

This article was downloaded by: [24.9.167.149]

On: 06 December 2012, At: 13:46

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Research in Childhood Education

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ujrc20>

Explicit Reading Comprehension Instruction in Elementary Classrooms: Teacher Use of Reading Comprehension Strategies

Molly Ness ^a

^a Fordham University, New York, New York

Version of record first published: 03 Jan 2011.

To cite this article: Molly Ness (2011): Explicit Reading Comprehension Instruction in Elementary Classrooms: Teacher Use of Reading Comprehension Strategies, *Journal of Research in Childhood Education*, 25:1, 98-117

To link to this article: <http://dx.doi.org/10.1080/02568543.2010.531076>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Explicit Reading Comprehension Instruction in Elementary Classrooms: Teacher Use of Reading Comprehension Strategies

Molly Ness

Fordham University, New York, New York

The purpose of this observational study was to identify the frequency of reading comprehension instruction in elementary classrooms. Additional objectives were to determine which reading comprehension instructional strategies were most employed by teachers in elementary classrooms. In 3,000 minutes of direct classroom observation in 20 first- through fifth-grade classrooms, a total of 751 minutes (or 25% of instructional time) was allotted for reading comprehension instruction. The highest amount of reading comprehension instruction occurred in 4th-grade classrooms, with the least amount occurring in 3rd grade. Question answering, summarization, and predicting/prior knowledge were the most frequently occurring reading comprehension strategies. Finally, implications for teachers' professional development and training are provided.

Keywords: reading comprehension, reading instruction, elementary reading programs, classrooms

In the past three decades, reading researchers and cognitive scientists have made significant strides in understanding the mental processes that readers employ in comprehending text. With its prolific research base from multiple fields, reading comprehension comprises a variety of tasks. Comprehension involves recalling information from text, extracting themes, engaging in higher order thinking skills, constructing a mental picture of text, and understanding text structure (van den Broek & Kremer, 2000). The importance of constructing meaning from text has led researchers to conclude that “the most important thing about reading is comprehension” (Block, Gambrell, & Pressley, 2002, p. 3) and that comprehension is the ultimate goal of proficient literacy (Pressley, 2006). For the purpose of the current study, the RAND Group's definition of *reading comprehension* will be used: “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (Snow, 2002, p. 11).

Submitted May 21, 2010; accepted July 27, 2010.

Address correspondence to Molly Ness, Division of Curriculum and Teaching, Fordham University, 113 West 60th Street, New York, NY 10069. E-mail: mness@fordham.edu

HOW AND WHY TO TEACH READING COMPREHENSION STRATEGIES

Perhaps the best way to build students' understandings of text is through explicit instruction of reading comprehension strategies, during which teachers teach students to "use specific cognitive strategies or to reason strategically when they encounter barriers to comprehension" (National Reading Panel [NRP], 2000, pp. 4–39). Through explicit strategy instruction, teachers intentionally and directly teach comprehension strategies in efforts to help students monitor and build their understanding of text (Duffy, 2002). In providing modeling and think-alouds, scaffolding, guided practice, direct instruction, and independent practice, teachers encourage students to become proficient and self-regulatory in their use of such strategies (Block & Lacinia, 2009; Block & Pressley, 2002). A key foundation of this process is the gradual release of responsibility (Pearson & Gallagher, 1983), in which the teacher gradually transfers the responsibility of a task from himself or herself to the student.

The academic benefits of explicit reading comprehension instruction in elementary grades are well-documented (Baumann, 1984; Baumann & Bergeron, 1993; Block, 1993; Brown, Pressley, Van Meter, & Schuder, 1996; Collins, 1991; Dole, Brown, & Trathen, 1996; Paris, Cross, & Lipson, 1984; Pressley et al., 1992). More specifically, researchers (Duffy & Roehler, 1989) provided 3rd-graders with mental modeling of reading comprehension strategies, explanations of how to apply such strategies, teacher monitoring and feedback about the use of the strategy, and reinstruction and reexplanation when needed. On standardized measures of reading, students who received the direct explanations of reading comprehension strategy instruction outperformed their peers who received no such instruction. Additionally, students who are taught comprehension strategies, such as predicting, questioning, and summarizing, improve their reading comprehension scores on experimenter-constructed and standardized tests (Pressley, 1998; Rosenshine, Meister, & Chapman, 1996). Research demonstrates that when primary-grade students receive optimal comprehension instruction, their performances on measures of literal, inferential, and metacognitive comprehension increase, as do their vocabulary; decoding, problem-solving, and cooperative learning skills; and self-esteem (Block, 1999; Block, Parris, & Whiteley, 2008).

Furthermore, recent research indicates that internalization of comprehension processes may take less time than originally thought (Block & Lacinia, 2009). Prior to 2000, researchers believed that students needed up to 8 months of direct instruction in comprehension strategies to independently transfer such strategies to later reading tasks (Anderson & Pearson, 1984; Block, 1993; Collins, 1991). More recent multiyear studies (Cummins, Stewart, & Block, 2005) demonstrate that students used comprehension strategies continually after 8 weeks of instruction.

THE LACK OF READING COMPREHENSION INSTRUCTION IN ELEMENTARY CLASSROOMS

Even with a body of knowledge highlighting effective comprehension strategies, too often our students in the elementary grades miss out on such instruction. In her milestone work, Durkin (1978–1979) observed 4,469 minutes of 4th-grade social studies and reading instruction, noting that teachers spent only 20 minutes, or less than 1% of instructional time, on reading comprehension instruction. Durkin's findings were confirmed by Duffy, Lanier, and Roehler (1980) in

their subsequent research on classroom teaching of reading. They described teachers as spending time in assigning activities, supervising and monitoring students to ensure they stay on task, assessing what the students were doing, and providing corrective feedback to correct students' errors. Teachers did not teach, model, explain, or demonstrate strategies and skills that students could use to successfully comprehend text. Twenty years later, Pressley and colleagues (Pressley, Wharton-McDonald, Hampston, & Echevarria, 1998) found strikingly similar results in their observations of 10 fourth- and fifth-grade classrooms over the course of a year. Much like those of Durkin, their findings indicated that explicit reading comprehension instruction rarely occurred. Furthermore, the observed comprehension instruction did little to encourage students to self-regulate their understandings of texts. In their survey and observational study of schools "beating the odds," Taylor, Pearson, Clark, and Walpole (1999) reported that only 16% of teachers emphasized comprehension during classroom instruction. It is important to note that although reading comprehension may be overlooked in many elementary classrooms, ample research points out that the most accomplished teachers across multiple grade levels routinely engage in comprehension instruction (Knapp, 1995; Langer, 2000; Lipson, Mosenthal, Mekkelsen, & Russ, 2004; Metsala et al., 1997; Morrow, Tracey, Woo, & Pressley, 1999; Pressley, Rankin, & Yokoi, 1996; Taylor, Pearson, Clark, & Walpole, 2000).

There are several reasons why comprehension instruction is not more common in elementary classrooms, as explained by Pressley (2006). First, many teachers do not understand the active reading components that are the critical foundation of reading comprehension. Additionally, comprehension instruction may lead to student-teacher interactions that are quite different from the status quo. Typically, teachers ask questions and evaluate students on the correctness of their answers, thus controlling the majority of interactions. Comprehension instruction requires conversation that is less controlled by the teacher; the teacher's role may simply be to prompt students on how to make meaning of text. The mental modeling required in effective comprehension instruction also may be a challenging process for many teachers; research (Pressley & El-Dinary, 1997) indicates that it takes about a year to become proficient in teaching reading comprehension. As Block and Lacina (2009) explained, "Helping students become self-regulated comprehenders is hard work. The quality of teacher-student interactions and collaborative talk can hasten students' development" (p. 504). Furthermore, the teaching of comprehension strategies is complicated by the explicitness of instruction, the challenge of finding appropriate texts, and a delicate balance of teaching the text's content and any relevant comprehension strategies (Dole, Nokes, & Drits, 2009; Pressley, Goodchild, Zajchowski, Fleet, & Evans, 1989). These complicating factors have led P. David Pearson (2009) to declare the following:

The Achilles heel for strategy instruction . . . is finding a way to make it a part of "daily life" in classrooms. It is one thing to implement strategy instruction for a certain number of minutes each day for the ten weeks of a pedagogical experiment, but it is quite another to sustain a strategy emphasis over an entire school year. (p. 22)

The consequences of not providing explicit reading comprehension strategy instruction are costly to students in elementary school and beyond. Trabasso and Bouchard (2002) stated, "Most readers who are not explicitly taught cognitive procedures are unlikely to learn, develop, or use them spontaneously" (p. 177). By shortchanging our elementary students of reading comprehension, we leave them ill-prepared for the academic demands of secondary school. In fact, an overwhelming number, nearly nine million, of today's 4th- through 12th-graders struggle to read

their textbooks (Kamil, 2003). Pressley and Afflerbach (1995) pointed to evidence that many students progress to college without learning the reading comprehension strategies employed by proficient readers; as such, 53% of high school graduates enroll in postsecondary remedial courses (National Center for Education Statistics, 2001).

In a chapter examining comprehension instruction in the primary grades, Block and Lacina (2009) traced the academic importance of reading comprehension to today's No Child Left Behind federal legislation, which requires comprehension instruction to be one of five major instructional components taught in K-3 schools. Shaped largely by the report *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) and the National Reading Panel report (NRP, 2000), No Child Left Behind sets the expectation that all students will read at grade level by 2014. To achieve this goal, K-3 schools should provide transactional strategy lessons, with the goal of "developing students who, on their own, use the comprehension strategies that excellent readers use" (Pressley, 2006, p. 319).

PURPOSE AND SIGNIFICANCE OF THE STUDY

The purpose of the current study was to examine the extent to which elementary teachers include explicit reading comprehension instruction during their English language arts instruction. In examining the instructional practices of elementary teachers, the following questions were addressed:

1. To what degree do teachers in Grades 1 through 5 incorporate reading comprehension strategies during English language arts instruction?
2. What percentage of instructional time is spent on reading comprehension instruction in elementary classrooms?
3. Which reading comprehension strategies are most frequently incorporated into elementary classrooms? Which reading comprehension strategies are least frequently incorporated into elementary classrooms?

The current study is significant, because it seeks to understand whether the findings of Durkin (1978–1979) and subsequent researchers (Pressley et al., 1998) still ring true in the era of No Child Left Behind. Since these landmark studies, little work has been done to examine whether the previous trends of two and three decades ago have changed with regard to teachers' inclusion of explicit reading comprehension instruction. As recently as 2006, Pressley provided anecdotal evidence that little has changed with regard to the explicit teaching of reading comprehension: "[In most classrooms we have seen,] . . . there is very little teaching of students to be self-regulated comprehenders. There is a great deal of reading, the implicit theory being that if children simply read, read, and read some more, they will become skilled comprehenders" (p. 334).

Additionally, previous research has been limited to observations of reading comprehension instruction in the upper elementary grades. Underpinning this earlier work was the belief that students should be taught comprehension strategies in the later grades—after word identification skills and decoding have been mastered (Chall, 1983; Chall & Squires, 1991; Harris & Sipay, 1990). A recent shift has occurred with regard to deciding when to teach reading comprehension; multiple researchers have advocated for explicit reading comprehension instruction to begin as early as 1st grade (Pressley et al., 1992; Snow et al., 1998). Block and Pressley (2007)

recommended that teachers begin to teach children as early as kindergarten how to predict, form mental images, make connections, and summarize. As of yet, studies have not begun to examine whether reading comprehension instruction is indeed included in lower elementary grades, as backed by researchers. By filling this research gap, the current study also aims to understand the nature of reading comprehension instruction on a grade-by-grade basis.

THEORETICAL FOUNDATIONS

Underpinning this study is socially mediated learning theory (Vygotsky, 1978). In his theory of cognitive development, Vygotsky (1978) explained that optimal learning occurs when teachers assist students in building and understanding new knowledge. As teachers provide students with strategy instruction through support and modeling, learning occurs within the students' zone of proximal development. Teachers rely upon instructional scaffolds to provide assistance in students' learning and understanding. Duke and Pearson (2002) described a cognitive apprenticeship model in which there is a gradual release of responsibility. In this model, teachers make their thinking and application of reading comprehension strategies visible and public through demonstration and guided practice, to facilitate students' independent use of reading comprehension strategies.

METHOD

This observational study occurred over the course of the 2008–2009 academic year. Two researchers (the author and a doctoral student) observed 3,000 minutes of classroom instruction to understand how instructional time was used in 20 first- through fifth-grade classrooms. Classroom observations focused on teachers' instructional choices, with the intent of gauging how frequently elementary teachers incorporate explicit reading comprehension instruction into their language arts instruction.

Research Sites and Participants

Research occurred at two elementary schools in two northeastern states. The Miller School (all names are pseudonyms) was a suburban K-5 school, in a town with a population of approximately 6,000 residents. The Miller School's student body was largely white, and the town's per capita income was \$23,146. The Gordon School was an urban K-5 charter school, founded in 2002. The Gordon School served a largely African American student body, and the neighboring city's per capita income was \$16,775. Additional information on both schools can be found in Table 1. Both schools' language arts curriculum embraced a wide variety of instructional approaches, including response to literature, vocabulary, daily oral language, listening comprehension, guided and independent reading, and textual analysis. Students at the Miller School spent 90 minutes per day receiving literacy instruction, whereas students at the Gordon School had 180 minutes per day of literacy instruction. The Miller School used a basal reader for its language arts instruction, whereas the Gordon School used picture and chapter books for guided reading lessons, as well as a scripted program for phonics instruction.

TABLE 1
Information About School Sites

<i>School Name</i>	<i># of Students</i>	<i>% of Students Qualifying for Free or Reduced-price Lunch</i>	<i>% of Student Body Receiving Services in English as a Second Language (ESL)</i>	<i>Racial Makeup of Student Body</i>	<i>% of Student Body Scoring Proficient on State Reading Tests</i>	<i>% of Student Body Scoring Proficient on State Math Tests</i>
Miller Elementary	429	25.2	1	96.5% White, 0.7% African American, 0.2% Latino, 2.3% Asian, 0.2% Native American	73.1	67.9
Gordon Elementary	427	96	3	96% African American, 4% Hispanic	77	94

In the summer prior to the start of the school year, the researcher received district and administrative approval to conduct this research study. In the first weeks of school, both researchers visited the school sites to introduce themselves and the study and to seek volunteer participants. A total of 28 teachers from both schools volunteered to participate; through stratified purposeful sampling, the principal researcher selected 20 first- through fifth-grade teachers for participation, with four teachers per grade.

Participants for the current study included 10 teachers from the Miller School and 10 teachers from the Gordon School. The average age of participants was 41.6 years ($SD = 4.8$). Fifteen of the teacher-participants were women and five were men. Of the participants, 14 identified themselves as white, 4 as African American, 1 as Asian, and 1 as Latino. The average length of classroom experience was 11.3 years ($SD = 3.2$ years). All teachers held state certification, with two holding certification from birth through Grade 6, five certified for Grades 1 through 6, three held dual certification in Grades 1 through 6 and special education, and 10 held certification for kindergarten through Grade 8. Finally, three of the 20 teachers came into the classroom through alternative certification routes; one teacher was pursuing a doctorate in literacy education at the time of the study.

Data Collection

Over a course of 7 months in one academic year, researchers observed 3,000 minutes of classroom instruction. This amount was reached through comparison to past work (Coyne, 1981; Durkin, 1978–1979). The objective of classroom observations was to gain a complete sense of teachers' instructional behaviors and routine classroom instruction. Observations were equally divided among grade levels, with four classrooms per grade level. Furthermore, observations were equally divided among the Miller School and the Gordon School, with two classrooms per grade level at Miller School and two classrooms per grade level at the Gordon School.

Each of the 20 teacher participants were observed for a total of 120 minutes, broken into five 30-minute blocks. All classroom observations occurred during language arts instruction. Prior to each observation, researchers contacted teachers and confirmed a mutually agreeable time. As a result, teachers were fully aware in advance of researchers' upcoming classroom presences. In acting as privileged observers (Wolcott, 1988), researchers were nonintrusive and had no interaction with the teachers or students.

To examine teacher behavior regarding explicit reading comprehension instruction, researchers created a coding system modified from previous work (Coyne, 1981; Durkin, 1978–1979; Taylor, Peterson, Pearson, & Rodriguez, 2002). The classroom observation coding system developed for the current study included two categories of codes: (1) comprehension instruction and (2) noncomprehension instruction (see the appendix).

Comprehension instruction and noncomprehension codes. In determining what entails reading comprehension, the principal researcher examined a wide body of literature (Block & Pressley, 2002; Duke & Pearson, 2002; NRP, 2000) to understand the individual comprehension strategies and comprehension routines with solid research foundations. The list of observational codes (and corresponding abbreviations) used for the purpose of this study can be found in Table 2, with further detail on each code provided in the appendix.

TABLE 2
Noncomprehension and Comprehension Codes for Classroom Observations

<i>Noncomprehension Codes</i>	<i>Comprehension Codes</i>
Silent reading (SILENT)	Vocabulary instruction (VOCAB)
Oral reading (ORAL)	Predicting/prior knowledge (PR)
Word skills instruction (WORD)	Comprehension monitoring (CM)
Writing instruction (WR)	Text structure (TS)
Assignment (ASSIGN)	Question answering (QA)
Transition (TR)	Question generation (QG)
Noninstruction (NON)	Summarization (SUM)
Oral language activities (OR-LANG)	Visual representations (VR)
Technology-based activities (TECH)	Multiple strategy instruction (MSI)

To be coded as comprehension instruction, the teacher had to provide some explanation and/or reminder to students for how, when, and why to employ comprehension strategies. More specifically, researchers applied the Comprehension instruction codes when one or more of the following teacher behaviors occurred:

- An explicit description of the strategy and when and how it should be used
- Teacher and/or student modeling of the strategy in action
- Collaborative use of the strategy in action
- Guided practice using the strategy with gradual release of responsibility
- Independent use of the strategy (Duke & Pearson, 2002, pp. 208–210).

Because the NRP (2000) noted that vocabulary instruction does lead to gains in comprehension, vocabulary instruction also was included as a reading comprehension code.

Noncomprehension instruction codes captured other routine language arts instructional activities and behaviors. This list was developed from various observational data (Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta, 1997; Taylor et al., 2002).

Using the classroom observation coding system. While observing the class, researchers coded teacher behavior in 30-second increments, adapted from similar protocols (Taylor et al., 1999). Researchers coded for however many instructional codes occurred in the 30-second increment, allowing for multiple codes in one increment. In addition to recording codes, researchers made qualitative notes about the instruction in that interval, including teacher directions, materials used, and student behaviors (Taylor et al., 2002). This process was repeated for the 30-minute duration of observation. At the conclusion of each observation, codes that appeared during observation were tallied. Because teacher behavior was the key focus of the study, the researchers coded for teacher actions; for instance, when an entire classroom was subdivided into small-group instruction, researchers followed the teacher as the primary instructor and thus coded his or her behavior.

Two researchers took part in the classroom observations. The principal researcher was a university-based teacher educator with a doctorate in reading education. A doctoral student in language and literacy served as a secondary researcher. Both researchers were former K-8 classroom teachers, with a combined 17 years of experience.

Prior to the commencement of data collection, researchers performed pilot tests to determine the applicability of the coding system. Furthermore, researchers established interrater reliability through applying the coding system to videotapes and routine observations of elementary instruction. Through pilot testing and mutually witnessed classroom observations, researchers established an interrater reliability of 0.92. To ensure data validity, researchers followed the techniques recommended by Denzin (1989). In data triangulation, data were collected in multiple classrooms and on multiple occasions to increase the likelihood that the emerging instructional themes were representative. Additionally, the interrater reliability of the coding system was a deliberate attempt to increase validity and reliability.

To get an accurate portrait of what happens at multiple points in an academic year, data collection spanned seven months. Deliberate efforts were made to visit participating teachers' classrooms in the beginning, middle, and end of the academic year in order to observe a variety of classroom instruction.

Data Analysis

At the conclusion of all data collection, data from classroom observations were tallied, analyzed, and disaggregated in multiple steps. Computer-based statistical software enabled the principal researcher to look at the means and standard deviations for the total of reading comprehension instruction, as well as disaggregating by grade level. Finally, data were examined to understand which reading comprehension strategies were least and most prevalent in classroom instruction.

FINDINGS

The overarching purpose of the current study was to understand what percentage of language arts instructional time was spent on explicit reading comprehension. Additional objectives were (1) to understand which reading comprehension strategies were most and least prevalent and (2) to explore which grade levels provided the most and least reading comprehension instruction. Data will be presented in three categories below: (1) the amount of reading comprehension instruction across all classroom observations, (2) the amount of reading comprehension instruction according to grade level, and (3) the inclusion of specific reading comprehension strategies during classroom observations.

The Amount of Reading Comprehension Instruction Across All Classroom Observations

A total of 751 minutes occurred during language arts instruction across 3,000 minutes of classroom observation. Thus, data from the current study indicate that explicit reading comprehension instruction made up 25% of language arts instruction. It should be noted that this reading comprehension took place with a variety of instructional materials and in a variety of settings. More specifically, researchers observed teachers including reading comprehension instruction during whole-class read-alouds, small-group guided reading lessons, mini-lessons

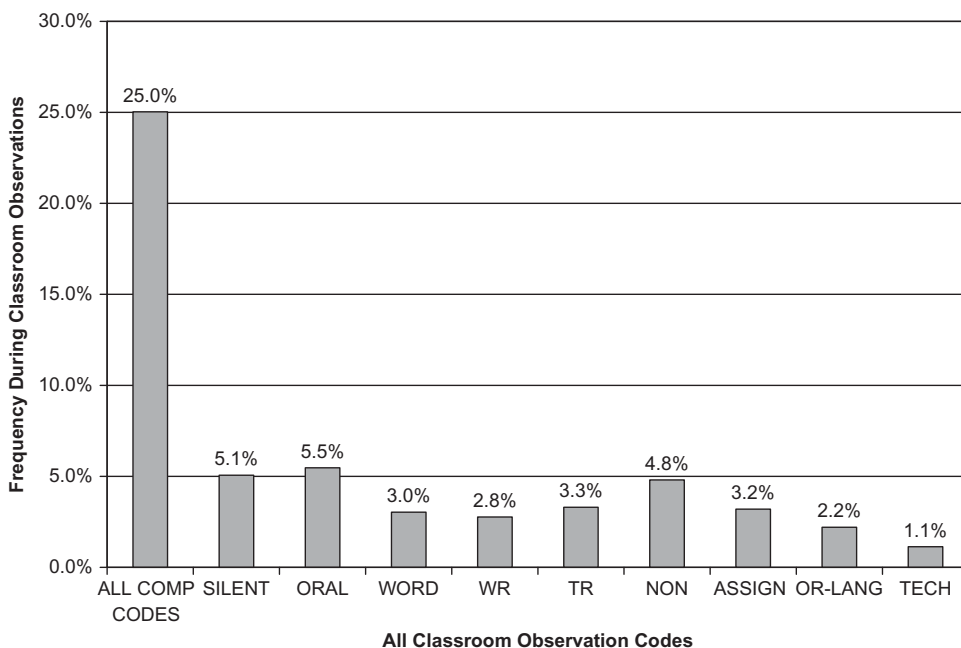


FIGURE 1 Percentage of all classroom observation codes in 3,000 minutes of instruction.

SILENT = Silent reading; ORAL = Oral reading; WORD = Word skills instruction; WR = Writing instruction; TR = Transition; NON = Noninstruction; ASSIGN = Assignment; OR-LANG = Oral language activities; TECH = Technology-based activities.

during readers’ workshop, and independent reading. Additionally, teachers provided reading comprehension instruction when using novels, chapter books, nonfiction text, poetry, selections from basal readers, picture books, magazines geared for young readers (such as *Time for Kids*), and fluency texts used for Readers Theater. Figure 1 shows the breakdown of all codes across 3,000 minutes of classroom observation. Clearly, reading comprehension instruction occurred more frequently than any other sort of instructional behavior or activity in these language arts classrooms.

The Amount of Reading Comprehension Instruction, Disaggregated by Grade Level

To look for instructional patterns across grade levels, data were disaggregated by grade level. As shown in Table 3, the highest amount of reading comprehension instruction occurred in 4th grade (a total of 287 minutes) and the lowest amount took place in 3rd grade (a total of 67 minutes). First-grade teachers incorporated 142 minutes of reading comprehension instruction, with 2nd-grade teachers including 174 minutes, and 5th-grade teachers including 122 minutes.

TABLE 3
Percentage of Reading Comprehension Instruction According to Grade Levels

<i>Reading Comprehension Code</i>	<i>Grade 1</i>	<i>Grade 2</i>	<i>Grade 3</i>	<i>Grade 4</i>	<i>Grade 5</i>	<i>Total Percentage Across All Grade Levels</i>
Predicting/prior knowledge	6.5	7.0	4.0	8.7	4.5	6.1
Comprehension monitoring	0.3	0.0	0.5	1.0	1.3	0.6
Text structure	1.0	2.3	0.5	2.8	4.2	2.2
Question generation	0.0	0.0	0.7	0.5	0.0	0.2
Question answering	10.5	9.7	2.0	16.3	4.2	8.5
Summarization	2.7	4.3	2.5	4.5	2.8	3.4
Visual representations	0.2	1.8	0.3	2.7	0.7	1.1
Multiple strategy instruction	0.0	0.0	0.0	0.0	0.0	0.0
Vocabulary instruction	2.5	3.8	0.7	4.5	2.7	2.8
Total percentage of reading comprehension instruction	23.7	28.9	11.2	41.0	20.4	24.9

The Inclusion of Specific Reading Comprehension Strategies During Classroom Observations

To understand the range of comprehension activities included in language arts instruction, data are presented according to which reading comprehension instructional strategies were used during language arts instruction. As depicted in Figure 2, teachers most heavily favored asking questions as a comprehension strategy (a total of 256 minutes). Furthermore, teachers provided instruction in the following comprehension strategies: predicting/prior knowledge (184 total minutes), comprehension monitoring (19 total minutes), question generation (7 total minutes), text structure (65 minutes), summarization (101 total minutes), vocabulary (85 total minutes), and visual representation (34 total minutes). Multiple strategy instruction was not incorporated. Thus, teachers in the current study incorporated a variety of the reading comprehension strategies presented in the National Reading Panel report (2000).

DISCUSSION AND IMPLICATIONS

Before considering the implications of the current study and the possibility of similar projects, it is important to consider the possible limitations. One possible limitation of the study lies with the amount of observation time. Although researchers carefully considered the amount of time and compared it to similar previous research, it is difficult to determine whether 3,000 minutes of classroom observations were sufficient to see comprehension instruction in action in language arts classrooms. In addition, this observational time might have been configured in very different ways. For instance, rather than devote 150 minutes to 20 teachers, similar observations could have focused on fewer teachers for longer time periods, or more teachers for shorter time periods. Additionally, although deliberate efforts were made to standardize the coding system and establish its interrater reliability, it is impossible to entirely reduce the subjective nature of observational coding. It is possible that different observers might have coded the same observations

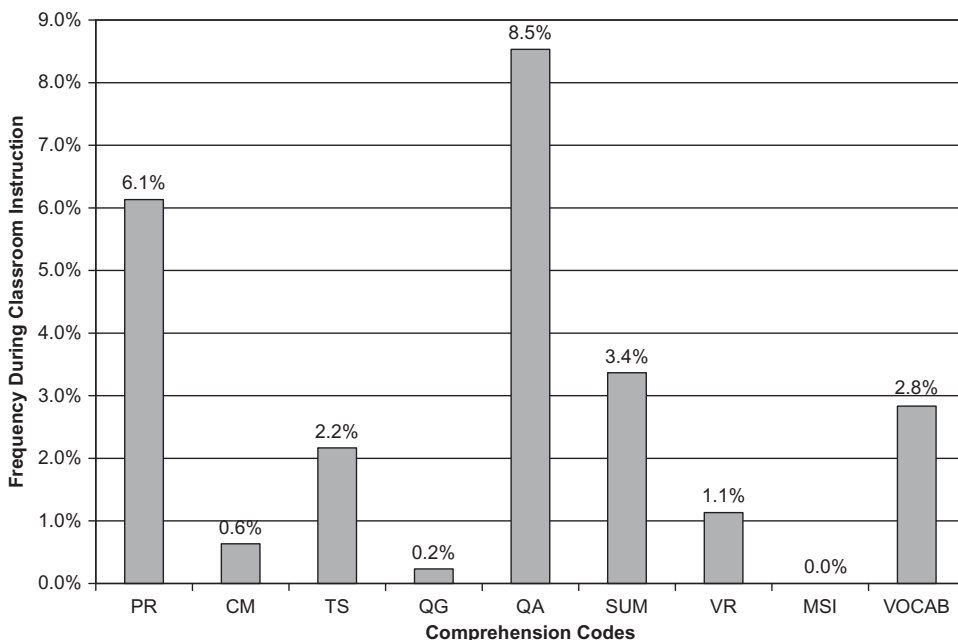


FIGURE 2 Reading comprehension instructional codes observed in language arts instruction.

PR = Predicting/prior knowledge; CM = Comprehension monitoring; TS = Text structure; QG = Question generation; QA = Question answering; SUM = Summarization; VR = Visual representations; MSI = Multiple strategy instruction; VOCAB = Vocabulary instruction.

in different manners. The mere presence of outside researchers and the nature of observation itself influence teacher instruction. It is possible that the observed instruction might have been somewhat atypical of the instruction that may have occurred without the presence of an outside observer. Finally, the focus of the current study was on English language arts instruction. It is certainly possible that reading comprehension instruction may be provided during other daily instruction, such as while looking at informational text used in science and social studies lessons.

The results from the current study offer promising indications that the amount of reading comprehension instruction occurring in today’s elementary classrooms has increased since Durkin (1978–1979) first brought this issue to light. Whereas Durkin noted 1% of instructional time allotted for reading comprehension instruction, the results from the current study note a marked increase to 25% of classroom observations. This increase in reading comprehension instruction may be attributed to a variety of reasons. First, it is possible that teachers are heeding the messages of researchers and practitioner-based publications, which have called for an increase in reading comprehension instruction. It is also possible that the surge in reading comprehension instruction is due to an abundance of professional development materials and instructional materials focusing on reading comprehension instruction.

Another promising finding pertains to the occurrence of reading comprehension instruction according to grade level. Researchers were encouraged to see that 1st- and 2nd-grade teachers incorporated strategy instruction into 23.7% and 28.9%, respectively, of class time. These findings seem to suggest that the work of many researchers (Block & Pressley, 2007; Pressley et al., 1992; Smolkin & Donovan, 2002; Snow et al., 1998) who advocate for comprehension instruction to begin in the primary grades has affected classroom instruction. There was a sharp decline in frequency of reading comprehension instruction in the 3rd-grade classrooms of the current study, with only 77 minutes or 11.2% of instructional time. In both states where data collection occurred, 3rd grade marks the start of high-stakes testing; therefore, it is possible that teachers prioritized preparation for state tests and, as such, provided less reading comprehension instruction.

Although these results are largely encouraging, it is difficult to truly evaluate how much reading comprehension instruction is enough to produce student gains and metacognitive readers. In other words, it is impossible to determine whether allotting 25% of classroom time to reading comprehension instruction is sufficient, unless we can link such instruction to student achievement. Thus, a lingering question stemming from the current study focuses on the effectiveness of reading comprehension in producing student gains. It is also logical to question whether this percentage of instructional time leads to students' independent use of reading comprehension strategies, which is ultimately the goal of teacher-directed comprehension instruction.

Although progress has certainly been made, there is still room for growth in the realm of teachers' use of reading comprehension instructional strategies. More specifically, we must address the relatively limited scope of reading comprehension strategies, and the reliance upon single-strategy instruction.

First, although the occurrence of strategy instruction appears to be on the rise, teachers still need more variety in the strategies that they teach. As previously noted, the most frequently occurring strategies were question asking, predicting or activating prior knowledge, and summarization. Similar to Durkin's (1978–1979) work three decades ago, teacher-generated questions by far dominated the reading comprehension instruction observed in the current study. It is possible that the relatively narrow number of reading comprehension strategies seen in the current study can be attributed to teachers' unfamiliarity with other comprehension strategies or to their lack of confidence in teaching other strategies. Another possibility is that teachers are relying solely upon the reading comprehension strategies predetermined by their instructional materials and are not deviating from what these instructional manuals prescribe; the Miller School, in particular, relied heavily upon its basal reader. In any case, we must help "primary educators . . . continuously and systematically add depth and breadth to the number of comprehension processes students learn" (Block & Lacina, 2009, p. 497).

It is also important to note the minimal inclusion of comprehension monitoring (19 minutes total) and the absence of multiple strategy instruction. Comprehension monitoring may have been minimal in classroom observations because of teachers' reluctance, or uncertainty, regarding how to model comprehension obstacles and fix-it strategies through think-alouds. Despite the effectiveness of multiple-strategy instruction, as demonstrated in studies with at-risk readers, remedial readers, and good, average, and poor comprehenders (Hacker & Tenet, 2002; Rosenshine & Meister, 1994), it may have been omitted from classroom instruction because of the difficulties that often emerge in cooperative learning approaches (Druckman & Bjork, 1994; Hacker & Tenet, 2002; McCaslin & Good, 1996).

It is also important to note that the teachers in the current study relied largely on single-strategy reading comprehension instruction, as opposed to multiple-strategy instruction. Teachers' reliance on single strategies may largely be due to instructional materials that encourage teachers to rely on a select number of tried-but-true single comprehension strategies, such as predicting, questioning, and activating background knowledge. Pressley (2001) pointed out that "of course, excellent readers do not use such strategies one at a time, nor do they use them simply when under strong instructional control." Thus, our challenge is to help teachers teach students to be self-regulated in applying reading comprehension strategies. Teachers may benefit from understanding Transactional Strategy Instruction (TSI) (Pressley et al., 1992), which prepares readers to become active and independent readers who coordinate the application of multiple reading comprehension strategies.

The findings of the current study offer important possibilities for ongoing professional development for teachers in the area of reading comprehension. Most important, professional development and teacher training must inform future and inservice teachers about the variety and importance of reading comprehension strategies. Porter, Garet, Desimone, and Birman (2003) noted that professional development focusing on specific instructional practices is most likely to increase teachers' use of these strategies. Furthermore, in an age of instructional accountability, teachers must be provided with the data and proof that these instructional practices have a positive impact on student achievement (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Stein, Schwan, & Silver, 1999). Professional development focused on reading comprehension also must include effective inservice support (Anders, Hoffman, & Duffy, 2000), as opposed to the "one shot" model of full-day sessions by external experts, in which teachers are passive participants and are likely to forget the majority of what was presented to them (Sandholtz, 2002). The objective with such professional development is to create informed teachers who become "aware of the comprehension strategies research literature [and select] from that literature the strategies and methods that [make] the most sense to them in light of their years of experience" (Pressley, 2006, p. 316).

FUTURE DIRECTIONS AND CONCLUDING THOUGHTS

The scope of the current study was limited to the type of instruction teachers provided in their English language arts classrooms; outside of the scope of the current study are the factors in teachers' backgrounds, training, and instructional beliefs that influence their instruction, all of which would be a logical follow-up qualitative component to the current study. After extensive classroom observations at the Benchmark School, often noted for its explicit instruction in reading strategies to high-ability students experiencing reading difficulties, Pressley, Gaskins, Wile, Cunicelli, and Sherida (1991) asked 31 teachers to explain their instructional decisions and their beliefs about strategy instruction. Findings indicated that teachers' instructional decisions were largely shaped by their experience and their knowledge and understanding of best-practices research. More recent qualitative inquiries about teachers' attitudes toward and beliefs about reading comprehension instruction have been conducted with preservice, rather than inservice, teachers (Theurer & Onofrey, 2006). Thus, logical follow-up work might focus on why teachers choose to include, or not to include, reading comprehension instruction, as well as the factors in their backgrounds, training, and beliefs that influence these decisions.

The current study has the potential to benefit preservice and inservice teachers. By understanding the degree to which reading comprehension instruction occurs in elementary classroom, we can begin to rethink the quantity and quality of explicit reading comprehension strategy instruction. Although much progress has been made since Durkin brought to light the lack of reading comprehension instruction, teachers in Grades 1 through 5 continue to need ongoing support in the whys and hows of reading comprehension instruction.

REFERENCES

- Anders, P. L., Hoffman, J. V., & Duffy, G. G. (2000). Teaching teachers to teach reading: Paradigm shifts, persistent problems, and challenges. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 719–742). Mahwah, NJ: Erlbaum Associates.
- Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretical view of basic processes in reading. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 255–291). New York: Longman.
- Baumann, J. F. (1984). The effectiveness of an instruction paradigm for teaching main idea comprehension. *Reading Research Quarterly*, 20(1), 93–115.
- Baumann, J. F., & Bergeron, B. S. (1993). Story map instruction using children's literature: Effects on first graders' comprehension of central narrative elements. *Journal of Reading Behavior*, 25, 407–437.
- Block, C. C. (1993). Strategy instruction in a student-centered classroom. *Elementary School Journal*, 94(2), 137–153.
- Block, C. C. (1999). The case for exemplary teaching, especially for students who begin first grade without the precursors for literacy success. In T. Shanahan (Ed.), *49th yearbook of the National Reading Conference* (pp. 71–85). Chicago: National Reading Conference.
- Block, C. C., Gambrell, L., & Pressley, M. (2002). *Improving comprehension instruction*. San Francisco: Jossey-Bass.
- Block, C. C., & Lacina, J. (2009). Comprehension instruction in kindergarten through grade three. In S. Israel & G. Duffy (Eds.), *Handbook of research on reading comprehension* (pp. 494–509). New York: Routledge.
- Block, C. C., Paris, S. R., & Whiteley, C. S. (2008). CPMs: Helping primary grade students self-initiate comprehension processes through kinesthetic instruction. *Reading Teacher*, 61(6), 440–448.
- Block, C. C., & Pressley, M. (2002). *Comprehension instruction: Research-based best practices*. New York: Guilford.
- Block, C. C., & Pressley, M. (2007). Best practices in teaching comprehension. In L. B. Gambrell, L. M. Morrow, & M. Pressley (Eds.), *Best practices in literacy instruction* (3rd ed., pp. 220–242). New York: Guilford.
- Brown, R., Pressley, M., Van Meter, P., & Schuder, T. (1996). A quasi-experimental validation of transactional strategies instruction with low-achieving second grade readers. *Journal of Educational Psychology*, 88, 18–37.
- Butler, D. L., Lauscher, H. N., Jarvis-Selinger, S., & Beckingham, B. (2004). Collaboration and self-regulation in teachers' professional development. *Teaching and Teacher Education*, 20, 435–455.
- Chall, J. (1983). *Stages of reading development*. New York: McGraw-Hill.
- Chall, J., & Squires, J. R. (1991). The publishing industry and textbooks. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research* (Vol. 2, pp. 120–146). White Plains, NY: Longman.
- Collins, C. (1991). Reading instruction that increases thinking abilities. *Journal of Reading*, 34, 510–516.
- Coyne, M. (1981). *An investigation of reading comprehension instruction and content instruction in fourth grade social studies*. Unpublished doctoral dissertation, University of Pennsylvania, Philadelphia.
- Cummins, C., Stewart, M. T., & Block, C. C. (2005). Teaching several metacognitive strategies together increases students' independent metacognition. In S. E. Israel, C. C. Block, K. L. Bauserman, & K. Kinnucan-Welsh (Eds.), *Metacognition in literacy learning: The theory, assessment, instruction, and professional development* (pp. 277–295). Mahwah, NJ: Erlbaum Associates.
- Denzin, N. K. (1989). *The research act: A theoretical introduction to sociological methods*. Englewood Cliffs, NJ: Prentice Hall.
- Dole, J. A., Brown, K. J., & Trathen, W. (1996). The effects of strategy instruction on the comprehension of at-risk students. *Reading Research Quarterly*, 31, 62–88.
- Dole, J. A., Nokes, J. D., & Dritis, D. (2009). Cognitive strategy instruction. In G. G. Duffy & S. E. Israel (Eds.), *Handbook of research on reading comprehension* (pp. 347–372). Hillsdale, NJ: Erlbaum Associates.
- Druckman, D., & Bjork, R. A. (Eds.). (1994). *Learning, remembering, believing: Enhancing team and individual performance*. Washington, DC: National Academy Press.

- Duffy, D. (2002). The case for direct explanation of strategies. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 28–41). New York: Guilford.
- Duffy, G., Lanier, J. E., & Roehler, L. R. (1980). *On the need to consider instructional practice when looking for instructional implications*. Paper presented at the Reading Expository Materials, University of Wisconsin-Madison.
- Duffy, G. G., & Roehler, L. R. (1989). Why strategy instruction is so difficult and what we need to do about it. In C. McCormick, G. E. Miller, & M. Pressley (Eds.), *Cognitive strategy research: From basic research to educational applications* (pp. 133–154). New York: Springer-Verlag.
- Duke, N. K., & Pearson, P. D. (2002). Effective practices for developing reading comprehension. In A. E. Farstrup & S. J. Samuels (Eds.), *What research has to say about reading instruction* (pp. 205–242). Newark, DE: International Reading Association.
- Durkin, D. (1978–1979). What classroom observation reveals about reading comprehension instruction. *Reading Research Quarterly*, 14, 481–533.
- Hacker, D., & Tenet, A. (2002). Implementing reciprocal teaching in the classroom: Overcoming obstacles and making modifications. *Journal of Educational Psychology*, 94(4), 699–718.
- Harris, A. J., & Sipay, E. R. (1990). *How to increase reading ability: A guide to developmental and remedial methods* (9th ed.). White Plains, NY: Longman.
- Kamil, M. (2003). *Adolescents and literacy: Reading for the 21st century*. Washington, DC: Alliance for Excellent Education.
- Knapp, M. S. (1995). *Teaching for meaning in high-poverty classrooms*. New York: Teachers College Press.
- Langer, J. A. (2000). *Beating the odds: Teaching middle and high school students to read and write well* (Report Series 12014). Albany, NY: University at Albany, State University of New York, National Research Center on English Learning and Achievement.
- Lipson, M. Y., Mosenthal, J. H., Mekkelsen, J., & Russ, B. (2004). Building knowledge and fashioning success one school at a time. *Reading Teacher*, 57, 534–542.
- McCaslin, M., & Good, T. L. (1996). The informal curriculum. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 622–673). New York: Simon & Schuster.
- Metsala, J. L., Wharton-McDonald, R., Pressley, M., Rankin, J., Mistretta, K., & Ettenberger, S. (1997). Effective primary grade literacy instruction = balanced literacy instruction. *Reading Teacher*, 50, 518–521.
- Morrow, L. M., Tracey, D. H., Woo, D. G., & Pressley, M. (1999). Characteristics of exemplary first-grade literacy instruction. *Reading Teacher*, 52, 462–476.
- National Center for Education Statistics. (2001). *The condition of education* (Appendix 1, Table 29–3). Washington, DC: U.S. Government Printing Office.
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implication for reading instruction: Reports of the subgroups*. Washington, DC: National Institute of Child Health and Development.
- Paris, S., Cross, D., & Lipson, M. (1984). Informed strategies for learning: A program to improve children's reading awareness and comprehension. *Journal of Educational Psychology*, 76, 1239–1252.
- Pearson, P. D. (2009). The roots of reading comprehension instruction. In S. Israel & G. Duffy (Eds.), *Handbook of research on reading comprehension* (pp. 3–31). New York: Routledge.
- Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary Educational Psychology*, 8, 317–344.
- Porter, A. C., Garet, M. S., Desimone, L. M., & Birman, B. F. (2003). Providing effective professional development: Lessons from the Eisenhower Program. *Science Educator*, 12(1), 23–40.
- Pressley, M. (1998). *Reading instruction that works: The case for balanced teaching*. New York: Guilford.
- Pressley, M. (2001, September). Comprehension instruction: What makes sense now, what might make sense soon. *Reading Online*, 5(2). Available: www.readingonline.org/articles/art_index.asp?HREF=/articles/handbook/pressley/index.html
- Pressley, M. (2006). *Reading instruction that works: The case for balanced teaching* (3rd ed.). New York: Guilford.
- Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Hillsdale, NJ: Erlbaum Associates.
- Pressley, M., & El-Dinary, P. B. (1997). What we know about translating comprehension strategies instruction research into practice. *Journal of Learning Disabilities*, 30, 486–488.
- Pressley, M., El-Dinary, P. B., Gaskins, I., Schuder, T., Bergman, J., Almasi, L., & Brown, R. (1992). Beyond direct explanation: Transactional instruction of reading comprehension strategies. *Elementary School Journal*, 92, 511–554.

- Pressley, M., Gaskins, I., Wile, D., Cunicelli, B., & Sherida, J. (1991). Teaching literacy strategies across the curriculum: A case study at Benchmark School. In J. Zutell & S. McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction: Fortieth yearbook of the National Reading Conference* (pp. 219–228). Chicago: National Reading Conference.
- Pressley, M., Goodchild, F., Zajchowski, R., Fleet, J., & Evans, E. D. (1989). The challenges of classroom strategy instruction. *Elementary School Journal*, *89*, 301–342.
- Pressley, M., Rankin, J., & Yokoi, L. (1996). A survey of instructional practices of primary teachers nominated as effective in promoting literacy. *Elementary School Journal*, *96*(4), 363–383.
- Pressley, M., Wharton-McDonald, R., Hampston, J. M., & Echevarria, M. (1998). The nature of literacy instruction in ten grade-4 and -5 classrooms in upstate New York. *Scientific Studies of Reading*, *2*, 150–191.
- Pressley, M., Yokoi, L., Rankin, J., Wharton-McDonald, R., & Mistretta, J. (1997). A survey of the instructional practices of grade 5 teachers nominated as effective in promoting literacy. *Scientific Studies of Reading*, *1*(2), 145–160.
- Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. *Review of Educational Research*, *64*, 479–530.
- Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, *66*, 181–221.
- Sandholtz, J. H. (2002). Inservice training or professional development: Contrasting opportunities in a school/university partnership. *Teaching and Teacher Education*, *18*, 815–830.
- Smolkin, L. B., & Donovan, C. A. (2002). “Oh, excellent, excellent question!”: Developmental differences and comprehension acquisition. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 140–157). New York: Guilford Press.
- Snow, C. (2002). *Reading for understanding: Towards a R&D program in reading comprehension*. Washington, DC: RAND Reading Study Group.
- Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stein, M. K., Schwan, M. S., & Silver, E. A. (1999). The development of professional developers: Learning to assist teachers in new settings in new ways. *Harvard Educational Review*, *69*, 237–269.
- Taylor, B. M., Pearson, P. D., Clark, K. F., & Walpole, S. (1999). Effective schools/accomplished teachers. *Reading Teacher*, *53*(2), 156–159.
- Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary grade reading instruction in low-income schools. *Elementary School Journal*, *101*(2), 121–166.
- Taylor, B., Peterson, D., Pearson, P. D., & Rodriguez, M. (2002). Looking inside classrooms: Reflecting on the “how” as well as the “what” in effective reading instruction. *Reading Teacher*, *56*(3), 270–279.
- Theurer, K., & Onofrey, K. (2006). Tell me what you know: Preservice teachers’ attitudes towards teaching comprehension. *Reading Matrix*, *6*(1), 113–120.
- Trabasso, T., & Bouchard, E. (2002). Teaching readers how to comprehend text strategically. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 176–200). New York: Guilford Press.
- van den Broek, P., & Kremer, K. (2000). The mind in action: What it means to comprehend during reading. In B. M. Taylor, M. F. Graves, & P. van den Broek (Eds.), *Reading for meaning: Fostering comprehension in the middle grades* (pp. 1–31). New York: Teachers College Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wolcott, H. F. (1988). Ethnographic research in education. In R. M. Jaeger (Ed.), *Complementary methods for research in education* (pp. 187–249). Washington, DC: American Educational Research.

APPENDIX
Observation Code Directory

<i>Category of Code</i>	<i>Code</i>	<i>Abbreviation</i>	<i>Explanation of Code</i>
Noncomprehension codes	Silent reading	SILENT	Here the teacher encourages students to silently read nonfiction or fiction text.
	Oral reading	ORAL	Here the teacher leads students in orally reading nonfiction or fiction text, either in whole-group or small-group instruction. This also includes students listening to the teacher orally read or oral reading through taped books.
	Word skills instruction	WORD	This code was allotted for instruction geared toward building students' skills in automatic word recognition and decoding. This code was applied to general instruction in phonics, phonemic awareness, and spelling.
	Writing instruction	WR	Here the teacher leads students in a writing-based activity, including writer's workshops, shared writing, writing conferences, peer editing, and independent writing practice.
	Assignment	ASSIGN	The teacher checks, gives, or assists students with an in-class or out-of-class assignment. This code also includes the teacher assessing students on assignments, such as giving tests, reviewing homework or classwork assignments, and conferencing with students on individual work. In these assignments, students work independently without teacher-centered instruction.
	Noninstruction	NON	This code is used when the teacher is not engaged in instructional behavior. This may include recoding grades, checking papers, behavior management, or noninstructional conversation.
	Transition	TR	The teacher gives transitory directions, including taking out or putting away materials and shifting instructional topics.
	Oral language activities	OR-LANG	Here the teacher leads students in activities to facilitate their oral language development, including morning meetings, whole-group conversations, or general instances where oral language is the primary instructional focus.
	Technology-based activities	TECH	Here the teacher uses technology as an instructional resource to extend and reinforce other literacy-based instruction. This code includes technology-based instruction, such as the use of SmartBoards, wikis, Internet searches, and computer games.

(Continued)

APPENDIX
(Continued)

<i>Category of Code</i>	<i>Code</i>	<i>Abbreviation</i>	<i>Explanation of Code</i>
Reading comprehension codes	Vocabulary instruction	VOCAB	As the National Reading Panel (NRP, 2000) suggests that vocabulary and comprehension are inherently linked, this category was used for strategies ascertaining the meaning of unknown words, including general vocabulary building, context clues, dictionary work, and teacher-generated explanations of unfamiliar words (Duke & Pearson, 2002).
	Predicting/prior knowledge	PR	As explained by Duke and Pearson (2002), prediction is a family of strategies including making predictions, evaluating the accuracy of these predictions based on further reading, activating prior knowledge, and overviewing texts.
	Comprehension monitoring	CM	Here the teacher asks and encourages students to be metacognitive and aware of their understanding during reading. The teacher provides students with fix-it strategies to clarify comprehension difficulties. Comprehension monitoring can include teacher-led think-alouds.
	Text structure	TS	The teacher provides students with information on how to use narrative and informational text structure to understand text. This can include plot, sequencing, characters, and events in narrative text and text features such as titles, headings, pictures, captions, typography, charts, graphs, glossaries, and appendices in informational text.
	Question answering	QA	The teacher asks students to answer text-based questions as a comprehension strategy. Students independently search for answers in the text. Here the teacher provides feedback on the correctness of student responses.
Question generation	QG	The teacher asks students to generate questions from the text as a comprehension strategy. Questions can be of the who, what, why, when, where, and how nature. In addition to posing questions, students are responsible for answering them.	
Summarization	SUM	The teacher asks students to summarize informational text either orally or in writing. Here the teacher asks students to identify the main ideas and central points in a text.	

(Continued)

APPENDIX
(Continued)

<i>Category of Code</i>	<i>Code</i>	<i>Abbreviation</i>	<i>Explanation of Code</i>
Visual representations		VR	The teacher encourages students to make visual representations of a text, through graphic organizers or mental images. Graphic organizers can include any type of visual or semantic organizers intended to assist students with comprehension and to understand the meanings and relationships in text.
Multiple strategy instruction		MSI	Here the teacher guides students in applying several procedures with flexibility and appropriate application to increase comprehension. For this code, comprehension instruction must include at least two or more combinations of the following four strategies: question generation, summarization, clarification, and prediction (NRP, 2000).