



Why Reciprocal Teaching?

Carolyn J. Carter

Teachers in Highland Park, Michigan, conducted research and began an effective reading instruction program for students who were not succeeding in school. Reciprocal Teaching raised hopes, expectations, and student achievement in less than one year.

- Poverty
- Rigid school structure
- Lack of training
- Few resources and supportive systems
- Deeply entrenched resistance to change
- Low teacher morale
- Low student achievement
- Abysmal test scores
- Low graduation rate

In 1992, these indicators had combined to doom the Highland Park, Michigan, school district to the limbo of possible takeover or sanctions by the state. Even when honest attempts to develop responsive Chapter 1 intervention programs were launched in Highland Park (a small district in Detroit, with almost 100 percent African-American enrollment), nothing seemed to work. The children were not learning, and the teachers were frustrated, unhappy, and exhausted.

In that school year, when I assumed responsibility for student achievement (as curriculum director first and later as assistant superintendent), I faced the challenge of my professional career: giving the teachers hope and stimulating student achievement. My first goal was to bring elementary student achievement to at least the minimum standard required by the Chapter 1 program. Three out of four Highland Park elementary schools faced the sanction of Program Improvement status—the designation given to schools that are unable to reach National Curve Equivalent (NCE) targets and so are required to revise their Chapter 1 plans under state oversight and approval. Making the challenge even more daunting were the new core curriculum requirements, accompanied by new teaching strategies, new testing systems, and new school improvement teams that consumed even more teacher time. My second, parallel goal concerned secondary-level student achievement—which was perhaps even more dismal. In 1993-94, Michigan adopted a two-tier high school diploma system: endorsed and standard. Examinations for these diplomas began in the 10th grade, through the Michigan Educational Assessment Program (MEAP).

- "Endorsed" diplomas were those in which students met only minimal standards (at about the 50 percent level) in reading, mathematics, and science.
- "Standard" diplomas represented satisfactory scores (at about the 75 percent level) on the exam.

Thus, endorsement standards are lower than the state standard for satisfactory performance. Accordingly, students can receive "endorsement" even when they fail to attain a satisfactory score on the MEAP. However, their school cannot receive accreditation unless 66 percent of the students have met or exceeded the state standard for reading, math, and science. And if schools fail to receive accreditation status, they face state sanctions including closure, state takeover, or vouchers for parents to send their children elsewhere.

In 1993-94, fewer than 30 percent of Highland Park's graduating seniors had attained scores high enough to qualify even for endorsed diplomas. The 10th and 11th graders also posted dismal records. By anyone's estimate, achievement was not taking place in Highland Park despite some Herculean efforts to reverse this state of affairs.

That same year, we decided to take advantage of the extra chances that high school seniors were given to be retested for the diplomas—even though retest results were discouraging. Previous test preparation efforts had generated few students whose scores improved as a result of the intervention tried—regardless of the nature of the intervention. The typical average percentage of students who improved on MEAP retests was less than 5 percent. Yet despite these discouraging figures, the Highland Park curriculum office developed what we called a "quick-fix test preparation intervention" to help high school students—particularly the seniors—score higher on the MEAP.

For both goals, we surveyed the research on urban students, cognitive science, and reading comprehension and decided that we would try Reciprocal Teaching.

Why Research? Why Reciprocal Teaching?

With a clear focus and purpose in mind and mounds of encouraging research findings, we chose Reciprocal Teaching because of its emphasis on reading comprehension—particularly in the short term. This program involves training students to use four strategies that are associated with both improving reading comprehension and self-monitoring of comprehension while reading (Palinscar and Brown 1984; Palinscar 1984, 1986). The four strategies are (1) generating questions, (2) summarizing, (3) clarifying, and (4) predicting.

We needed to provide immediate support to the seniors and other students, but we chose Reciprocal Teaching for its ease of use and flexibility with various teaching styles and formats. The following summarizes our rationale for using Reciprocal Teaching.

- Reciprocal Teaching has been heralded as effective in helping students improve their reading ability in pre-post trials or research studies (Pearson and Doyle 1987, Pressley et al. 1987). According to Bruer (1993), Reciprocal Teaching helps novice readers learn and internalize the strategies excellent readers employ. When engaging in Reciprocal Teaching strategies, the novices are practicing and developing the skills required to comprehend and learn. Further, trials employing Reciprocal Teaching have consistently indicated that the technique

promotes reading comprehension as measured on standardized reading tests. Bruer reports that one researcher, Annemarie Palinscar, experimented with the technique in a variety of ways: (1) one-to-one tutorials, (2) small-group sessions facilitated by trained reading specialists, (3) small-group sessions taught by general classroom teachers with no specialized training, (4) whole-group instruction in the technique by teachers with no specialized training, and (5) small-group sessions led by students who were peers of the students in the groups.

In all cases, student comprehension improved—even in the groups facilitated by students. These promising findings convinced us that this strategy could be just what Highland Park needed.

- We felt that the technique was ideal because it provided numerous options for teaching and reinforcing the strategies. We believed that getting the teachers to buy in would be considerably easier than if we asked teachers to learn a completely new model.
- Because the technique is easily understood and mastered by both teachers and students, regardless of the level of training in reading research and applications (or even ability to read), we felt confident that this technique would provide us with a model we could use to teach parents (and volunteers) how to help promote comprehension among their children—and therefore reinforce reading skills that would help students develop further.
- Best of all, Reciprocal Teaching parallels the new definition of reading that describes the process of reading as an interactive one, in which readers interact with the text as their prior experience is activated. Using prior experience as a channel, readers learn new information, main ideas, and arguments. Most important, readers construct meaning from the text by relying on prior experience to parallel, contrast, or affirm what the author suggests. All excellent readers do this construction. Otherwise, the content would be meaningless alphabetic squiggles on the page. Without meaning construction, learning does not take place. Reciprocal Teaching is a model of constructivist learning.

What Is Reciprocal Teaching?

A metaphor may help us understand Reciprocal Teaching strategies. Imagine that inside your brain resides a person who goes into action every time you read (or attempt to learn something new). Imagine this person is a sentry who stands guard—at the ready—to inform you if what you are reading makes sense to you. She will let you know whether you have really understood the content during (and after) your reading. She says, for example, as you read, "I agree with that," or "I understand that," or "It is similar to (or different from) _____ that I know about," or "I disagree with that—it is different from what my experience has taught me to be true."

The sentry informs you when meaning is cloudy or nonexistent, as if she were saying, "Wait a minute, I don't get it," or "What exactly is this thing?" In reality, this sentry is a process—a thinking and monitoring process called metacognition—which informs all readers when understanding takes place and when it does not.

The metacognition sentry is at work when you realize that you can speed ahead past a slow part of the text (you already understand it; or you don't see the relevance of reading this, given the purpose you have for reading). Metacognition informs you when you encounter something interesting or

substantive and suggests that you slow down so as to savor what is being communicated, to glory in the splendor of the message as it unfolds.

The sentry is at work when you reread a passage with frustration because meaning did not flow to you at first. Without good metacognitive abilities, readers have little facility to understand what they read simply because, for them, the process of constructing meaning will not take place. Reciprocal Teaching helps students develop their metacognitive "sentries."

Reciprocal Teaching is characterized as a dialogue that takes place between the teacher and students (or student leader and members of the group) that results in students' learning how to construct meaning when they are placed in must-read situations (tests or assignments). Reciprocal Teaching derives from the theory that reading for meaning and retention—what is referred to as *study reading*—requires effort, a full repertoire of comprehension strategies, and the flexibility to use these strategies as the situation requires. The dialogues incorporate four strategies, as mentioned earlier: generating questions, summarizing, clarifying, and predicting.

How We Developed Our Reciprocal Teaching Program

After we decided to use Reciprocal Teaching, our next task was to develop a system for teaching students the strategies. We turned to the Chapter 1 program and developed short-term interventions, intensive classroom support for teachers, and opportunities to provide services for many students. Using Chapter 1 funds, we established (and later expanded) a team of 10 professional and paraprofessional educators at each school except the high school. At our K–2 school, we deployed two teachers and two paraprofessionals. We called these teams the Academic Response Teams. The teams worked with small groups of students (six to eight) who experienced difficulty in math and reading achievement. The aim was to teach each child how to boost his or her learning through instruction in metacognitive skills. We first focused on mathematics and social studies classes because we felt these two areas were key routes to higher achievement on the MEAP.

The mission of the teams was to pull students from mathematics and social studies classrooms and teach them the techniques of Reciprocal Teaching daily for 30 minutes, 20 days in a row. We began the experiment in the fall of 1993 with some specific objectives in mind:

- To ensure that students at highest risk received instruction in monitoring and regulating their reading comprehension.
- To help teachers realize firsthand the benefits of small-group dialogues as vehicles of comprehension because these matched the new definition of reading exactly.
- To encourage a new basic requirement among teachers: proficiency in using the Reciprocal Teaching technique.

We designed our program to focus on the actual problems that students were having. To do this, we carefully chose the teachers who would be working with the most challenging students. These teachers would sometimes work in their own classrooms and sometimes in other classrooms or resource rooms—ours was both a "pull-out" and "push-in" program. Selected team members led staff development

sessions related to curriculum and instruction issues, and we challenged these teachers to incorporate Reciprocal Teaching techniques into their staff development sessions.

Annemarie Palinscar, co-creator of the Reciprocal Teaching technique, agreed to assist Highland Park in the initial training. Following a session with Palinscar, team members worked in two groups: mathematics and social studies. I challenged them to construct their own meaning about Reciprocal Teaching and develop an approach they might use to teach students the four strategies.

For three weeks, team members discovered what Reciprocal Teaching meant in their own practice, found ways to use it to improve student learning, and created staff development activities that they could use to help ease the staff into the process. Through daily dialogues regarding Reciprocal Teaching and through practice with the strategies on live bodies (the high school students who had failed to achieve endorsed diplomas as a result of their MEAP scores), the teams began to jell.

The transition was not as smooth as I envisioned. Although cooperation among all segments of staff was exceptional, some teachers expressed concern about the process and the time it took to follow it in their classrooms—even though the process involved teaming with them and supporting their attempts to promote learning for a short time.

Taking Reciprocal Teaching Further

Following the short-term training program with teachers and high school students, our next step was to launch the program at the elementary level. We wanted to boost all students' abilities to comprehend symbols and words they encounter in their classes. We anticipated returning better students to their classrooms, and we planned to monitor the students throughout the school year to determine if they had improved. We asked the Academic Response Teams to develop plans for teaching Reciprocal Teaching techniques to identified elementary students and the entire 3rd grade population (who would be taking their first MEAP test the following year, 1994-95).

In November 1993, we deployed teams of mathematics teachers, reading teachers, and paraprofessionals. We assigned one team of three reading teachers, two mathematics teachers, and five paraprofessionals to each elementary school. We also provided each 3rd grade teacher with video courses in reading research (teaching reading in the elementary classroom and developing literacy) and used Reciprocal Teaching strategies to generate daily, weekly, and monthly dialogues among the teachers regarding the research and its meaning.

In addition, we partnered with Berlitz and provided all 3rd grade students with six weeks' instruction in French through Berlitz, Jr., a constructivist foreign language program. The entire 1993-94 year was devoted to developing staff proficiency in using Reciprocal Teaching strategies; we became convinced that the program should become a staple of classroom teachers.

How Reciprocal Teaching Raised Student Achievement

One convincing result of the program was that our high school students seeking endorsement in reading and mathematics made significant gains in MEAP scores. This time, instead of the customary 2-3

percent retest gains, Highland Park students posted gains that exceeded 25 percent in some of the test areas. As a result, more students received endorsed diplomas than had been anticipated. For seniors, 29 percent received three endorsements on the first test; on the retest, 43 percent received three endorsements. This suggested that students were learning how to learn and were understanding more of what they read. Armed with this knowledge (and the feedback from teachers and students regarding the benefits of Reciprocal Teaching), we provided more staff development in reversing low student achievement.

All of Highland Park's students are improving. The 1994 state assessment reports were a delightful surprise. Whereas many Michigan school districts experienced a decline in their 4th grade reading scores, Highland Park 4th graders doubled theirs—from 14.4 to 28.8 percent in one year (fig. 1). And they more than doubled their scores in math. (These were the former 3rd graders who had received the intensive Reciprocal Teaching tutoring.) The higher test scores are encouraging and certainly sweet nectar for educators who went in search of solutions in uncharted areas.

Figure 1. Comparison of Highland Park MEAP Reading Scores, 1991–1994 (percent)

Grade	1994	1993	1992	1991
4th	28.8	14.4	9.8	8.6
7th	9.3	10.9	8.6	12.8
10th	23.2	13.3	22.4	10.6

Note: MEAP = Michigan Educational Assessment Program. Percentages represent the proportion of students meeting state standards in reading. The 4th graders tested in 1994 had received intensive instruction in Reciprocal Teaching reading comprehension strategies in the 1993–94 school year. Reading scores for the next two years' groups of 4th graders continue to improve: for 1995, 31.5 percent; for 1996, 39.6 percent.

Sandra Thompson, Title One Coordinator, reports ongoing progress for Highland Park: for 1995, 31.5 percent of 4th graders met or exceeded the state standard; for 1996, the percentage was 39.6. Even though these scores are nothing to crow about, the urban Highland Park students, most of whom are from minority families with low socioeconomic status, have achieved higher scores than many urban, rural, and suburban school districts in Michigan. Much work remains to be done; teachers continue to collaborate and consult research for solutions to the problems of low student achievement.

The district's teachers now know that research-based applications—such as Reciprocal Teaching—can be used to help students learn. What a breakthrough! Now, Highland Park can also boast that a significant percentage of its staff understands the application of reading research. Accordingly, the

once dim future offers brighter hopes for student achievement in Highland Park. This alone is worth celebrating because high hopes precede high expectations, which, the research tells us, precede high student achievement.

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Carolyn J. Carter is Assistant Professor at the University of Toledo, College of Education, Department of Curriculum and Instruction, 346 Snyder Memorial, Toledo, OH 43606 (e-mail: ccarter@utnet.utoledo.edu).

Introducing Reciprocal Teaching and Teaching Roles



Lesson 1: Connecting

1. Put students in groups of four*.
* For bigger groups, there are roles for Connecting and Visualizing
2. Distribute one cueing card to each student.
3. Using the cueing card as a reference, model each role as a “think aloud” with a shared text.
4. Students will then use their cueing cards to read a portion text and note information they needed to clarify in order to understand the text and read on (self-monitoring).
5. Encourage students to use note-taking strategies such as selective underlining or sticky-notes to help them better prepare for their role in the discussion, to use their Fix-Up Strategies cards, or to make a list of pieces of information/words/phrases they needed to clarify.
* It is good for student teams to have access to a dictionary and thesaurus.
6. Students will then use their cueing cards to read the text and stop to list connections for Text to Self, Text to Text, and Text to World.
7. Groups then share and discuss their connections.
8. Signal for the groups to stop sharing and conduct a whole group discussion.
9. In work stations, students then take turns working in groups and each being the Connector for a portion of the text, then sharing out with the group.

Optional ~ Chart in Students' Reading Notebooks:

Text-to-Self Connections:	
1.	
2.	
Text-to-Text Connections:	
1.	
2.	
Text-to-World Connections:	
1.	
2.	



Lesson 2: Clarifying

- 1-5. Repeat above.
6. Groups then share and discuss their lists of clarifications and strategies (Fix-Up) they used to understand the word/sentence/phrase, etc.
7. Signal for the groups to stop sharing and conduct a whole group discussion.
8. In work stations, students then take turns working in groups and each being the Clarifier for a portion of the text, then sharing out with the group.

Optional ~ T-Chart in Students' Reading Notebooks:

What I needed to clarify:	Strategy used to clarify:

Lesson 3: Questioning

- 1-5. Repeat above.
6. Students will then use their cueing cards to read the text and stop to write questions. After they have finished reading the text, they need to be able to answer their questions.
7. Groups then share and discuss their questions and have each other discuss the answers to their questions.
8. Signal for the groups to stop sharing and conduct a whole group discussion.
9. In work stations, students then take turns working in groups and each being the Questioner for a portion of the text, then sharing out with the group.

Optional ~ T-Chart in Students' Reading Notebooks:

Questions:	Answers:



Lesson 4: Visualizing

1-5. Repeat above.

6. Students will then use their cueing cards to read the text and stop to note or place sticky flags in places in the text where the author gave specific descriptions, when the author wrote something that made the student imagine something, and how they could explain this portion of the text to someone who listened to it as a read-aloud.

7. Groups then share and discuss their visualizations. This is an activity for verbalizing what the reader should be thinking/envisioning while reading that section of the text.

8. Signal for the groups to stop sharing and conduct a whole group discussion.

9. In work stations, students then take turns working in groups and each being the Visualizer for a portion of the text, then sharing out with the group.



Lesson 5: Summarizing

- 1-5. Repeat above.
6. Students will then use their cueing cards to read the text and note key words. Students use key words to write a 1-2 sentence summary of what they read.
7. Groups then share and discuss their summaries.
8. Signal for the groups to stop sharing and conduct a whole group discussion.
9. In work stations, students then take turns working in groups and each being the Summarizer for a portion of the text, then sharing out with the group.

Optional ~ Key Word Summary Cards

<p>K E Y W O R D S</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Summary:</p>	<p>K E Y W O R D S</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Summary:</p>
<p>_____</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p> <p>_____</p>
<p>K E Y W O R D S</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Summary:</p>	<p>K E Y W O R D S</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Summary:</p>
<p>_____</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p> <p>_____</p>

Lesson 6: Predicting

- 1-5. Repeat above.
6. Students will then use their cueing cards to read the text and stop to make predictions, cite supporting evidence, and confirm outcomes.
7. Groups then share and discuss their lists of predictions, evidence, and outcomes.
8. Signal for the groups to stop sharing and conduct a whole group discussion.
9. In work stations, students then take turns working in groups and each being the Predictor for a portion of the text, then sharing out with the group.

Optional ~ 3-Column Chart in Students' Notebooks:

Prediction	Evidence	Actual Outcome



After Each Roll has been Taught:

1. The group of students uses 1 set of cue cards.
2. Each student takes a different role and the students all read a portion of the text.
3. Students share out using their notes and charts.
4. Students pass their cue cards to the right, and repeat steps 2-3
5. This continues until the entire section is read and each student has had a chance to practice a small section of text with each role.



In Small Groups:

1. When students start Reciprocal Teaching in their small groups, they will have their role for 1 day, and will read one section or chapter. They will then choose another role for each subsequent day.
2. Students should use rigorous and vocabulary-rich text such as articles, short text, or chapter books on their independent reading level (accuracy rate is 95% or higher).

