

Reciprocal Teaching

No studies of the *reciprocal teaching* instructional method that fall within the scope of the Students with Learning Disabilities review protocol meet What Works Clearinghouse (WWC) evidence standards. Because no studies meet WWC evidence standards, at this time, the WWC is unable to draw any conclusions based on research about the effectiveness or ineffectiveness of *reciprocal teaching* on students with learning disabilities. Additional research is needed to determine the effectiveness or ineffectiveness of this intervention.

Program Description¹

Reciprocal teaching is an instructional method designed to help teach reading comprehension skills to students with adequate decoding proficiency. During initial instructional sessions, the teacher introduces four comprehension strategies: summarizing, questioning, clarifying, and predicting. Then, the teacher and student read several passages that include narrative or informational text. The teacher thinks aloud while reading to model the four strategies, and the teacher also leads a discussion after the passage has been read. The student responds to the teacher's summaries, makes additional predictions and clarifications about the text, and answers the teacher's questions. Gradually, as the student's skills develop, the student assumes responsibility for using the strategies and leading the discussion. This provides the student with strategy practice and allows the teacher to monitor and offer additional instruction as needed. *Reciprocal teaching* may be implemented with large groups or as peer tutoring, with the adult teacher monitoring.

Research²

The WWC identified 54 studies of *reciprocal teaching* for students with learning disabilities that were published or released between 1989 and 2013.

One study is within the scope of the Students with Learning Disabilities review protocol but does not meet WWC evidence standards. This study was a single-case design study that did not have at least three attempts to demonstrate an intervention effect at three different points in time.

Forty studies are out of the scope of the Students with Learning Disabilities review protocol because they have an ineligible study design.

- Eight studies do not use an eligible study design (comparison group or single-case).
- Thirty-two studies are secondary analyses of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Thirteen studies are out of the scope of the Students with Learning Disabilities review protocol for reasons other than study design.

- Ten studies did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled, as required for review under this protocol.
- Three studies used the intervention in a way that did not fall within the scope of the review because the intervention was bundled with other components.

References

Studies that do not meet WWC group design standards

None

Study that does not meet WWC pilot single-case design standards

Briganti, N. C. (1995). *Reintegration of students with learning disabilities using reciprocal teaching, cooperative learning, peer tutoring, and transenvironmental programming* (Unpublished doctoral dissertation). University of Maryland, College Park. This study does not meet standards because it does not have at least three attempts to demonstrate an intervention effect at three different points in time.

Studies that are ineligible for review using the Students with Learning Disabilities Evidence Review Protocol

Alfassi, M. (1998). Reading for meaning: The efficacy of reciprocal teaching in fostering reading comprehension in high school students in remedial reading classes. *American Educational Research Journal*, 35(2), 309–332.

This study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.

Andrews, J. F. (2012). Reading to deaf children who sign: A response to Williams (2012) and suggestions for future research. *American Annals of the Deaf*, 157(3), 307–319. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention such as a meta-analysis or research literature review.

Beaumont, C. J. (1999). Dilemmas of peer assistance in a bilingual full inclusion classroom. *Elementary School Journal*, 99(3), 233–254. This study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.

Bender, W. N., & Council for Exceptional Children. (2008). *Differentiating instruction for students with learning disabilities: Best teaching practices for general and special educators*. Thousand Oaks, CA: SAGE Publications. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Bianco, M., & Watson, S. M. R. (2008). *Reading comprehension instruction for English language learners with learning disabilities: Validated instructional practices*. Retrieved from <http://www.cldinternational.org> This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Billingsley, B. S., & Ferro-Almeida, S. C. (1993). Strategies to facilitate reading comprehension in students with learning disabilities. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 9(3), 263–278. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Brown, A. L., Campione, J. C., Reeve, R. A., Ferrara, R. A., & Palincsar, A. S. (1991). Interactive learning and individual understanding: The case of reading and mathematics. In L. T. Landsmann (Ed.), *Culture, schooling, and psychological development* (pp. 136–170). Hillsdale, NJ: Erlbaum. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Brown, A. L., & Palincsar, A. S. (1989). Guided cooperative learning and individual knowledge acquisition. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 393–451). Hillsdale, NJ: Erlbaum. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Cowden, P. A. (2012). Cognitive strategies for students with mild learning disabilities. *Education*, 133(1), 151–154. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

- Daniels, H. (1993). Coping with mathematics in the national curriculum: Pupil strategies and teacher responses. *Support for Learning, 8*(2), 65–69. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Deshler, D. D., Palincsar, A. S., Biancarosa, G., & Nair, M. (2007). *Informed choices for struggling adolescent readers: A research-based guide to instructional programs and practices*. Newark, DE: International Reading Association. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Diehl, H. L. (2005). *The effects of the reciprocal teaching framework on strategy acquisition of fourth-grade struggling readers* (Unpublished doctoral dissertation). West Virginia University, Morgantown. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- DiLorenzo, K. E. (2011). *The effects of reciprocal teaching on the science literacy of intermediate elementary students in inclusive science classes* (Unpublished doctoral dissertation). Florida Atlantic University, Fort Lauderdale. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Dion, E., Fuchs, D., & Fuchs, L. S. (2007). Peer-mediated programs to strengthen classroom instruction: Cooperative learning, reciprocal teaching, classwide peer tutoring and peer-assisted learning strategies. In L. Florian (Ed.), *The Sage handbook of special education* (pp. 450–459). London, England: SAGE Publications Ltd. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Gajria, M., Jitendra, A. K., Sood, S., & Sacks, G. (2007). Improving comprehension of expository text in students with LD: A research synthesis. *Journal of Learning Disabilities, 40*(3), 210–225. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Gersten, R., Williams, J. P., Fuchs, L., Baker, S., Koppenhaver, D., Spadorcia, S., & Harrison, M. (1998). *Improving reading comprehension for children with disabilities: A review of research. Final report*. Jessup, MD: ED Pubs. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Greenday, K. J. (2007). *Reciprocal teaching and self-regulation strategies: The effects on the strategy acquisition and self-determination of students with disabilities* (Unpublished doctoral dissertation). Arcadia University, Glenside, PA. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Hager, A. (2003). Learning to use reciprocal teaching: One teacher's journey. *Michigan Reading Journal, 35*(3), 25–29. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Helfeldt, J. P., & Henk, W. A. (1990). Reciprocal question-answer relationships: An instructional technique for at-risk readers. *Journal of Reading, 33*(7), 509–514. This study is ineligible for review because it does not implement the intervention in a way that falls within the scope of the review—the intervention is bundled with other components.
- Henry, L. A., Castek, J., O'Byrne, W. I., & Zawilinski, L. (2012). Using peer collaboration to support online reading, writing, and communication: An empowerment model for struggling readers. *Reading & Writing Quarterly: Overcoming Learning Difficulties, 28*(3), 279–306. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Johnson-Glenberg, M. C. (2000). Training reading comprehension in adequate decoders/poor comprehenders: Verbal versus visual strategies. *Journal of Educational Psychology, 92*(4), 772–782. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Kim, W., Linan-Thompson, S., & Misquitta, R. (2012). Critical factors in reading comprehension instruction for students with learning disabilities: A research synthesis. *Learning Disabilities Research & Practice, 27*(2), 66–78.

This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

- Klingner, J. K., & Vaughn, S. (1996). Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as a second language. *Elementary School Journal*, 96(3), 275–293. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Levin, M. C. (1989). *An experimental investigation of reciprocal teaching and informed strategies for learning taught to learning-disabled intermediate school students* (Unpublished doctoral dissertation). Columbia University Teacher's College, New York. This study is ineligible for review because it does not implement the intervention in a way that falls within the scope of the review—the intervention is bundled with other components.
- Marks, M., & Pressley, M. (1993). Three teachers' adaptations of reciprocal teaching in comparison to traditional reciprocal teaching. *Elementary School Journal*, 94(2), 265. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Marston, D., Deno, S. L., Kim, D., & Diment, K. (1995). Comparison of reading intervention approaches for students with mild disabilities. *Exceptional Children*, 62(1), 20–37. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Martin, B. J. (1989). *The effect of metacognitive strategy instruction on the problem-solving skills of disadvantaged/handicapped vocational students* (Unpublished doctoral dissertation). Clemson University, SC. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Masters, L. F., Mori, B. A., & Mori, A. A. (1999). *Teaching secondary students with mild learning and behavior problems: Methods, materials, strategies* (3rd ed.). Austin, TX: Pro-Ed Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- McClanahan, B. (2009). Help! I have kids who can't read in my world history class! *Preventing School Failure*, 53(2), 105–112. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Means, B., Chelemer, C., & Knapp, M. S. (1991). *Teaching advanced skills to at-risk students: Views from research and practice*. San Francisco, CA: Jossey-Bass Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Meltzer, L. J., Roditi, B. N., Haynes, D. P., Biddle, K. R., Paster, M., & Taber, S. E. (1996). *Strategies for success: Classroom teaching techniques for students with learning problems*. Austin, TX: Pro-Ed Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Michaux, R. P. (2011). *The effects of reciprocal teaching on at-risk 10th grade students* (Unpublished doctoral dissertation). Walden University, Minneapolis, MN. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Mitchell, D. (2008). *What really works in special and inclusive education: Using evidence-based teaching strategies*. London, England: Routledge. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Palincsar, A. S. (1991). Scaffolded instruction of listening comprehension with first graders at risk for academic difficulty. In A. McKeough & J. L. Lupart (Eds.), *Toward the practice of theory-based instruction* (pp. 50–65). Hilldale, NJ: Erlbaum. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Palincsar, A. S., & Brown, A. L. (1989). Classroom dialogues to promote self-regulated comprehension. In J. Brophy (Ed.), *Advances in research on teaching* (volume 1, pp. 53–72). Greenwich, CT: JAI Press. This study is ineligible

for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

- Palincsar, A. S., & David, Y. M. (1992). Classroom-based literacy instruction: The development of one program of intervention research. *Disorders of Human Learning, Behavior, and Communication*, 65–80. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Palincsar, A. S., David, Y., Winn, J., & Stevens, D. (1991). Examining the context of strategy instruction. *Remedial and Special Education (RASE)*, 12(3), 43–53. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Palincsar, A. S., & Herrenkohl, L. R. (1999). Designing collaborative contexts: Lessons from three research programs. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning. The Rutgers Invitational Symposium on Education series* (xii ed., pp. 151–177). Mahwah, NJ: Lawrence Erlbaum Associates Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Additional source:

- Palincsar, A. S., & Herrenkohl, L. R. (2002). Designing collaborative contexts: Lessons from three research programs. *Theory Into Practice*, 41(1), 26–32.
- Palincsar, A. S., Winn, J., David, Y., Snyder, B., & Stevens, D. (1993). Approaches to strategic reading instruction reflecting different assumptions regarding teaching and learning. In L. J. Meltzer (Ed.), *Strategy assessment and instruction for students with learning disabilities* (pp. 247–270). Austin, TX: Pro-Ed Publishers. This study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Parmer, L. J. (1997). *Effects of an integrated format for reading instruction on the comprehension and word-recognition performance of fourth- and fifth-grade students who exhibit severe reading problems* (Unpublished doctoral dissertation). University of Southern Mississippi, Hattiesburg. The study is ineligible for review because it does not implement the intervention in a way that falls within the scope of the review—the intervention is bundled with other components.

Additional source:

- Parmer, L. J., Thames, D. G., & Kazelskis, R. (1997, November). *Effects of an integrated format for reading instruction on the comprehension and word-recognition performance of fourth- and fifth-grade students who exhibit severe reading problems*. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Memphis, TN.
- Platt, J. M., & Olson, J. L. (1997). *Teaching adolescents with mild disabilities*. Belmont, CA: Wadsworth Publishing. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Reed, D. K., Sorrells, A. M., Cole, H. A., & Takakawa, N. N. (2013). The ecological and population validity of reading interventions for adolescents: Can effectiveness be generalized? *Learning Disability Quarterly*, 36(3), 131–144. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Reid, D. K. (1993). Learning disorders and the flavors of cognitive science. In L. Meltzer (Ed.), *Strategy assessment and instruction for students with learning disabilities: From theory to practice* (pp. 5–22). Austin, TX: Pro-Ed Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Reid, D. K., & Kuykendall, M. (1996). Literacy: A tale of different belief systems. In D. K. Reid, W. P. Hresko, & H. L. Swanson (Eds.), *Cognitive approaches to learning disabilities* (3rd ed., pp. 497–544). Austin, TX: Pro-Ed Publishers. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

- Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. *Review of Educational Research, 64*, 479–530. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Scheid, K., & LINC Resources, Inc. (1989). *Cognitive and metacognitive learning strategy instruction: Its relevance for media and material design. The instructional methods report series*. Columbus, OH: Information Center for Special Education Media and Materials. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Speece, D. L., MacDonald, V., Kilsheimer, L., & Krist, J. (1997). Research to practice: Preservice teachers reflect on reciprocal teaching. *Learning Disabilities Research & Practice, 12*(3), 177–187. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Swanson, H. L. (1999). Reading research for students with LD: A meta-analysis of intervention outcomes. *Journal of Learning Disabilities, 32*(6), 504. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Swicegood, P. R., & Parsons, J. L. (1989). Better questions and answers equal success. *Teaching Exceptional Children, 21*(3), 4–8. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Vaughn, S., Klingner, J. K., & Boardman, A. (2007). *Teaching reading comprehension to students with learning difficulties. What works for special needs learners*. New York: The Guilford Press. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Waxman, H. C., Padron, Y. N., & Knight, S. L. (1991). Risks associated with students' limited cognitive mastery. In M. Wang, H. Walberg, & M. Reynolds (Eds.), *Handbook on special education* (pp. 235–254). Oxford, England: Pergamon. This study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.
- Weisch, R. G. (2006). In or out: Surprises in reading comprehension instruction. *Intervention in School & Clinic, 41*(3), 175–179. This study is ineligible for review because it does not use a comparison group design or a single-case design.
- Wise, B. W., & Olson, R. K. (1995). Computer-based phonological awareness and reading instruction. *Annals of Dyslexia, 45*, 99–122. The study is ineligible for review because it did not use a sample that was at least 50% students with learning disabilities or did not confirm that at least 50% of the students in the study were classified as learning disabled.
- Additional source:**
- Olson, R. K., Wise, B., Ring, J., & Johnson, M. (1997). Computer-based remedial training in phoneme awareness and phonological decoding: Effects on the posttraining development of word recognition. *Scientific Studies of Reading, 1*(3), 235.

Endnotes

¹ The descriptive information for this program was obtained from two journal articles: Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension fostering and comprehension monitoring activities. *Cognition and Instruction*, 1(2), 117–175.; and Palincsar, A. S., & Brown, A. L. (1986). Interactive teaching to promote independent learning from text. *The Reading Teacher*, 39(8), 771–777. The WWC requests developers to review the program description sections for accuracy from their perspective. The program description was provided to the developer in November 2012; however, the WWC received no response. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review. The literature search reflects documents publicly available by July 2013.

² The studies in this report were reviewed using the Evidence Standards from the WWC Procedures and Standards Handbook (version 2.1), along with those described in the Students with Learning Disabilities review protocol (version 2.2). The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

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Glossary of Terms

Attrition	Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.
Clustering adjustment	If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.
Confounding factor	A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.
Design	The design of a study is the method by which intervention and comparison groups were assigned.
Domain	A domain is a group of closely related outcomes.
Effect size	The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.
Eligibility	A study is eligible for review and inclusion in this report if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.
Equivalence	A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.
Extent of evidence	An indication of how much evidence supports the findings. The criteria for the extent of evidence levels are given in the WWC Procedures and Standards Handbook (version 2.1).
Improvement index	Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from -50 to +50.
Multiple comparison adjustment	When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.
Quasi-experimental design (QED)	A quasi-experimental design (QED) is a research design in which subjects are assigned to intervention and comparison groups through a process that is not random.
Randomized controlled trial (RCT)	A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into intervention and comparison groups.
Rating of effectiveness	The WWC rates the effects of an intervention in each domain based on the quality of the research design and the magnitude, statistical significance, and consistency in findings. The criteria for the ratings of effectiveness are given in the WWC Procedures and Standards Handbook (version 2.1).
Single-case design	A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.
Standard deviation	The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample tend to be spread out over a large range of values.
Statistical significance	Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ($p < 0.05$).
Substantively important	A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the [WWC Procedures and Standards Handbook \(version 2.1\)](#) for additional details.