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“IT’S REALLY COOL BECAUSE I GET TO
LEARN STUFF”: TEACHING AND
LEARNING ON, AN ORIGINAL
READING COMPREHENSION
STRATEGY, IN AN ELEMENTARY
CLASSROOM

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"IT'S REALLY COOL"

"It's Really Cool Because I Get to Learn Stuff": Teaching and Learning ON, an Original
Reading Comprehension Strategy, in an Elementary Classroom

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and

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Abstract

This collaborative study examined teaching and learning Old and New (ON), an innovative reading comprehension strategy, in an inclusive third grade classroom. Data consisted of researcher notes and evaluation sessions, student interviews, demographic information, and Grade Equivalent (GE) scores on the Standardized Test of Assessment of Reading (STAR). Researchers noted surprising student learning achievements throughout the instruction. The average GE increase for the spring semester, measured after the students had worked with ON (0.85), was more than twice as great as the increase for the semester prior to ON instruction (0.38). One-tailed *t*-test analysis of the scores ($\alpha = 0.25$) resulted in a *t* of 2.789 (critical value = 2.120). ON appears to have major benefits for early elementary reading comprehension.

One day near the end of the first semester, I gave my students a simple paragraph I had written on ants. It described what they had learned over the previous two weeks by observing, discussing, and writing about a glassed-in ant colony. It was a summary of what they already knew and contained no unfamiliar words. I intended it as a way to help them see the whole picture and experience the project in an organized piece of writing. However, two students had questions about a lot of the vocabulary. They were making stabs at decoding without much success and were very unhappy about it. Three others also appeared to be having decoding problems and hid behind other students in the hopes of remaining undetected. Seeing they were embarrassed, I asked them some leading questions about word-attack strategies, to no avail. Four other students, who knew the vocabulary in the passage, seemed absolutely lost when I asked easy post-reading comprehension questions to get a discussion going. I was frustrated, to say the least. I did not want to explain any part of the text before the students read it. I did not want to lead them through it by the nose. I did not want simply to teach them how to get through this one text. I was truly at a loss as to what to do, and I felt the time I'd spent teaching them reading comprehension skills had been a sad waste.

Old and New (ON) is a reading comprehension metastrategy Amy invented while a doctoral student doing research on teacher learning (Hazelrigg, 2004). A few years ago, she developed plans to investigate children's understanding of ON. Carleen, a veteran classroom teacher of thirteen years, was a master's student who had taken several

of Amy's courses. The two educators began their work by discussing the possibility of conducting an action study of ON in Carleen's third grade classroom. As a way of arriving at a consensus on critical reading comprehension issues, they collaborated on writing the above hypothetical account of teacher and student frustrations. It reflects their view that struggling readers face problems on a number of levels: low decoding skills, an inability to talk about their reading problems, and trouble making inferences and connecting ideas. It expresses their belief that elementary teachers often feel something is missing in reading instruction.

Reading comprehension strategy instruction (RCSI) has been a spotlighted topic in the research on literacy education in North America since the 1970s (Gambrell, Block, and Pressley, 2002; Park, J. Y., 2012). A number of recent assessments (Pearson & Dole, 1987; Trabasso & Bouchard, 2002) of the link between RCSI research and practice have pointed out that not much has changed in the classroom since Durkin observed that teachers were primarily assessing comprehension rather than teaching it (1978-1979). The same studies have shown that although researchers have proposed a large number of reading strategies that appear to work (Collins, 1991; Anderson, 1992; Keene & Zimmermann, 1997; Harvey & Goudvis, 2007), the techniques are not appearing in classrooms. Reading problems continue in the persistent gap between the tested proficiency of mainstream readers and that of minority and poor children (NAEP, 1999; Au, 2002) and in the more generally occurring reading difficulties of the so-called "struggling" or, more recently, "striving" reader (McKenna, 2002; Strickland, Gansky, & Munroe, 2002; Allington, 2006).

A critical time in reading development for children in these groups occurs in late third to fourth grade, when the goal of reading instruction often makes a whole-scale shift from "learning to read" to "reading to learn" (Jacobs, 2005, 171) and reading material simultaneously changes from a steady diet of narratives to a more varied one encompassing the expository texts of the content areas (Fitzgerald, 1995; NAEP; Ogle & Blachowicz, 2002). Accepted research in linguistics and education on narrative structure and cognitive processing maintains that narrative is easier for young children to comprehend, in part because it is a familiar cultural form (Labov & Waletzky, 1967; Stein & Glenn, 1979). Expository text, by contrast, poses the challenges of new subject matter and unfamiliar genres (Reutzel, Camperell, & Smith, 2002).

Two strains in the professional literature of the last two decades have tightened and refocused the discussion of RCSI and expanded what is available for teachers in the way of methods. One strain recognizes that RCSI is most successful when the strategic reader is the instructional goal rather than "the mechanical application of strategy checklists" (Grabe, 2004)—when RCSI comes in the form of purposeful, almost holistic "routines" like Reciprocal Instruction (Palinscar & Brown, 1984), Questioning the Author (Beck, McKeown, Hamilton, & Kucan, 1997), and Transactional Strategy Instruction (Pressley et al., 1992). These approaches or techniques are in effect collections of strategies that privilege interaction and are aimed at the development of the metacognitive reader who can independently monitor and repair her own comprehension. The second strain has been the proliferation of books on RCSI focused on expository text, frequently in the context of discussions of content area literacy (Harvey, 1998; Alverman & Phelps, 2002; Daniels & Zemelman, 2004; Montelongo & Herter, 2010)).

Nevertheless, the RCSI tradition, as far as it exists, is to teach repertoires of individual strategies, leaving the teacher and the student without an answer to the question of which strategies are best used under a multiplicity of different conditions including text type, reading purpose, and the proficiency of the individual student. The complexity of choosing appropriate strategies is multiplied in the case of expository text. Despite the problems, teacher modeling and student practice in such strategies as visualizing, predicting, summarizing, and self-questioning, as well as various "fix-up" strategies (Harvey & Goudvis, 2000), are the accepted cornerstones of RCSI. Unfortunately, too, the holistic routines—as well-conceived as they are and as successful as they have been in research situations—may be impractical for widespread classroom adoption.

Transactional Strategy Instruction is a broad program requiring extensive integration of school resources; Reciprocal Instruction demands extensive pre-instruction and deft management of peer interactions; Questioning the Author would require most teachers to engage in probing self-examination of their classroom discussion styles; all three undoubtedly necessitate a major rededication of classroom time. Another difficulty is that all varieties of struggling readers may benefit the least from existing strategy instruction as they try to make the desired move to independent reading. Readers with extremely limited vocabulary and syntactic processing skills are faced with basic decoding challenges that hamper meaning-making across stretches of text—across phrases, whole sentences, and discourse (Anderson & Freebody, 1981; Nagy, 1988; Bentin, Deutsch, & Liberman, 1990; Cain, 2007).

In 1986 the psychologist Jerome Bruner described metacognition as "a master routine that knows how and when to break away from straight [cognitive] processing to

corrective processing procedures" (p. 130). Amy developed ON as a kind of external, explicit master routine that would provide a streamlined, uncomplicated "way in" to monitoring comprehension. It would enable the identification of comprehension breakdowns and open a space for the teacher to check student understanding and provide instruction in corrective measures—in appropriate fix-up strategies, in other words. ON is a heuristic for discovering what is understood and what is not understood as the student reads. Beyond simply identifying what is Old and what is New in the text, it does not ask the reader to perform mental operations "on top of" trying to understand the text: no mental pictures, no summaries of the text, no questions to the self. While such operations can be used with ON, they are not guiding principles.

ON depends on an understanding of two simple constituents of what in linguistics is called Information Flow—the presentation of the unfamiliar in the context of the familiar to enable comprehension (Chafe, 1992). Virtually all text, both spoken and written, presents or attempts to present New information. Expository text has a special interest in the New, of course. New information can consist of facts, points of view, analyses, syntheses. For the purpose of communicating effectively with the reader, a writer presents New information in the light of Old information. This procedure allows construction of the text so that New information is understandable. As a text unfolds, New information automatically becomes Old information. What is New in the first sentence is Old by the time the author mentions it in a subsequent sentence. Additional New information follows it, in turn. This cycle of New-to-Old-to-New allows the construction of arguments and the telling of stories. All text follows the same pattern if it is well-written. A science text might begin with a description of evaporation and build to

a picture of the entire water cycle. The information on evaporation is at first New, but by the time the text discusses the water cycle, the information on evaporation is Old and can be embedded in the account of the water cycle. A typical story begins by describing characters and setting. By the time the action begins to unfold, the account of characters and setting constitutes Old information.

"Old" as used in ON differs from "Known" as used in the well-known K-W-L reading comprehension strategy (Ogle, 1986). In K-W-L, "Known" refers to background information or what the student knows *before* reading the text. In ON, "Old" means what is *previously mentioned in the text*. If students can identify what is Old and what is New—can *distinguish* meaningfully between them, in other words—then comprehension has occurred. If they cannot make the Old/New distinction, a comprehension breakdown has occurred and needs repair through the use of fix-up strategies such as rereading, investigating vocabulary, parsing syntax, reading ahead, and asking for help. The student may use other strategies (such as visualizing and summarizing) to assist the process. Awareness of the breakdown comes first through the use of ON as a guiding strategy; the search for appropriate fix-up strategies comes next.

ON involves the following steps and features:

1. Students and teacher work together to identify Old and New information. *New* signifies information *mentioned for the first time in the text*. As pointed out above, *Old* applies to information that has been *previously mentioned in the same text*. The entire first sentence in a text is always called *New*.
2. Students and teacher work through the text, sentence by sentence, eventually aiming at locating New information that also qualifies as “important.” The teacher continually

challenges student judgments about information status. Students must support their claims that something is Old or New with reference to the text so that their knowledge of these concepts is monitored and expanded and close reading is encouraged. For example, early in ON instruction students often identify synonyms and pronouns as New, but deft challenging from the teacher can lead them to realize that the concepts represented by these words are Old. If a pronoun or a synonym for a word mentioned previously is corrected identified as Old, the teacher asks the student to state its antecedent or synonym. (See Appendix A for an example of ON text analysis.)

3. The teacher helps continually in the search for appropriate fix-up strategies when problems block correct identification of Old and New. Does discussion suffice? Are dictionaries necessary? Can the student parse a complex sentence to reveal the relationship between the clauses? Can simple rereading or reading ahead help? Throughout the enactment of ON, the teacher treats disagreements among students regarding Old and New information status as inevitable and healthy.

ON shares features with other reading strategies, especially synthesizing, which Keene describes as maintaining "cognitive track of the main ideas, themes, and topics while reading" (2002). It differs from existing approaches, however, in its application of the Old/New principle within a single text, and it offers a specific heuristic or algorithm for cognitive tracking. Keene & Zimmermann, Harvey & Goudvis, and Tovani (2000) focus on the process of connecting what is being read to background knowledge. ON expands the well-known connections proposed by these writers (text-to-self, text-to-text, and text-to-world) to include text-to-*same*-text connections.

Perhaps the most unusual feature of ON is its recognition and inclusion of simultaneous cognitive processes. Although simple to carry out, the process of distinguishing between Old and New encompasses a number of interrelated and necessary sub-processes: understanding propositions, recognizing comprehension gaps, decoding, learning unfamiliar vocabulary, comprehending longer chunks of text, making connections between various parts of the text, and synthesizing. ON is a guiding strategy because it forces the enactment of these processes, which are vital to master along the road to reading fluency, and, ultimately, to critical reading.

Methodology

Carleen's third graders were chosen as the participants for this study because the class was diverse and inclusive and because well over half the students needed reading intervention. In addition, the total enrollment of 20 students had remained stable since the beginning of the school year. At that time, only seven students had tested at or above grade level on the STAR. The school itself, here called Main Street Elementary, has 300 students and serves grades one to three. Seventy percent of the students are from families below the poverty line. Approximately one-third are Native American, one-third are Hispanic, and one-third Caucasian. The town where the school is located, "Appleton," has a population of approximately 7,500. Energy resource mining is the major local industry. Citizens depend on a nearby city for most of their material needs and entertainment.

Following the cyclical approach to qualitative action research first suggested by Lewin (1948), Amy and Carleen worked on identifying a general idea and available resources and planned the broad outlines of the research in the fall of 2006. They

committed themselves to recurring evaluation of the data along the way and, if necessary, periodic reformulation of research objectives. They conceived of the study as a qualitative, interpretive examination of teaching and learning processes (Anderson, Herr, & Nihlen, 1994) using ON as content. They initially decided against using standardized tests but concluded later that pre- and post-study STAR results should be used.

Researchers would take field notes and come to a consensus on how well the class as a whole was doing after each instructional session. Thought was given to collecting student work to determine broad patterns of understanding, but since the students would be doing a great deal of revision of answers based on the teacher's challenges and accompanying negotiation of meaning, "right" and "wrong" answers would be difficult to identify. In simplest terms, the interest of the study was in whether or not the information presented would make sense to third graders, and, by implication, how pedagogical processes might need adjustment to suit the needs of students at that level. The research question that emerged from the researchers' discussion was, *Can ON be successfully taught and learned in a third grade classroom?*

The broad research plan involved Amy teaching Carleen's students for two or three 20-minute sessions a week during their reading period, for a total of 10 weeks. Carleen was to take detailed notes on classroom events. Amy would construct her field notes shortly after each teaching session. The researchers were to compare notes after each session and hold longer evaluation meetings when necessary. Amy would conduct individual audiotaped interviews with the students at the end of the semester.

In line with Bruner's definition of scaffolding as "the steps taken to reduce the degree of freedom in carrying out some tasks so that the child can concentrate on the

difficult skill she is in the process of acquiring" (1978, p. 19), the researchers decided that the study would demand little from the students beyond the task of learning ON.

Instruction sessions would consist of teacher-directed mini-lessons. Amy would write the texts so that the difference between Old and New would be clear and other cognitive challenges minimized. Texts were to be nonfiction in nature and one to several paragraphs in length. At first, the texts would be very short and based on the immediate, concrete world the students already knew, then increase gradually in length and add gentle challenges in vocabulary, syntax, and conceptual abstraction. Supporting visuals would accompany only the first few paragraphs.

Because of their differences in positioning, the researchers had differing concerns and questions at the start of the study. Carleen was dubious about how much the students would learn about this new strategy in the time available, and yet she—as well as the school's principal—was interested in comparing before and after standardized reading comprehension test scores on the state-mandated tests the students were required to take. Amy thought 10 weeks of instruction would have positive benefits for the students' reading development, but that the gains might not be measurable on the standardized instrument. She was most concerned about explaining the concepts of intratextual Old and New to third graders.

It was decided that data analysis would focus on frequent assessment of student responses as detailed in researcher field notes. The central area of interest was the focus of the research question: Were the students understanding ON? Despite their separate concerns, both researchers were deeply curious about how the study would unfold. These children had no experience of ON or anything faintly resembling it. ON had never been

taught *anywhere*, as far as they knew, except to a limited extent by the teachers in Amy's earlier study, and their students had been sixth graders. What would happen to the metacognitive knowledge of these third graders, if anything? How would they react to the necessary self-questioning and the challenging questions from the teacher? How would they adjust to the extensive rereading involved in the process—a behavior students often find onerous because they feel it signifies they have failed in some way? How would they respond affectively to ON? Would they find it engaging, or would the close reading required become tiresome?

The Teaching-Learning Spiral

Using the spiral approach to action research, Amy and Carleen continually paused to evaluate how the students were responding to ON instruction and based their next steps on insights stemming from their assessment. They noted seven major stages in the research (relevant teaching texts are in italics, texts are numbered, and paragraphs in Text 7 are indicated by letters):

1. Text 1 *Kim*

 Kim is my friend. She likes funny clothes. She likes paper hats. She likes big shoes.

One-paragraph texts supported by photographs were used for Sessions 1 and 2. The students were quiet and noncommittal during Session 1, but the researchers were astonished to discover during Session 2 that most of the class was understanding and correctly applying the definitions of Old and New except for some occasional reversal of the two terms. Amy introduced the idea that a pronoun referring to an antecedent is Old

information. Although the concepts of Old and New were obviously transparent to the students, Amy felt instruction should continue along the same lines for a while for the sake of reinforcement. Since the students were understanding ON so well, however, she decided to dispense with visuals as soon as possible. Amy's notes for Session 2 indicate that the children were "lively," Carleen's that they were "more vocal" than during Session 1.

2. Text 2 *Mom*

My mom uses many garden tools. She uses a lawnmower.

She uses a shovel. She uses a rake. She uses a hoe.

Text 3 *Dad*

Dad likes to cook for the family. He can make cheese enchiladas.

He can make roast chicken. He can make fried bread. He can make vegetable soup. He can make cherry pies. He can make huge salads.

Four of the five paragraphs analyzed during Sessions 3 through 7 were unaccompanied by visuals. During Session 7, the researchers had another surprise. In 15 minutes, the students silently completed pencil analysis of Texts 2 and 3 without any help from the teacher. Over-the-shoulder checks on their progress showed that the vast majority were working rapidly and with confidence and accuracy. Previous exercises had required twice the time, even with teacher support. The researchers decided to push the students in two ways in future sessions: engaging in more verbal negotiation and identifying fix-up strategies to deal with unfamiliar vocabulary.

3. Text 4 *Daffodils*

Daffodils are flowering plants. They have blossoms. Plant blossoms can be many colors. The colors can be yellow, red, and pink. They can also be white.

The class rose to these challenges in Session 8 and 9. Amy pointed out that a word could not be said to be Old or New if its meaning was unfamiliar. Before she realized what was happening, before she had even mentioned what she knew was probably an unfamiliar word in Text 4, *blossoms*, five students had pulled dictionaries out of their desks and were intently searching for it. Throughout the lesson, the class responded with enthusiasm to constant reminders that they prove their assertions about Old and New. As the researchers hoped it would, "they" in the second sentence caused some heated discussion: It was Old, but did it stand for "daffodils" or "flowering plants"? "They" in the last sentence was Old, but did it stand for "colors" or "yellow, red, and pink"? Why did it matter? The researchers felt that the continuing student engagement pointed to the need to push the cognitive demands of the texts much further.

4. Text 5 *Mail*

What happens after people put mail into mailboxes? First it is collected by the mail carrier. Then it is driven to the post office. Next it is unloaded. Then it is separated into piles for different zip codes. After being sorted, it is packed into boxes.

Text 6 *How We Eat*

People around the world eat with different things. In India, people use their carefully-washed hands. In Japan, China, and Korea, people eat with chopsticks. Spoons are also used in the Far East. In America, most people use spoons, but they also use knives and forks. These utensils are also used in Europe

Texts 5 and 6, taught during Session 11, presented several hurdles. For one, they were longer than previous texts; for another, they contained a greater number of multi-syllabic words. In particular, Text 5 required the students to see that the word *sorted* in the last sentence was an exact synonym not simply for one word but for a six-word phrase in the previous sentence, "separated into piles for different zip codes." Text 6 was structured so that there were two lines of Old/New information rather than just one—one line on geographic location and one on types of utensils. In addition, "Far East" needed to be seen as a synonym for "Japan, China, and Korea." Although the students took slightly longer to process the more demanding language structures in these texts, most of them never stumbled. Carleen and Amy felt that their problem-solving was smooth and unproblematic. The students had unquestionably accumulated considerable understanding of the process of tracking ideas through a text and systematically repairing comprehension problems. After this session, Amy decided to take the plunge of writing a text of several paragraphs (a "mini-book," she called it in class) that would require the students to connect ideas across longer stretches of writing. (Note that correct place names were used in the text given to students in the following sessions, but they are changed here for reasons of confidentiality.)

5. Text 7 *Appleton in the Spring*

A. *Several times a week, I drive from my home to teach Mrs. Scheidegger's third grade class in Appleton. From the highway, I see a wide, shiny, green river. The speed limit is 55. The limit is now 45. A sign says, "Trucks Turning." Behind the river are sandstone cliffs. There is a cave in the rocks. The speed limit is 55 again. Farther on, there are green fields and budding trees. There are houses and ranches and businesses. The speed limit is 40. A sign says "Welcome to Appleton."*

B. *There is a stoplight at Appleton Highway and 5th Street. Main Street Elementary is to the left. Going straight, I see Doggy Clips on the right, then Fisherman's Nook. There are many other businesses. One of them sells backhoes. Along the way, huge cottonwoods are beginning to leaf out. I take a left turn at Appaloosa. Along this road I see goats, ponies, and several freshly-plowed gardens. At the corner of Avenue A, I see the campgrounds property with a long, beautiful row of bright purple lilacs along the front fence.*

C. *I drive back to Appleton Highway along Appaloosa and turn left. At South Rancho Street, I go right. A sign on South Rancho says, "River Access." There is a business called Mini-Storage. I see the Cultural Complex. It's a large place with many sports areas. One of them is the Soccer Complex. At the end of the road is Riverside City Park. It has a pretty white gazebo.*

D. *Appleton is located in the Valencia Basin. This geologic formation is huge. It has four boundaries. To the north are the Oro Mountains. To the south is Roosevelt City. To the east is Estancia. To the west are the Navajo*

Mountains. The Basin has many mesas, canyons, and valleys. They were formed by erosion beginning about 65 million years ago. Other geologic formations in the Basin include famous rocks like Camel Rock. It is 1,700 feet high and is about 60 miles from Appleton.

E. I drive to the Smithfield Ruins Museum. It is two miles west of the town. It is another famous area in the Valencia Basin. It shows some of the history of this part of the world. One section of the Museum contains the ruins of an ancient pueblo that was built of sandstone and timbers from the Basin. Another contains the ruins of the house of an Anglo settler. The Puebloan people lived in the area from 1100 to 1300. Navajos probably started coming in the 1400s, maybe earlier. Hispanics arrived in the 1500s, and Anglos started coming in the 1870s. The Smithfield Ruins Museum shows signs of spring. The willows and cottonwoods are leafing out. The cholla cactus is blooming.

F. I drive back from Smithfield Ruins to Appleton, turn left at the stoplight, turn right at the next street, and park in front of Main Street Elementary. I see another sign of spring near the front wall of the school—yellow daffodils. As I walk to Mrs. Scheidegger's room, I pass by the gym, the music room, the pods, and the outdoor courtyard. The courtyard is fascinating. It contains an elevated pond, large pots of plants, and art projects. Then I walk to the best part of the school, Mrs. Scheidegger's classroom. All of my friends are there, finishing their morning snacks and greeting me. We are ready to talk about Old and New and reading once again.

Texts 7A, 7B, and 7C were used for Sessions 12, 13, and 14. They dealt with familiar sights in and near Appleton. A few words (*erosion, formations, willows*) were intended to provoke discussion of meaning and searches for fix-up strategies. In general, Text 7 contained a higher syllable-to-word ratio than the earliest texts. Amy emphasized two new ideas for the students: 1) even though the first sentence of the first paragraph should be considered New, the first sentence of ensuing paragraphs did not necessarily contain entirely New information; 2) when searching for New information, important ideas should be the goal rather than function words—or "little words," as she termed them. The researchers were in agreement that the students were successfully using these concepts by the end of session 14. In addition, because the class as a whole had begun to finish analysis of the texts very rapidly—working ahead of the teacher and becoming obviously bored as a result—the researchers decided that the next two paragraphs of the mini-book would contain information that was more abstract and difficult to process.

6. For Amy—less so Carleen, who was better-acquainted with the students' general knowledge—the surprise during Sessions 15 and 16 was that the class had major difficulties with the subject matter in Texts 7D and 7E. The first of the two paragraphs describes the history of a well-known archaeological site a few miles from Appleton; the second discusses the large geologic basin in which the town is situated. The researchers conferred later about the comprehension problems and decided that scaffolding had been insufficient despite the pre-reading information presented and the students' presumed familiarity with the two locations. It turned out that the students knew very little about the ruins and the basin, and were so occupied with understanding concepts associated with maps and aerial photographs that they could not focus on working with Old and

New. Afterward, Amy and Carleen conferred about the content of the unfolding mini-book and the STAR. It was at that point in time that Amy agreed, with some reluctance, to include student STAR scores. The researchers decided that one more mini-book paragraph would be taught on more familiar subject matter and that the last day of instruction would present the class with the entire six-paragraph text.

7. For the last day of work with text, Amy taped the final version of the mini-book to the board, formatted as a single running text, and gave a copy to each student. There were three typewritten pages. She asked the students to spread the pages out on their desks exactly as the text was arranged horizontally on the board. In the past, Amy had worked with the students sentence-by-sentence. This time she asked them to read the entire text independently and identify Old ideas from the beginning to the end. A single instruction was given: "Tell me where to draw arrows between Old and any previous mention of the ideas, and then draw the same arrows on your copy." When discussion began, Amy had difficulty keeping up with their rapid-fire answers, partly because she became fascinated with watching them as they worked. Most had the focus and confidence of professionals, it seemed to her: totally on-task, intensely engaged, eyes and brains and pencils working in concert. Carleen was equally impressed.

Student Interviews

With a few minor exceptions, all students were asked the same questions in their individual interviews (See Appendix B.) The two questions designed to uncover their opinions of ON elicited sixteen very positive responses. (Results from four students were not considered to be clear and were labeled "unresponsive.") The following comments were typical:

"I like it. . . . I think it's fun."

"It's cool and fun."

"I think it's good."

"I thought it was great."

"It's pretty cool."

When asked for their reasons, 11 students described the process itself, sometimes including implicit definitions of *Old* and *New*. For example, when asked why he thought ON was "fun," one student said,

That we get to do lines and a bunch of other stuff, and, um, about Old and New, when, um, it's . . . sometimes we do not know if it's Old, and, um, we look it up in the dictionary, and then we find what it means, and then, um, if it's a word that we saw before, we put one line under it, and if it's New, we put two lines under it.

Five students gave reasons that reflected metacognitive awareness. One said, "I like it because it helps me out on reading a lot, and it helps me go back and look at the words and tell me if it's Old or New. And it tells me what kind of sentence it is." Another said, "You can read the sentences more better because you just take the Old and you take what you know already and then you take what's New and you put that . . . and you put it all together."

Question 4 was designed to uncover student opinions on the difficulty level of the information presented. Of the 13 responsive answers, three indicated without qualification that the students thought the approach was easy. No one said it was consistently difficult. The other 10 students differentiated their responses. Interestingly, only three of these students judged the process to be difficult or easy on the basis of

whether or not the vocabulary of the texts was familiar to them. The other seven focused on the learning process, with responses like the following:

"The first time I did it, it was, like, hard because you went kind of fast."

"It was difficult sometimes because you tried to take parts of stories that you already heard, and because we were making the book, we had to take the part that started the next story, and we already knew Old and stuff; New we had to watch out."

"It was hard at first, but it's easy whenever you get to know what Old and New . . . more and more, what you know about it."

The purpose of questions 2, 3, and 5 was to determine the students' perception of their understanding of Old and New. All of the 13 clear responses indicated a definite grasp of the concept of first and second mention. *Old* and *New* were invariably defined in terms of whether or not a concept or word had been "seen before" or "heard before." One student said that *Old* signified that a word was in a "previous paragraph or sentence." Another stressed that *New* meant "brand-new." All of the comments were made in contexts that demonstrated the students were talking about words or concepts found within the same text.

The purpose of the fourth line of questioning was to obtain a sense of what the students remembered about different levels of information in the mini-book. The most commonly recalled details involved the familiar in the children's lives: their classroom, the streets of the town, the names of various local businesses, and natural objects such as flowers, rock formations, and bodies of water. The paragraphs on the geologic basin and the archaeological ruins were a different matter. For example, only three students produced the name of the large geologic formation spontaneously, and two of them did

not seem able to give details about it. The third asked, with fair accuracy, if the area was "a mountain or something like that." A fourth, when asked, "Do you remember the basin?" replied affirmatively with considerable excitement.

Reading Scores

STAR GE scores were obtained for the children in September and December of 2006, prior to the study, and in May of 2007 at the end of the study. Figure 1 shows the comparison between average student improvement from September to December and average improvement from December to May. The important result is that the average GE increase for the semester the students worked with ON (0.85) was more than twice as great as the increase for the semester prior to their ON instruction (0.38). A one-tailed *t*-test analysis with an alpha level of .025 resulted in a *t* of 2.789 (critical value = 2.120), establishing the major statistical significance of the difference.

In addition, in December of 2006, 12 students scored below third-grade level (< 3.0). Their average GE was 2.4. Of those 12, eight were above 3.0 GE in May of 2007. Sixty-seven percent of the 12 had moved to GE scores of 3.0 or better following ON training. Their GE average was 3.6.

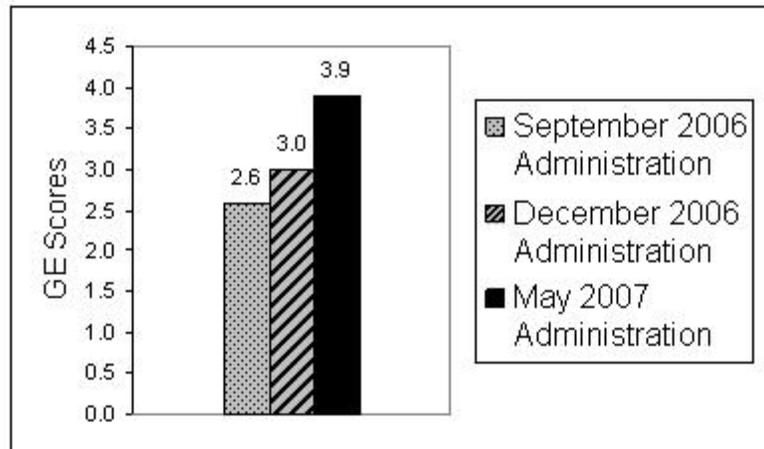


Figure 1. Changes in average STAR GE scores over time

Conclusions, Implications, and Limitations

The excellent progress in reading comprehension demonstrated by this classroom's STAR results represents a hopeful correlation between ON instruction and comprehension improvement. Other variables could well have been factors, of course. The simple presence of a guest teacher might have contributed to student focus or expectations of self. Classroom reading instruction outside the study might have been different in some yet-unidentified way during the second semester.

Since over half of this class went from a mean STAR GE of 2.4 in December to one of 3.6 in May, and since this group included Special Education students as well as untested students for whom English was a second language, there is a need for future ON research with special populations. Comparing Title I and ESL students with regular populations could yield important results.

The researchers feel that the most interesting and important question is how to integrate published texts into ON instruction. Transitioning students to analyzing writing

that is not scaffolded in the manner of researcher-written ON texts would involve a number of considerations. School textbooks in the content areas are by and large written to include frequent, clear links between text and graphics. In addition, the point of view of textbook writing occasionally jumps for a moment from third person to second person ("Have you ever seen a sinkhole?") or moves the student from considering a theoretical account of a phenomenon to inserted directions for conducting an experiment—and back again to theory. Such shifts in point of view or purpose as well as the relationship of text to graphics would doubtlessly require additional explanation while teaching ON.

Another expansion to ON would seem to involve utilizing texts—authentic or otherwise—with examples of conceptually important function words. In this study, function words were largely ignored for the sake of scaffolding students through relatively simple texts; however, it should be noted that the function word "also" in the fourth sentence of Text 6 operates as a logical clue to the information status of "the Far East." Adverbs and conjunctions that mark the relationships of words to each other, especially words signaling opposition, like *but* and *however*, will need attention and perhaps elevation to a special category of New.

It seems clear from the study that third graders in a not-atypical American classroom with a fair proportion of below-average readers can learn ON in a reasonable length of time and that their reading proficiency may well improve significantly because of it, at least in the short term. Classroom behavior and responses to interview questions underscore the fact that students seem to enjoy doing ON and do not find it difficult.

At this age students also appear to learn the basic concepts of Old and New so readily that they can graduate to less and less scaffolded forms of text in a short period of

time, with careful attention paid to their capability for understanding abstractions. Even though a number of Carleen's students had some difficulty with two of the paragraphs in Text 7, it was clear that ON instruction had helped them make an entry into the texts. In retrospect, what is startling about this classroom's understanding of ON was the fact that over half the students learned it well enough to be able to talk about it as a linguistic principle.

A clue to the success of ON is that it is *streamlined* yet contains fortunate "unavoidables" that force the enactment of a series of *complex* processes. The mental act of distinguishing between Old and New information requires the identification and repair of comprehension breakdowns and leads to an understanding of intratextual coherence. Moreover, language and content are learned simultaneously. ON also appears to elicit intense student engagement at this grade level. In all likelihood, it has the attraction of puzzle-solving and therefore appears to make close reading intriguing rather than burdensome. Because it is transparent yet typically offers immediate rewards, ON may also inspire intellectual confidence

What cannot be answered by this study alone is how far the participants' understanding of ON permeated their lives and how long it will continue to help them with their reading comprehension. An encouraging surprise, however, was their frequent mention of using ON with other assignments and at home during leisure reading. Nine students said that they used ON with out-of-school books like "bedtime stories" and "chapter books" from the public library. Two of those students said they wrote about ON at home in their diaries. Four of them talked about discussing ON with a parent and teaching it to younger siblings. The fact that neither Amy nor Carleen had suggested they

literally take the strategy home points to how well they had accepted and internalized it. The move to home also suggests that ON can be used in settings beyond a single classroom and even beyond the school. Eventually, the goal of ON is to create independent readers for whom the process of knitting ideas together across a text is automatic. That objective, as well as the obvious need students will have to use ON at higher and higher reading levels throughout their schooling, suggests the importance of using and studying it in whole-school contexts and in community-based literacy initiatives.

Appendix A

In this sample text analysis, New information is underlined twice, Old once. The first sentence is New because all of it is being mentioned, so to speak, for the first time. Function words are ignored because they are not conceptually important in this

paragraph. In Sentence 2, "she" is Old because it is a pronoun standing for "puppy." "They" in Sentence 4 is also a pronoun. Its antecedent is "toys." "Ball," "stuffed rabbit," and "rag" must be considered New even though they are foreshadowed by "toys." They add information to the broader category. In Sentence 5, "little dog" is Old because it is a synonym for "puppy."

¹This puppy's name is Amanda. ²She is chubby. ³She has three toys. ⁴They are a ball, a stuffed rabbit, and a rag. ⁵This little dog is very happy.

Appendix B

Student Interview Questions

1. *What do you think about Old and New?*

2. *Tell me how we do Old and New.*
3. *If you had to explain Old and New to a new student, what would you say?*
4. *Is Old and New fun or boring? Confusing or easy?*
5. *What does New mean? Old?*
6. *Have you thought about Old and New when you were reading other stuff in class?*
7. *What about kids who really, really have trouble reading? Can it help them?*
8. *Tell me about what you remember from the book about Appleton.*

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