher and student turns. For example, roughly 12% of teacher turns (i.e., probability of .12) were behaviorally oriented in TYP lessons compared with only 5% during CSR. The exception is Matt's typical class, in which 43% of teacher turns and 35% of student turns contained behavioral or off-task talk. The percentages of behavioral talk fell substantially for both Matt and his students during the CSR lesson. There was an even smaller number of off-task turns with a significant difference across lesson types for teachers ($p < .001$) but not students ($p < .216$). There was also no significant difference in the probability of organizational turns for CSR lessons compared with TYP lessons for either teachers ($p < .921$) or students ($p < .157$). Again, the exception was Matt's class, in which discussion of procedures and organization consumed 32% of student talk in his typical lesson.

In CSR lessons, the ratio of student talk to teacher talk was higher than the ratio in TYP lessons (CSR M ratio = 1.09, range = 0.82–1.28; TYP M ratio = 0.95, range = 0.71–1.12). Not only do students have increased opportunities to talk with one another in student-led groups during CSR, but they also have opportunities to talk during exchanges when the teacher is present.

Type of Talk

After getting a broad sense of the domains of talk (e.g., academic, organizational) in CSR and TYP lessons, we narrowed our grain size in characterizing the type and function of the academic talk across talk episodes in each lesson. As represented in Figure 2, the percentages of teacher academic turn code types were relatively similar in CSR and TYP lessons, save for the elicit information code (11.5%) and the give information code, where we saw the largest discrepancy of 16.5%. In student talk (see Figure 3), there was a similar discrepancy in the

TABLE 5
Comparison of Domain Codes in Collaborative Strategic Reading (CSR) and Typical (TYP) Lessons

	Teacher			Student		
Domain code	CSR	TYP	*p*	CSR	TYP	*p*
Academic	.72 [.69, .75]	.61 [.58, .65]	<.000	.78 [.75, .81]	.67 [.63, .70]	<.000
Organizational	.20 [.17, .22]	.20 [.17, .23]	<.921	.15 [.13, .18]	.17 [.14, .20]	<.157
Behavioral	.05 [.03, .07]	.12 [.09, .14]	<.000	.02 [.01, .03]	.09 [.07, .11]	<.000
Off task	.03 [.02, .04]	.06 [.05, .08]	<.001	.05 [.04, .07]	.07 [.05, .09]	<.216

Note. Fixed-effects logistic regression models in which the outcome is a binary indicator (1 = *yes*, 0 = *no*), controlling for teacher and lesson length. Values in brackets are the 95% confidence interval for each estimated probability.

FIGURE 2
Percentage of Teacher Academic Turns in Collaborative Strategic Reading (CSR) and Typical (TYP) Lessons

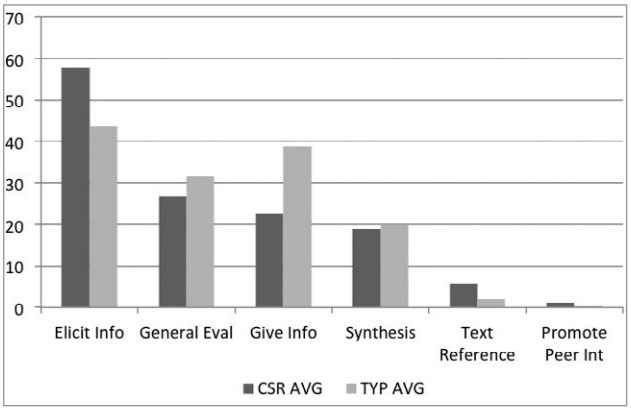
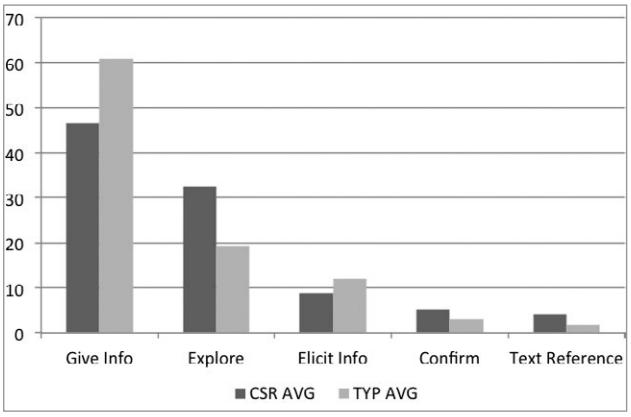


FIGURE 3
Percentage of Student Academic Turns in Collaborative Strategic Reading (CSR) and Typical (TYP) Lessons



give information code (14.2%) and another in the explore code (13.1%). In the following sections, we look deeper into three codes (explore, elicit information, and give information) that differ across CSR and TYP lessons in ways that hold the potential to influence comprehension.

Explore (Student)

In CSR lessons, when the teacher was present, students had higher instances of exploring ideas with one another than in typical lessons when the teacher was present. These exchanges included students coreasoning, evaluating evidence, considering options, and engaging in collective thinking (Soter et al., 2008); in essence, students talked one after another. In looking at the content of this kind of talk, patterns emerged across and within class types. In both CSR and typical classes, consecutive student turns sometimes consisted of students guessing or making conjectures in response to the teacher's question. Another common pattern across both class types was the presence of student-initiated authentic questions (e.g., in reference to a reading about Anne Frank, "How would they know that she is Jewish?"). Thus, in both classes, students felt free to explore ideas related to the content with the teacher.

However, several differences emerged between student talk in CSR and typical lessons. In CSR lessons, students built on one another's responses and were more likely to talk to one another than only to the teacher. This is relevant when considering that the recordings necessarily included the teacher, as he or she was wearing the recorder. More often than in typical lessons, students in CSR classes answered one another's questions:

Student 1: It's a hard place to get to.
Student 2: Wow that's perfect. That is actually perfect. Why would they go if it's so hard to get to?
Student 3: 'Cause they want money, so it's bad.
Student 4: We could say ___.

They also considered whether ideas were reasonable (e.g., "We said Darth Vader was introduced as an evil character, but does that make sense?") and confirmed one another's statements:

Student 1: So then, *consciously* is—
Student 2: Awake.
Student 3: Yeah.
Student 4: "A consciously crafted work of literature."

Moreover, they added information to other students' responses:

Student 1: See, I told you. It's like a glue!
Student 2: It's a sealant. It's a sealant!

To further characterize utterances within the explore code, we examined the frequency of student sequences of talk and the maximum number of turns in a sequence in each lesson to identify instances of student–student talk when the teacher was present. A sequence is a set of two or more consecutive turns of talk bound by an initiating turn (Wells, 2007). When comparing CSR lessons with the typical lessons, CSR classes collectively had more than twice as many sequences of student talk (average = 7.6 sequences) than in typical classes (average = 2.8 sequences). Further, the sequences of student talk tended to be longer in CSR classes than in typical classes. On average, the maximum number of consecutive student turns in

the CSR classes was 5.8, whereas the average maximum number in typical classes was 2.4. Student exploratory talk in CSR classes was more frequent and greater in length, in terms of consecutive student turns, than in typical classes.

Elicit Information (Teacher)

Findings also revealed that teacher elicitations, as discursive tools, were employed differently in CSR lessons than in typical lessons. Not surprisingly, teachers were more likely to pose strategy-related elicitations in CSR classes (average = 31%) than in typical classes (average = 19%). Generally, in their typical classes, teachers tended to ask a question of the class and then request a response from a student who raised his or her hand. Often, these followed the pervasive Initiation-Response-Evaluation pattern (Cazden, 2001). In CSR lessons, however, whole-class queries were most frequently solicitations to share a strategy (e.g., gist, clunk). For example, a teacher might ask each group to share their best statement of the main idea of a text. Students discussed with one another and agreed on a statement, and then the teacher heard from each group. The teacher might then comment on similarities and differences or how well the main ideas captured the themes in the text. So, rather than a question to the whole class answered by one student, all groups were given a chance to respond. This form of sharing was unique to the CSR lessons and was more systematic than in typical classes, offering additional response opportunities because students from multiple small, student-led groups answered the same question. In typical classes, main idea was rarely discussed, but when it was, the activity often involved selecting a statement from a list (e.g., multiple-choice question in the *Weekly Reader*) or one student providing a summary statement. The following is an example of a teacher elicitation in this context:

Teacher:	Miguel, what did you put?
Miguel:	For number 1, I put C.
Teacher:	OK, how many people put C? Dorian, did you put C? [Dorian nods.] Yeah, OK, good. That's exactly right.

Many of the strategy-related elicitations in CSR classes in small groups worked to uphold the model of students sharing aloud with one another, such as asking students to provide their gists or their possible meanings of unknown words. During their typical lessons, teachers were more likely to pose elicitations that challenged or corrected student responses than in their CSR classes. This often came in the form of reframing the task or pointing out missing information. We hypothesize that because the CSR model promotes students' self-monitoring and collaborative problem solving, teachers alternatively were able to direct students to the strategies or to the text when providing corrective feedback (e.g., "What's the first thing you do?"; "Does it [the text] say that?").

Give Information (Teacher)

Teachers gave information to students throughout lessons, whether the classroom was discussion focused or more teacher directed. In both class types, the turns coded as give information were characterized by teachers providing context or background, correcting student responses, adding to or building on student responses, and explaining vocabulary words or text. In CSR classes, teachers more often gave information related to strategy use, in which teachers commented on, explained, provided examples, and categorized responses.

The nature of CSR instruction seemed to restrict both the number of turns that teachers used to give information and the amount of information delivered in each turn. In typical classes, the teacher gave information in 39% of the total teacher academic turns, whereas in CSR classes, information was given by teachers in 23% of total teacher academic turns. Further, there were more teacher monologues in typical classes, in which teachers provided extended information about the text or about a task. For instance, in his TYP lesson, Carl used eight turns of more than 100 words each, with a maximum turn containing 441 words. In his CSR lesson, he still had one long turn at the start of the lesson, but the remaining turns were all under 75 words, with most in the 15–25 words range, decreasing the total number of words spoken within give information turns by more than one third.

In What Ways Does CSR Influence Teacher-Mediated Talk About Text?

To determine how CSR influenced the nature of discussions, academic utterances were next coded as either strategy focused, content focused, or focused on both the content and a reading strategy (content and strategy). An "other" category included comments that were ancillary to the content or focused on literacy activities or skills not related to comprehension (e.g., writing).

There were more strategy-focused comments in CSR lessons. However, most strategy comments combined strategy use with the content of the text. In the following examples, we present several excerpts from Denise's typical and CSR lessons to demonstrate the ways that strategies interact with discussions about the text.

CSR Lesson: Prediction Strategy

In the following excerpt, Denise entered a small-group discussion in a CSR lesson with a strategy elicitation, asking students what they had predicted they would

learn from the text. The students then took over the conversation, offering responses and engaging in exploration about what would happen next and why (// denotes overlapping talk).

Teacher:	OK. So, what were your predictions? You were working on those when I was back here.
Student 1:	That Ulysses might have even // more bad luck,
Student 2:	// more bad luck.
Student 1:	'Cause he's been having a lot of bad luck lately, // and he might have even more.
Teacher:	// OK, so he's been having some bad luck.
Student 1:	Well, so, because—
Student 2:	The locust eaters—
Student 1:	Yeah, yeah, he tracked the, um, Cyclops, and he prayed to Poseidon to bring them bad luck, and that // actually happened.
Student 2:	// turned into a pig.
Student 1:	And he got turned into a pig. And he lost, like, a lot of crews. Like of the three crews, there's only one crew left, and he has 45 men left.
Student 3:	Oh, he lost that one battle?
Student 1:	Yeah.
Teacher:	OK.

Evidence of strategy application was demonstrated throughout this sequence, as students followed the steps of the preview strategy, using the text to support their predictions. Students were observed taking an active role in the discussion, sharing ideas freely while the teacher, who had stopped by the table, participated. Our theoretical model of discourse analysis asks why the discourse occurred in this particular way versus another (Johnstone, 2008), and thus we suggest that the ensuing interaction about the text's content occurred as a result of the teacher eliciting the students' predictions. Discussion of the content stemmed from and was in service to discussion of the strategy.

TYP Lesson: Unknown Word

We identified a topic of conversation that arose in both Denise's typical lesson and her CSR lesson, the meaning of the Greek term *Tartarus*. In the following excerpt from her typical lesson, she provided the definition of the term, and in contrast, during her CSR lesson, the students engaged in a dialogue with the teacher about the meaning:

> *Tartarus* is another name for the underworld, OK? It's more commonly known as the underworld, but they use—they call it Tartarus, OK? There's also—if you look at descriptions that have been written about the underworld, they consider that the darkest place. The underworld has several different states, as you will, or places. And Tartarus is the darkest one you don't want to go to. So, that's what they're talking about there. OK?

Here, Denise provided the definition through a series of statements and assertions. Although she asked questions, each one was characterized by a statement followed by a tag ("OK?"), which did not function as an invitation for a student response. Denise spoke 74 words in one utterance, whereas the students did not speak at all. In Denise's CSR class, however, the discussion, initiated by a student, took a more student-focused form as she encouraged her students to figure out the definition using context clues, as seen in the next episode.

CSR Lesson: Unknown Word/Click and Clunk Strategy

In this interaction during her CSR lesson, Denise spoke 50 words, and her students spoke a collective 86 words.

Student 1:	All right, guys, um, Clunk Expert, um, I had a clunk. Did anyone else have a clunk?
Student 2:	I had the same one you had. I had *Tartarus*. What about you?
Teacher:	All right, yeah, you all did.
Student 1:	All right, then, um.
Teacher:	So, what's the first thing you do?
Student 3:	What about *feeble*?
Teacher:	Yeah, that's good. OK, so for *Tartarus*, what's the first thing you need to do?
Student 1:	Well, you would probably have to go back and read the sentence it was in so that you could know what it was.
Teacher:	OK, so find the sentence for me.
Student 1:	All right. "Hades' kingdom, dark Tartarus." So, I'm gonna guess from the beginning of the sentence that it's Hades.
Student 3:	A kind of kingdom?
Student 1:	Uh-huh.
Student 4:	Or a land.
Teacher:	So, in other words, it might be another name for—
Student 1:	The underworld.
Teacher:	And that's exactly what it is.
Student 1:	Awesome!

As part of the CSR process, students stopped after reading short sections of the text to clarify their misunderstandings. They identified confusing words or ideas (called clunks), and then together they applied strategies to figure out meanings. The teacher's elicitations in the CSR class prompted students to name a strategy and then discern the meaning of the word, which contrasted directly to the teacher's approach in her typical lesson.

CSR Lesson: Main Idea/Gist Strategy

In the following excerpt, we provide an example in Matt's CSR class that captures the kinds of comprehension exhibited by students through a group interaction. In this example, Matt approached the group and worked to help the students come to an agreement because they had been intensely debating the most important part of their reading while using the gist strategy. He first invited the students to share their individual gists and then facilitated the discussion regarding the most important parts of the section of text, which is the excerpt that follows ((.) denotes a pause during a turn):

Teacher:	OK, so we have three people thinking the most important part—you guys all agree who Frederick Douglass is. We have three people saying the most important thing is he married a white (.) woman (.)—
Student 1:	But it's not.
Teacher:	And that race lines can be crossed, right?
Student 2:	It is because in our // gists—
Teacher:	// However, however, we have two of you saying that—
Student 3:	// That was one paragraph.
Teacher:	// that the most important thing of this third section is how he remained true to his cause even after the war 'cause he knew the fight was not over. Hmm.
Student 3:	We need to mix'em together.
Student 2:	OK, well, like, we've already said that he's an abolitionist—
Teacher:	Mmhmm.
Student 2:	In, like, the last two gists.
Teacher:	K.
Student 2:	And now in this one, what is important, like, it <u>is</u> important (.) that he married a white woman. // It wasn't like—
Student 1:	// But it's very key that he stayed an abolitionist after the Civil War. He could have just been, like, "Oh, my job's done," you know!
Student 2:	But who does that? Like, who's like—
Student 3:	Here's the milk. Here's the cereal. Put the milk and cereal together.
Teacher:	Yeah, you have to put the milk and the cereal together.
Student 3:	Yep, see.
Teacher:	So, you could say maybe something like—
Student 1:	I don't know, like, // Douglass—
Teacher:	//"Frederick Douglass remains an abolitionist after the war."
Student 1:	Douglass tried. Douglass tried bridging the racial gap after the Civil War.
Student 3:	You have to put the milk and cereal together. [laughing]
Teacher:	[laughing] Yeah, that's what I'm talkin' about.

After listening to each individual gist, the teacher revoiced (O'Connor & Michaels, 1993) the students' thinking and rephrased the group's dilemma. This move allowed him to summarize the group's primary and student-initiated points. After doing so, a student proposed a solution to the problem: "We need to mix'em together." Other students chimed in, defending their arguments about what is most important in that section of text. Notably, when the teacher spoke again, he repeated what the student said. In doing so, he acknowledged the student's contribution as accepted and even privileged. Two lines later, the teacher offered a suggested gist: "So, you could say, maybe something like, 'Frederick Douglass remains an abolitionist after the war.'" However, the students did not attempt to replicate it. In fact, one student derived her own gist, which was different from the teacher's. It is important to note that even within the dialogic context of this interaction, the teacher was the one who provided the final evaluation of the newly proposed gist, as indicated when a student asked, "Is that good?" and the teacher replied, "That's fine, yeah." The student solidified her answer by saying, "We'll use that." (For additional comparative talk sequences for CSR and TYP lessons, see Appendix D, which is available as supporting information for the online version of this article.)

Discussion

A key assertion of literacy theory and research is that discussion about text can increase the dialogic nature of classrooms, allowing talk as a tool, to improve

comprehension (Cazden, 2001; Murphy et al., 2009). To date, there has been limited research examining how text-based discussions are influenced by the recommended reading comprehension practice of teaching students to use reading strategies before, during, and after reading. In fact, in our review of the literature, we noted that even when reading strategy approaches are collaborative and include components for talking about text, they are often not considered discussion approaches (e.g., Murphy et al., 2009) and thus are not looked at in terms of their potential contributions to research on text-based discussion.

We set out to determine how teacher and student interactions were influenced by the classroom reading structures, focusing on the collaborative multistrategy reading model of CSR, where text is read using reading strategies that are applied in small, student-led discussion groups. During CSR lessons, the teacher takes on the role of facilitator, monitoring understanding and joining in small-group conversations. We compared classes when the teacher and the text remained constant across CSR lessons and lessons without CSR, in which teachers used their typical instructional practices to teach the same text. Although there was some variation across CSR lessons, overall, substantial differences were demonstrated in the ways that teachers and students talked with each other about text in different lesson types, differences that are perhaps pronounced because the same teachers taught in both conditions. We argue that these strategy-based practices offered particular affordances for students to construct meaning about text that were not present in comparison lessons.

In our classroom activity comparisons, we noted that CSR lessons tended to follow a predictable pattern, engaging students in previewing strategies and the application of strategies during reading to identify and repair misunderstandings (click and clunk) and to generate and discuss main ideas (get the gist). After-reading strategies were used in some classes but not in others. Consistent with previous research reporting the use of strategies and discussion in middle school language arts classrooms (e.g., Grossman et al., 2010), there was limited strategy use beyond previewing activities in typical instruction lessons and limited peer–peer discussion about the text, even when students were given the opportunity to work together. In typical lessons, students most often worked independently or as a whole class. Further, despite sharing common objectives across lesson types, in most cases to read and understand the text, students in TYP lessons were exposed to various activities that included, in some cases, overly traditional routines such as completing a worksheet with comprehension questions as the main class activity or reading the text in a whole-class round-robin format while the teacher asked for volunteers to respond to questions. We conclude that the structure of the CSR lesson opened space for the types of conversations among students and with their teachers that can support meaning construction (Duke et al., 2011; Murphy et al., 2009), and that discourse in CSR lessons also played what Wells (2001) called "a 'meta' role in (re)negotiating the goal of the activity or task, and in monitoring and evaluating progress toward it" (p. 4), driving the enacted lesson purpose toward meaning construction.

Variation in Discourse Across Lesson Types

Compared with typical classes, in CSR lessons, we observed a greater quantity of talk overall, a higher ratio of student–teacher talk, a higher rate of academic talk for teachers and students, fewer instances of teachers giving information to students, more exploratory student talk, and importantly, a higher rate of teacher and student turns about content. Given these findings, students in CSR lessons engaged in a greater amount of discursive exploration and were subject to fewer experiences of merely receiving information from the teacher. With strategies, a student-led small-group format, and roles available as tools for meaning making, students in CSR classes appeared better positioned to become active collaborators in knowledge building about what they were reading. In the "milk and cereal" example, students were providing their reasoning for why they thought a particular idea was most important and should be included in the gist. In the *Tartarus* example, students were able to conjecture the meaning of unknown words to make sense of the text, as opposed to passively receiving the definition from the teacher's lecture in the typical practice version of the lesson.

The teacher's role shifted in substantial ways when implementing CSR, a structured but flexible model. To a certain extent, the student-led small-group discussion format provided natural opportunities for students to share the floor with the teacher, so such shifts as increased student talk and fewer teacher information delivery turns is expected when the grouping structure shifts. Yet, we are reminded that simply seating students in groups is not enough and that successful text-based discussions develop over time and with much teacher support (e.g., Cohen & Lotan, 2014; Gillies, 2008; Jadallah et al., 2011; Maloch, 2002). As evidenced in the increased consecutive turn sequences of student talk and the lower percentage of teachers giving information to students, teachers took on the role of facilitator or listener when using the framework of CSR more often than during their own typical practice. Differences in teacher elicitations point to the shifts associated with the type of instructional model implemented in the classroom. Because teachers were more likely to use elicitations to direct students to the strategies in CSR lessons, students had more

opportunities to solve problems themselves, collectively engaging in the sensemaking process of comprehension, as opposed to teacher elicitations that functioned to correct students' errors. We observed students doing the heavy lifting of unpacking meaning throughout CSR lessons with teachers facilitating, rather than dictating what exactly would be learned and by whom.

The Influence of Teacher-Mediated Talk About Text in CSR Lessons

Greater academic talk in CSR lessons—more specifically, talk about the content of what students were reading—suggests that the collaborative structure of CSR in conjunction with the availability of strategies allowed teachers and students to shift their discourse toward knowledge building. Strategies became integral tools within the discussion, directing both teachers and students to the text for understanding (Palincsar & Schutz, 2011). Further, for teachers like Matt, in his second year of teaching, and for others who struggled to maintain a productive use of class time, CSR appeared to provide structure and routines that facilitated more time spent engaged in academic tasks and talk. Similar to recommendations offered by Michaels and colleagues (see, e.g., Michaels et al., 2010) related to establishing a community that promotes high-quality discussions, we observed that familiar routines that are understood by all students were applied consistently across lessons. Building on prior work demonstrating the importance of dialogic meaning making in discussion about text (Applebee, Langer, Nystrand, & Gamoran, 2003; Murphy et al., 2009), our observations suggest that a collaborative strategy model can allow students to be positioned as active participants, complex problem solvers, initiators of ideas, contributors to the collective discourse, and producers—instead of mere consumers—of meaning.

Reading comprehension strategy instruction has often been characterized as an overly procedural approach to comprehension (Aukerman, 2008; Luke, Woods, & Dooley, 2011; McKeown et al., 2009). Although we do not disagree that there are problems with the view that strategy instruction is "something that all good readers do in fundamentally the same way, thereby making it teachable through generic imitation coupled with the kind of directive step-by-step coaching that might help a young child learn to tie her shoe" (Aukerman, 2008, p. 54), our data reveal that strategies can be vehicles for rich meaning construction. Despite the traditionally rigid separation of strategy-based reading approaches from other discussion-based comprehension models, the interactions in CSR lessons reflected a flexible application of strategies, resembling discussion models that are not strategy focused, such as instructional conversations and Question the Author, in which talk appears more authentic and natural. High-quality text-based discussions employ similar techniques that allow students to learn together about what they are reading, regardless of the model from which they are based.

Strategies were not implemented in a lockstep, uniform, or generic fashion; rather, they provided opportunities for deeper meaning construction. We observed students embracing opportunities to consider conflicting and competing interpretations of text (Almasi, 1995). For example, after the teacher revoiced the students' gist statements in the "milk and cereal" excerpt, students exuberantly continued to defend their positions while simultaneously working toward an agreement. In doing so, they referenced the text (e.g., "over the whole entire passage"), drew on their background knowledge of how the social world works (e.g., "But who does that?"), and worked toward incorporating each person's contribution (e.g., "Put the milk and cereal together"). Finally, multiple students acknowledged that each idea was important to an overall understanding of the section of text and was insufficient on its own; thus, to capture the essence of the text, they realized that they must consider multiple points of view. When reading strategies are used in socially mediated structures for participation and when the teacher encourages students' explorations and hypothesizing of ideas, they engage in comprehension as sensemaking processes. Thus, another key finding in this study is that the two conceptualizations of comprehension (procedures and sensemaking) need not be mutually exclusive.

Constraints of Strategy Instruction Implementation

We are encouraged by how teachers and students shifted discourse patterns within CSR lessons. Nevertheless, we are aware of several limitations of the strategy application that were observed in this study. First, the CSR lessons by and large did not complete the entire CSR cycle, leaving out opportunities to engage with the text beyond making predictions, coming up with definitions of unknown words, and generating main ideas. Two CSR lessons included generating questions, and only one concluded the lesson with students writing review statements. Thus, we are unable to account for the discussion that might have occurred during the implementation of those strategies across all of the lessons.

Second, the discussions presented here were predominantly text based, similar to what is called for in the Common Core State Standards for close reading. Yet, there is a need to go beyond literal comprehension when balancing the interactions of the reader, the text, and the context in the reading process (Aukerman, 2013; Pearson & Cervetti, 2015). For example, our transcripts

revealed that, overall, students did not engage with texts as text analysts, making links to broader ideological discourses and positions within the text and the reader (Freebody & Luke, 1990). Although the intended role of the teacher is to facilitate these perspectives, this role was not present in our observations. Similarly, we observed very few instances of teachers promoting peer interaction, a key component of productive group work (Lawrence & Snow, 2011; Michaels et al., 2010; Murphy et al., 2009; Soter et al., 2008). So, although teachers shifted the ways that they interacted with students, there is still more to do with professional learning to support teachers to further leverage their role in CSR to increase discussion quality. Working with teachers to reexamine the purpose of reading a specific text and where it fits into larger essential questions may serve to extend discussion during use of strategy-based models such as CSR, as would exploring goals for students during discussions. Adjustments in professional learning opportunities, during coaching, and in student and teacher materials could be entry points to expand the potential of student and teacher interactions.

Limitations and Future Research

Limitations in the study design should be considered when interpreting our findings. We were unable to separate the contribution of reading strategy use within a cooperative learning structure to other small-group text-based discussion formats. Still, we are confident in our conclusions for several reasons. First, our data mirror other observational and experimental studies that have demonstrated that teachers' reading practices do not typically include cooperative grouping formats (e.g., Antil, Jenkins, Wayne, & Vadasy, 1998; Greenleaf, et al., 2011; Vaughn et al., 2011). The typical instruction lessons that we observed did not include student-led discussions with cooperative learning, and even when students were provided with the opportunity to work in pairs, our transcripts revealed minimal student–student or teacher–student talk about text. Thus, CSR facilitated the use of this discussion format.

Second, research on cooperative learning has demonstrated the potential for shifts in discourse and academic growth but also highlighted the complexities and challenges that confront teachers (Cohen & Lotan, 2014; Gillies, 2008; Gillies & Boyle, 2010). We conclude that although collaborative grouping appeared to have contributed to the discussion shifts that we report, evidence has not suggested that the grouping format was primarily responsible for the differences across conditions. The CSR reading strategies model, with its components, processes, and supports for both teachers and students, appears to have created the collaborative learning environment that shifted discourse, not the other way around. Future research might look specifically at the role of cooperative learning in text-based discussions.

A third limitation in this study is that the discourse analysis that we used allowed for the in-depth study of a small number of classrooms. Additional research can expand on the work here to explain how strategy instruction influences text-based discussion across a larger number of classrooms. There is also a need to study the ways in which teachers might adapt multistrategy reading approaches to elevate the potential of both teachers and students to deepen meaning construction during text-based discussions. Finally, we hope that future research can expand on the work described here by looking at the differential participation of subgroups of students from various language and learning backgrounds and the teacher's role in supporting them.

Conclusion

Our study used student and teacher discourse to voice the ways in which reading comprehension was enacted across strategy-focused and typical practice lessons. Findings revealed that strategy instruction did not inhibit talk or engagement with content. On the contrary, we found that compared with typical instructional practices, even when the teacher and text were held constant, students in CSR lessons had greater opportunities to be collective constructors and producers of meaning. This study provides a new understanding of these enacted discourses that can be used to enhance the application of strategy-based models.

Strategy instruction is intended to be one of many tools used by teachers, not the sole methodological approach toward comprehension instruction. We acknowledge the preponderance of literacy research committed to best practices that do not place focus on strategies. The model of CSR, with its intention around collaborative strategy implementation in heterogeneous student groupings, provided a vehicle for meaning construction, with student talk and collaboration as primary drivers. We have seen that a reorganization of the comprehension model implemented in these classrooms has the potential to transform roles, shifting both teacher and student talk, and ultimately to increase understanding.

NOTES

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Supporting Information

Additional supporting information may be found in the online version of this article

- Appendix A: Length of Class Period, Reading Lesson, and Number of Students by Teacher and Lesson Type
- Appendix B: Typical Class Reading Activities
- Appendix C: Function Code Descriptions
- Appendix D: Additional Talk Excerpts in TYP and CSR Lessons With Explanations