



Annotated Bibliography of Sources Related to Peer Teaching

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Cross-Age and Same-Age Peer Tutoring (non-reciprocal)

Bar-Eli, N., M. Bar-Eli, et al. (1998). The tutoring process and its manifestation in the classroom behaviour of tutors and tutees. British Educational Research Journal 24(3): 283-300.

This article is a report of a study that examined three cross-age peer-tutoring dyads in order to identify important factors in the tutor-tutee interaction that might explain previous research showing benefits of peer tutoring for tutors and tutees. The subject area was math with seventh grade tutors and third grade tutees. The study found that when there is successful interaction between tutors and tutees, achievement of both is enhanced through peer tutoring.

Barron, A. M. and H. Foot (1991). Peer tutoring and tutor training. Educational Research 33(3): 174-185.

This article describes two studies of effectiveness of different types of training for enhancing benefits of peer tutoring. The first study found that teaching procedures and reasons behind them was more effective than just teaching task procedures. The second study found that requiring children themselves to make up the explanations and elaborations was less effective. The mean age of participants was eight years.

Bentz, J. L. and L. S. Fuchs (1996). Improving peers' helping behavior to students with learning disabilities during mathematics peer tutoring. Learning Disabilities Quarterly 19: 202-215.

This article describes a study to determine whether training students in helping behaviors during math peer tutoring has an effect on the explanations given by average achievers to learning disabled peers in grades 2 to 4. The study found that trained tutors offered help significantly more than untrained tutors did.

Benware, C. A. & Deci, E. L. (1984). Quality of learning with an active versus passive motivational set. *American Educational Research Journal*, Vol. 21 (4), pp. 755-765.

The hypothesis of this study was that if students learned material in order to teach it to someone else they would learn it better than if they learned it in order to be tested on it. One group of college students was told to learn material so that they could take an exam, and a second group was told to learn the same material so that they could teach it to others. Both groups were tested on the material and were assessed on intrinsic motivation. (No participants actually taught the material to others.) The study found that students who had learned material in order to teach it had a more active orientation toward the material, higher intrinsic motivation, and greater conceptual learning than students who learned it in order to take a test.

Blake, C., W. Wang, et al. (2000). Middle school students with serious emotional disturbances serve as social skills trainers and reinforcers for peers with SED. *Behavioral Disorders* 25(4): 280-298.

This article describes a study in which middle school students (age 9-13) with serious emotional disturbances were trained to teach social interaction to peers with serious emotional disturbances. The middle school tutors and their tutees benefited.

Brand, E. (2003). Children's beliefs about learning: Structures and strategies. *Bulletin of the Council for Research in Music Education*, 157, 9-17.

Eighteen pairs of children, ages 6, 9, or 12 years old, were selected for a song-learning task. One of each pair (the "child-teacher") learned the song from an audio tape and was asked to teach the song to the other later. It was found that, although the child-teachers used a broad range of teaching strategies, they tended to emphasize song structures rather than the tonal details of pitch, etc. An elaborate coding system is detailed in the report.

Chun, C. C., (1999). Classwide peer tutoring with or without reinforcement: Effects on academic responding, content coverage, achievement, intrinsic interest and reported project experiences. *Educational Psychology*, Vol. 19 (2), pp. 191-205.

This study examined the effects of classwide peer tutoring with and without reinforcement on spelling achievement under two different conditions. The average age of the lower secondary students in the study was 13 years, and the subject area was science. The study found that both conditions led to significant improvements in spelling, but the reinforcement group made significantly more gains than the non-reinforcement group. There is some indication that the children in the reinforcement condition displayed lower intrinsic interest in the subject matter (science) following the intervention than those in the non-reinforcement condition.

Cohen, J. (1986). Theoretical considerations of peer tutoring. *Psychology in the Schools* 23(2): 175-186.

This article provides conceptual definitions of peer tutoring and the processes involved in peer tutoring. The author argues that peer tutoring can be seen as an academic or interpersonal process. The article also discusses issues to be considered when implementing a peer-tutoring program, such as the ages and personality styles of the tutor and tutee, subject matter, academic goals, and length of tutoring session.

Cohen, P., J. Kulik, et al. (1982). Educational outcomes of tutoring: A meta-analysis of findings. American Educational Research Journal 19: 237-248.

This article describes a meta-analysis of research on effectiveness of peer tutoring on achievement, attitudes toward subject matter, and self-concept. The analysis of 65 studies found a clear positive effect for achievement for both tutors and tutees, a small but significant effect for attitudes toward subject matter for tutors and tutees, but no significant effect for self-concept.

Elbaum, B. E., S. Vaughn, et al. (1999). Grouping practices and reading outcomes for students with disabilities. Exceptional Children 65(3): 399-415.

This article describes a meta-analysis of research on effectiveness of different types of grouping practices in reading for students with disabilities. Types of grouping practices examined were pairing, small groups, and multiple grouping formats (specific combination of formats implemented systematically). The findings indicate that these alternative grouping formats are effective for improving reading of students with disabilities, and that student pairing may be the most effective. The study also found that peer-tutoring effects were the same whether students acted as reciprocal tutor-tutee or only as tutees, and that while students with disabilities tutored by older students didn't benefit academically, students with disabilities who tutored others did benefit.

Finney, J., & M. Tymoczko. (2004, March). Secondary school students as leaders: Examining the potential for transforming music education. Music Education International, 2. Accessed 17 December 2004
<http://www.isme.org/article/articleview/254/1/17/>.

The article describes a British ethnographic project in which four thirteen-year-old students, disengaged from schooling and viewed as potential negative leaders, were given the challenge of teaching music topics to a class of twelve-year-old students. The four students' plans, approaches, and attitudes were monitored by audio and video tape, and the responses of those taught were evaluated by interviews. Supervising teachers gradually moved from directive to supportive roles as the four students' plans and preparations warranted. Researchers concluded that the project successfully re-engaged the tutors and that tutees learned the content.

Franca, V. M., M. M. Kerr, et al. (1990). Peer tutoring among behaviorally disordered students: Academic and social benefits to tutor and tutee. Education and Treatment of Children 13(2): 109-128.

This study examined the effectiveness of same-age tutoring in math on the academic performance and social behavior of middle school students (age 13-16) with behavior disorders. The study found the following benefits of peer tutoring for both tutors and tutees: better academic performance, improvement in attitudes toward math, and improved interactions between tutors and tutees. No change was found on sociometric measures.

Fuchs, L. S., Fuchs, D., Hamlett, C. L., and Karns, K. (1998). High-achieving students' interactions and performance on complex mathematical tasks as a function of homogeneous and heterogeneous pairings. *American Educational Research Journal*, Vol. 35 (2), pp. 227-267.

This study compared high-achieving 3rd and 4th graders interactions and work quality in homogeneous and heterogeneous dyads. The students worked on complex math problems. The study found that when high-

achieving students were paired with another high-achieving student they had higher quality interactions and learned more than when they were paired with a low-achieving student.

Giesecke, D. and G. Cartledge (1993). Low-achieving students as successful cross-age tutors. Preventing School Failure 37(3): 34-43.

The goal of this study was to determine whether low-achieving students benefit when they tutor other students. In the study four 4th graders tutored four 3rd grade tutees. The study found academic benefits and increased self-concept for the tutors.

Goodlad, S. and B. Hirst, Eds. (1990). Explorations in peer tutoring. Oxford, England, Basil Blackwell, Ltd.

This edited volume contains a series of articles on peer tutoring. Topics include discussion about 'learning by teaching' theories, descriptions of specific peer tutoring projects, and obstacles to expansion of peer teaching activities.

Grant, T., A. Murphy, et al. (1997). Peer tutors and students work with formative assessment. Clearing House 71(2): 103-105.

This article was written from the perspective of three high school seniors who tutored eighth graders in a variety of subjects. The tutors believe their peer tutoring experience helped them better assess their own writing.

Gumpel, T. P. and R. Frank (1999). An expansion of the peer-tutoring paradigm: cross-age peer tutoring of social skills among socially rejected boys. Journal of Applied Behavior Analysis 32(1): 115-18.

This article describes a study of two 6th grade male tutors and their kindergarten level tutees. All four boys were nominated by teachers for the study because they were socially isolated and rejected by their peers. Tutors were given social competence training, and the study found that all four children improved in social relations, although one of the tutors had uneven maintenance.

Hansen, I. (1992). Should we use bright children as untrained, unpaid teacher aides? Childhood Education: 308-9.

In this article the author argues that the placement of high ability children in cooperative groups or peer tutoring dyads with lower ability children may be damaging for both high and lower ability children.

Jacobson, J., L. Thrope, et al. (2001). Cross-age tutoring: A literacy improvement approach for struggling adolescent readers. Journal of Adolescent & Adult Literacy 44(6): 528-36.

This article describes a study of a program in which 7th grade poor readers tutored 3rd grade students at another school. The 7th graders did improve on some achievement measures more than control children did; they also reported better attitudes towards reading.

Johnson-Prynn, J. S., & V. S. Nisbet. (2002). Preschoolers effectively tutor novice classmates in a block construction task. Child Study Journal 32(4): 241-255.

This article reports on a study of 28 pairs of preschoolers (ages 3-5) in a block construction task, where one member (called the *expert*) of the pair was given prior practice in constructing a house of blocks. Experts were more likely to provide nonverbal assistance than verbal assistance, usually through modeling. Verbal cues most frequently asked novices to examine one part of the house, and verbal directives were more likely to be encouraging than discouraging of novices' efforts. Expert preschoolers used a wider than expected variety of instructional strategies with their partners, and novices generally perceived expertise in their partners without having to be told.

Kamps, D. M., T. Kravitz, et al. (1998). What do the peers think? Social validity of peer-mediated programs. Education and Treatment of Children 21(2): 107-34.

This article reports results of interviews with nondisabled peer tutors who had participated in several different peer-tutoring programs for students with autism. In some programs the nondisabled peers had served only as tutors and in others they had been both tutors and tutees. Children ranged in age from five to eleven years. The interviews indicated that students enjoyed the activities, and there were few negative remarks about students with autism or the programs.

Kennedy, M. (1990). Controlled evaluation of the effects of peer tutoring on the tutors: Are the 'learning by teaching' theories viable? Explorations in Peer Tutoring. S. Goodlad and B. Hirst. Oxford, England, Basil Blackwell, Ltd: 58-72.

This chapter describes a study that examined whether cross-age peer tutoring provides benefits for tutors, and if so, why. In the study, 7-10 year-olds were randomly assigned to tutor reading, tutor math or to study math and reading alone. Findings were mixed.

Kreuger, E. and B. Braun (1999). Books and buddies: Peers tutoring peers. Reading Teacher 52(4): 410-414.

This study paired Grade 2 English as a second language (ESL) students with Grade 3 ESL tutors in reading. Gains in reading were made by both tutors and tutees.

Labbo, L. D. and W. H. Teale (1990). Cross-age reading: A strategy for helping poor readers. The Reading Teacher 43: 362-69.

In this study 5th grade poor readers read to kindergartners, and were taught how to use questioning and reading strategies with their kindergarten tutees. The tutors made more gains in reading than two comparison groups (a group that worked with a basal reader and a group that worked with kindergartners on art).

Marious, S. E., Jr. (2000). Mix and match: The effects of cross-age tutoring on literacy. Reading Improvement 37(3): 126-30.

This article argues that cross-age tutoring is effective in the area of reading, citing several studies that show benefits to tutees and tutors. Participants of this study were in fifth grade.

Mathes, P. G. and A. E. Babyak (2001). The effects of peer-assisted literacy strategies for first-grade readers with and without additional mini-skills lessons. Learning Disabilities Research & Practice 16(1): 28-44.

This article describes a study of 1st-grade peer-assisted literacy strategies (PALS) that sought to replicate previous studies of effectiveness of PALS for reading achievement and to see whether adding skills-focused mini-lessons for the lowest achievers had an added benefit. The findings concerning effectiveness of PALS were similar to previous findings, and the mini-lessons appeared to be of benefit.

Neuman, S. B. and K. Roskos (1991). Peers as literacy informants: A description of young children's literacy conversations in play. Early Childhood Research Quarterly 6: 233-248.

This article describes a study in which researchers set up two preschool classrooms with children age 4-5 in a literacy-enriched manner and then observed the behaviors and interactions that occurred. Three main types of discourse were found in the play: designating names of literacy-related objects, negotiating meaning related to a literacy topic, and coaching another child in some literacy task to achieve a play-related goal. Children generally moved back and forth between expert and learner. The authors conclude that if you create authentic environments like the ones in the study children will help each other to improve literacy-related skills.

Nevi, C. N. (1983). Cross-age tutoring: Why does it help tutors? The Reading Teacher 36(May): 892-898.

In this article the author examines various theories to explain why cross-age tutoring provides academic benefits to tutors in reading. He concludes that increased time spent working on the subject matter may be the most viable reason.

Ponzio, R. and C. Fisher (1995). Introducing prospective teachers to contemporary views of teaching and learning science: The science and youth project. Educating Teachers for Leadership and Change. M. J. O'Hair and S. J. Odell. Thousand Oaks, CA, Corwin Press: 257-284.

This article describes the Science and Youth (SAY) Project, a program for high schoolers who have expressed a strong interest in teaching. The project gives the students experience in teaching science to 8-12 year olds in informal education settings.

Ponzio, R. C. and K. Peterson, D. (1999). Adolescents as effective instructors of child science: Participant perceptions. Journal of Research and Development in Education 33(1): 36-46.

This article describes a program in which teenagers tutored 5-8 year olds in an after-school program, including possible socio-emotional benefits of teenagers acting as science teachers for younger children.

Rekrut, M. D. (1994). Peer and cross-age tutoring: The lessons of research. Journal of Reading 37(5): 356-62.

This article describes benefits of cross-age tutoring and makes suggestions for implementation. The author emphasizes the cost effectiveness of tutoring and the control that students have of their own learning as potential benefits. When implementing a tutoring program the author emphasizes the following: any age

student may be the tutor or tutee, any level achiever may serve as the tutor, same-sex partners work best, and the tutors should be trained.

Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., & Miller, T. R. (2003). Peer-assisted learning interventions with elementary school students: A meta-analytic review. *Journal of Educational Psychology*, Vol. 95 (2), pp. 240-257.

This meta-analysis examined the effectiveness of peer-assisted learning (PAL) interventions on elementary school students. The study found that PAL interventions were effective. They were most effective when student management was incorporated into the intervention, when interdependent reward contingencies were used, and when individualized evaluation procedures were used. Effect sizes were larger in studies with younger students, more urban students, and more low-income and minority students.

Saner, H., McCaffrey, D., Stecher, B., Klein, S., and Bell, R. (1994). The effects of working in pairs in science performance assessments. *Educational Assessment*, Vol. 2 (4), pp. 325-338.

This study examined whether assessments that require students to work collaboratively provide an independent assessment of each students' ability. Participants were 5th and 8th grade students, and the subject area was science. The study found that scores received by students when they were working with partners should not be considered an independent assessment of the student's ability. Individual scores on students' work completed after working in pairs appeared to be influenced both by their own work and by their partner's work.

Sharpley, A. M., J. W. Irvine, et al. (1983). An examination of the effectiveness of a cross-age tutoring program in mathematics for elementary school children. *American Educational Research Journal* 20(1): 103-111.

This study assessed the impact of a cross-age tutoring program in math. It found that tutors' (5th/6th grade) and tutees' (2nd/3rd grade) math performance improved when compared to control children.

Staub, D. and P. Hunt (1993). The effects of social interaction training on high school peer tutors of schoolmates with severe disabilities. *Exceptional Children* 60(1): 41-57.

This study randomly assigned high school students (age 15-20) who were to be tutors for students with disabilities to a training and nontraining condition. The study found that the students trained in social interactions were more likely than untrained tutors to initiate social interactions with the disabled students with whom they were paired.

Taylor, B. M., B. E. Hanson, et al. (1997). Helping struggling readers: Linking small-group intervention with cross-age tutoring. *Reading Teacher* 51(3): 196-209.

This article describes a reading intervention in which 4th-grade tutors helped 8-9 year old tutees. Both tutors and tutees were struggling in reading. The program was deemed helpful for both tutors and tutees.

Verba, M., & F. Winnykamen. (1992). Expert-novice interactions: Influence of partner status. *European J. of Psychology of Education* VII(1), 61-71.

First graders in Paris, France (18 high achievers and 18 low achievers) were paired in various ways to construct a bridge and an automobile out of varied shapes of blocks. When high achievers were paired with

low achievers, a tutoring dynamic characterized the interaction. A more cooperative dynamic held when low achievers who had done the task before (experts) were paired with high achievers who hadn't (novices). High achieving experts used more varied strategies when tutoring than did low achieving experts.

Wood, D., H. Wood, S. Ainsworth, & C. O'Malley. (1995). On becoming a tutor: Toward an ontogenetic model. Cognition and Instruction, 13(4), 565-581.

Eight pairs of girls and eight of boys at each of three age groups (3, 5, and 7) constructed a pyramid of blocks, with one of the pair having time to play with the blocks and see on a computer tutorial how the pyramid could be constructed. The second of the pair entered the room and the first was asked to help the second to make the pyramid. After the pyramid was constructed, the first child left the room and the second child was asked to re-construct the pyramid. Results confirmed that age affected instructional fluency. The researchers suggested that second-order reasoning (a feature in Tomasello et al's theory of mind) is likely a necessary condition for contingent instruction (teaching moves based on learner feedback) and that this pairing (reasoning and instruction) emerges at about age seven.

Zukowski, V. (1997). Teeter-totters and tandem bikes: A glimpse into the world of cross-age tutors. Teaching & Change 5(1): 71-91.

This qualitative study examined two cross-age tutoring dyads. Two 3rd grade students were paired with 5th grade tutors. The tutors and tutees were gifted and talented students. The author concluded that the tutoring was empowering for tutors and helpful for tutees.

Reciprocal Peer Tutoring

Arreaga-Mayer, C. (1998). Increasing active student responding and improving academic performance through classwide peer tutoring. Intervention in School and Clinic 34(2): 89-94.

This article describes classwide peer tutoring (CWPT) and its implementation. It also discusses research on the effectiveness of CWPT. The author argues that CWPT allows for the individualization of content, increases student engagement and time on task, and allows for immediate responses with positive feedback.

Butler, F., M. (1999). Reading partners: Students can help each other learn to read. Education and Treatment of Children 22(4): 415-426.

This article is a report of a study of the effectiveness of Classwide Peer Tutoring (CWPT), a reciprocal peer tutoring model, on students with mild to moderate disabilities in reading. The study found that CWPT was beneficial for this sample of 9-12 year-olds.

DuPaul, G. J., R. A. Ervin, et al. (1998). Peer tutoring for children with attention deficit hyperactivity disorder: Effects on classroom behavior and academic performance. Journal of Applied Behavior Analysis 31(4): 579-592.

This article describes a study to determine the effectiveness of Classwide Peer Tutoring (CWPT) for increasing the on-task behavior and academic performance of ADHD students in grades 1-5. CWPT, a method of reciprocal peer tutoring, was successful in terms of improving behavior. Results in terms of academic achievement were varied across the sample.

Ezell, H. K., S. A. Hunsicker, et al. (1997). Comparison of two strategies for teaching reading comprehension skills. Education and Treatment of Children 20(4): 365-382.

Prior research has shown that a specific reading comprehension strategy known as Question Answer Relationship (QAR) is effective when implemented through a reciprocal peer-tutoring model. This article reports a study to determine whether QAR, which requires students to generate different types of questions about text, was more effective when taught as part of teacher-led instruction or when taught as part of reciprocal peer tutoring. The grade level studied was fourth grade. The study found no difference in effectiveness between the two contexts.

Fantuzzo, J. W., J. A. King, et al. (1992). Effects of reciprocal peer tutoring on mathematics and school adjustment: A component analysis. Journal of Educational Psychology 84(3): 331-339.

The goal of this study was to examine the impact of including structure and group rewards in reciprocal peer tutoring. The study found that when both structure and group rewards were present the high risk elementary students (4th/5th grade) in the sample performed better than they did when these components were not present.

Fantuzzo, J. W., K. Polite, et al. (1990). An evaluation of reciprocal peer tutoring across elementary school settings. The Journal of School Psychology 28: 309-323.

This study examined the effectiveness of reciprocal peer tutoring for a sample of low income, underachieving elementary school students (4th/5th grade). The researchers found that reciprocal peer tutoring in math was effective with peer-managed group contingencies.

Fuchs, D., L. S. Fuchs, et al. (1997). Peer-assisted learning strategies: Making classrooms more responsive to diversity. American Educational Research Journal 34(1): 174-206.

This study examined the use of a reciprocal peer-tutoring model known as Peer-Assisted Learning Strategies (PALS) in elementary schools (grade2-6). The study found that students in classrooms that implemented PALS had greater reading progress than students in control classrooms.

Fuchs, D., L. S. Fuchs, et al. (2001). Peer-assisted learning strategies in reading: Extensions for kindergarten, first grade, and high school. Remedial and Special Education 22(1): 15-21.

Peer-assisted learning strategies (PALS) is a reciprocal peer tutoring model whose effectiveness for reading in grades 2 through 6 has been well-documented. This article describes how PALS has also been used in kindergarten, first grade, and high school levels. The authors emphasize that PALS can be effective, feasible, and enjoyable for teachers and students to use in a variety of classroom levels.

Fuchs, D., L. S. Fuchs, et al. (2001). Developing first-grade reading fluency through peer mediation. Teaching Exceptional Children 34(2): 90-93.

This article describes an intervention combining peer-assisted learning strategies (PALS) and repeated reading in order to help first grade students with disabilities. The authors also describe a research study of this reciprocal peer teaching approach to improving reading fluency. The study found evidence that when combining PALS and repeated reading strategies students will experience greater gains in fluency and comprehension than students using PALS alone.

Fuchs, L. S., D. Fuchs, et al. (1994). The nature of student interactions during peer tutoring with and without training and experience. American Educational Research Journal 34(1): 75-103.

This study compared interactions of 3rd, 4th, and 5th grade students in peer tutoring with experience and training to those without experience and training. When tutoring, students in the group without experience and training tended to lecture and demonstrate. In the trained group, tutors provided better explanations and tutees spent more time working.

Fuchs, L. S., D. Fuchs, et al. (1997). Enhancing Students' helping behavior during peer-mediated instruction with conceptual mathematical explanations. The Elementary School Journal 97(3).

This study compared peer tutoring interactions of 2nd to 4th graders under three different conditions: peer mediated instruction (PMI) in math with training in elaborated explanations, PMI with training in elaboration and also how to provide conceptual rather than algorithmic explanations, and no PMI. The study found that students in the PMI with conceptual condition did better than those in the PMI with elaboration only. Both treatments worked better than the no-PMI control. The study also found that high ability children learned even when explaining material to children below their ability level.

Fuchs, L. S., D. Fuchs, et al. (1996). The relation between student ability and the quality and effectiveness of explanations. American Educational Research Journal 33(3): 631-64.

This study of peer tutoring in grade 2 through 4 math examined the quality and effectiveness of tutoring explanations as a function of student ability. Researchers studied dyads who had received peer-tutoring training and who had experience in peer tutoring, comparing high-achieving and medium-achieving tutors who tutored the same learning-disabled student. Researchers found that high ability tutors gave higher quality explanations, using more strategies and more conceptual focus. Tutees with high-achieving tutors performed better than tutees with average-achieving tutors.

Fuchs, L. S., D. Fuchs, et al. (1999). Effects of peer-assisted learning strategies on high school students with serious reading problems. Remedial and Special Education 20(5): 309-318.

The goal of this study was to determine the effectiveness of the reciprocal peer-tutoring model known as peer-assisted learning strategies with high school children with reading problems. Researchers found mixed results of the treatment.

Fuchs, L. S., D. Fuchs, et al. (1999). Effects of peer-assisted learning strategies in reading with and without training in elaborated help giving. The Elementary School Journal 99(3): 201-219.

The goal of this study was to examine effects of an approach to teaching students in grades 2-4 to engage in elaborated help-giving during reciprocal peer tutoring in reading. The study found that children prepared in elaborated help-giving engaged in more helping behaviors during peer tutoring than did control group children.

Greenwood, C. R. (1991). Classwide peer tutoring: Longitudinal effects on the reading, language, and mathematics achievement of at-risk students. Reading, Writing, and Learning Disabilities 7: 105-123.

This article describes the classwide peer-tutoring program (CWPT) and discusses why it is effective for increased achievement in the classroom. The author suggests that CWPT fosters the processes of instruction known to affect academic growth, including engaged time, time management, success rate, academic learning time, monitoring, structuring, and questioning.

Greenwood, C. R., C. Arreaga-Mayer, et al. (2001). Classwide peer tutoring learning management system: Applications with elementary-level English language learners. Remedial and Special Education 22(1).

This article describes a study to determine the effectiveness of Classwide Peer Tutoring (CWPT) for improving English vocabulary and spelling of English language learners (ELL) in grades 1-5. The study found that ELL student learning increased under the CWPT model.

Greenwood, C. R., B. Terry, et al. (1992). The Classwide Peer Tutoring Program: Implementation factors moderating students' achievement. Journal of Applied Behavior Analysis 25(1).

This study examined the relationship between quality of implementation of the classwide peer tutoring program (CWPT) and student outcomes. Researchers found that differences in student outcomes with CWPT are often attributable to different quality of implementation by teachers. Participants of the study were in grades 2-5.

Greenwood, C. R., B. Terry, et al. (1993). Achievement, placement and services: Middle school benefits of classwide peer tutoring used at the elementary level. School Psychology Review 22(3): 497-516.

This study examined whether the benefits of an elementary school classwide peer-tutoring program (CWPT) were still evident in middle school (grade 6) for a group of children who were low SES and at-risk. The researchers found that the children who had been in a CWPT program in grades 1-4 were still doing better than the non-CWPT control group in 6th grade.

Harper, G. F., L. Maheady, et al. (1999). Peer tutoring and the minority child with disabilities. Preventing School Failure 43(2): 45-51.

This article describes and discusses two peer tutoring interventions -- classwide peer tutoring (CWPT) and classwide student tutoring teams (CSTT) -- that have been shown to be effective for increasing the achievement of minority students with mild disabilities. The authors argue that each of the interventions increases student involvement in learning, empowers the learner, combines group and individual accountability, and provides an opportunity for all students to be both teachers and learners.

King, A. (1994). Guiding knowledge construction in the classroom: Effects of teaching children how to question and how to explain. American Educational Research Journal 30: 338-368.

This study compared the effectiveness of training 4th and 5th grade students in different types of peer questioning. The researcher found that training in elaborated questioning was more effective than training in simple questioning in terms of student knowledge construction.

King, A. and B. Rosenshine (1993). Effects of guided cooperative questioning on children's knowledge construction. Journal of Experimental Education 61: 127-148.

This study of 5th graders found that teaching children to ask good questions and provide good explanations increases learning in peer tutoring.

King, A., A. Staffieri, et al. (1998). Mutual peer tutoring: Effects of structuring tutorial interaction to scaffold peer learning. Journal of Educational Psychology 80(1): 134-152.

This study examined the effectiveness of a particular reciprocal peer-tutoring model designed to help children (grade 7) provide each other with support for higher-order, complex learning. The model teaches children to ask different kinds of questions and to sequence the questions so that they start with lower-order questions and then move to higher order questions. The study found that children using the question-sequencing model demonstrated higher-level knowledge construction than children using other models of questioning.

Maheady, L., G. F. Harper, et al. (2001). Peer-mediated instruction and interventions and students with mild disabilities. Remedial and Special Education 22(1): 4-14.

This article reviews studies of classwide peer-mediated instruction. The authors conclude that peer mediated instruction is effective for students with mild disabilities.

Maheady, L., B. Mallette, et al. (1991). Peer-mediated instruction: A review of potential applications for special education. Reading, Writing, and Learning Disabilities International 7: 75-103.

This article is a review of previous research, arguing that peer-mediated instruction should be implemented more in schools, especially as a way to increase achievement of students with disabilities.

Marston, D., S. L. Deno, et al. (1995). Comparison of reading intervention approaches for students with mild disabilities. Exceptional Children 62(1): 20-37.

This study compared several different instructional approaches in reading for students in grades 1-6 with disabilities. Approaches examined included peer tutoring, reciprocal teaching, microcomputer applications, effective teaching principles and direct instruction. The researchers conclude that they would recommend direct instruction with basal, computer-assisted instruction and reciprocal teaching.

Mastropieri, M. A., T. Scruggs, et al. (2001). Can middle school students with serious reading difficulties help each other and learn anything? Learning Disabilities Research & Practice 16(1): 18-27.

This study examined the effectiveness of reciprocal peer tutoring in reading for middle school students (age 12-13) with learning disabilities and mild mental retardation. Students in the peer tutoring condition did significantly better on reading comprehension measures than control students and enjoyed the tutoring more than traditional instruction.

Mathes, P. G. and A. E. Babyak (2001). The effects of peer-assisted literacy strategies for first-grade readers with and without additional mini-skills lessons. Learning Disabilities Research & Practice 16(1): 28-44.

This article describes a study of 1st-grade peer-assisted literacy strategies (PALS) that sought to replicate previous studies of effectiveness of PALS for reading achievement and to see whether adding skills-focused mini-lessons for the lowest achievers had an added benefit. The findings concerning effectiveness were similar to previous findings that indicated that 1st-grade PALS, on average, enhanced reading performance of students. The mini-lessons appeared to be of benefit.

Mathes, P. G. and L. S. Fuchs (1994). The efficacy of peer tutoring in reading for students with mild disabilities: A best-evidence synthesis. School Psychology Review 23(1): 59080.

This article is a best-evidence synthesis of 11 studies of peer tutoring in reading for students with disabilities. The meta-analysis indicated that peer tutoring was effective for these students. The researchers also concluded that students with disabilities made greater gains in reading when they were in the role of tutor than when they were tutees or switched roles (and were both).

Mathes, P. G., J. K. Torgesen, et al. (2001). The effects of peer-assisted literacy strategies for first-grade readers with and without additional computer-assisted instruction in phonological awareness. American Educational Research Journal 38(2): 371-410.

This study examined the effectiveness of first grade peer-assisted literacy strategies (PALS) when it was accompanied by computer-assisted instruction (CAI) in phonological awareness and when it was implemented by itself. The study found that PALS was effective and that it was just effective without CAI as it was with CAI.

Mortweet, S. L., C. A. Utley, et al. (1999). Classwide peer tutoring: Teaching students with mild mental retardation in inclusive classrooms. Exceptional Children 65(4): 524-536.

This study examined the effectiveness of the classwide peer-tutoring program (CWPT) with a sample of 2nd and 3rd grade students with mild mental retardation. The subject area was spelling. The study found positive outcomes of CWPT for MMR students.

Utay, C. M. and J. M. Utay (1997). Peer-assisted learning: The effects of cooperative learning and cross-age peer tutoring with word processing on writing skills of students with learning disabilities. Journal of Computing in Childhood Education 8(2-3): 165-85.

The main hypothesis of this study was that learning disabled students using a peer-tutoring format to improve writing via the computer would score higher on a writing posttest than students in a non-tutoring control group. Tutors were taught techniques and strategies, which they then taught to their tutees. The study found no difference between treatment and control groups for either tutors or tutees on writing skills. Participants in the study were in grades 2 through 6.

Utley, C. A., S. L. Mortweet, et al. (1997). Peer-mediated instruction and interventions. Focus on Exceptional Children 29(5): 1-23.

This article reviews studies on peer-mediated instruction, and concludes that these approaches are effective for students with disabilities.

Cooperative Learning

Chinn, C. A., A. M. O'Donnell, et al. (2000). The structure of discourse in collaborative learning. Journal of Experimental Education 69(1): 77-97.

This article describes a study in which researchers analyzed group interaction in a science task. Researchers found that not all explanations given by the fifth grade participants predicted learning. They conclude that elaborated, complex explanations might be needed in order for learning to occur.

Cohen, E. G. (1994). Restructuring the classroom: conditions for productive small groups. Review of Educational Research 64(1): 1-35.

This article reviews and analyzes research on cooperative learning. Based on this analysis, the author makes assertions about how various small group conditions are related to different interaction, learning, and achievement outcomes. The author emphasizes the need to take key characteristics of the task into account when analyzing optimum conditions. These characteristics are whether or not the task is a true group task and whether the task is a high level task with a variety of possible solutions or a well-defined, lower level task.

Cohen, E. G., R. A. Lotan, et al. (1999). Complex instruction: Equity in cooperative learning classrooms. Theory into Practice 38(2): 80-6.

This article discusses a particular approach to cooperative learning that reduces problems with low-status children not contributing, and leads to greater equity in groups.

Colangelo, N. and G. A. Davis (1997). Introduction and Overview. Handbook of Gifted Education. N. Colangelo and G. A. Davis. Boston, Allyn and Bacon: 3-9.

This introduction to the Handbook on Gifted Education has a small section on cooperative learning and gifted students. In this section the authors argue that cooperative learning is ineffective and damaging for gifted students.

Davenport, P. and C. Howe (1999). Conceptual gain and successful problem-solving in primary school mathematics. Educational Studies 25(1): 55-78.

This article describes a study designed to determine whether sixth grade students working collaboratively on problem solving in math would benefit more than a control group working individually. The study found no significant difference overall between the two groups in terms of math performance. Some differential effects were found for ability level and gender.

Dori, Y. J. and O. Herscovitz (1999). Question-posing capability as an alternative evaluation method: Analysis of an environmental case study. Journal of Research in Science Teaching, 36(4): 411-430.

This article is a report of a study examining whether a cooperative learning approach involving analysis of case studies combined with the jigsaw technique was effective at enhancing question-posing capabilities and achievement of 10th graders in science. The researchers found that the cooperative learning strategy enhanced students' achievement and the quality of questions they generated. They propose using question-posing ability as an alternative evaluation method for students.

Fall, R. & Webb, N. M. (2000). Group discussion and large-scale language arts assessment: Effects on students' comprehension. American Educational Research Journal, 37(4), pp. 911-941.

This study compared 10th grade student performance on a large-scale language arts assessment with and without collaboration with other students. Specifically, students who read a story, answered written questions, discussed the story for 10 minutes with two other students, and then individually answered more questions did substantially better on the assessment than students who read the story and answered the same questions without discussion.

Gillies, R. M. (2002). The residual effects of cooperative-learning experiences: A two-year follow-up. J. of Educational Research, 96 (1), 15-20.

This study compared small-group interactions of 5th grade children who had been trained in small-group and interpersonal behavior two years earlier to small-group interactions of children who had not been trained. The subject matter was social studies. Researchers found that the children in the trained group were more cooperative and displayed higher quality verbal interactions than their peers who had not received the earlier training. Specifically, the previously trained children displayed more on-task behavior, listened to each other more, provided more explanations and used higher-level language strategies.

Gillies, R. M., & A. F. Ashman. (1998). Behavior and interactions of children in cooperative groups in lower and middle elementary grades. J. of Educational Psychology, 90(4), 746-757.

This study compared 1st and 3rd graders working in small groups in social studies under two different conditions. In the treatment condition students were trained in small-group procedures and cooperative interpersonal skills. In the control condition students were not trained. Both groups then worked in small groups on social studies tasks for six weeks (on hour per day, three times per week). Results indicated that student who receive training showed more cooperative behaviors and fewer non-cooperative behaviors than student without training. The trained group also used a wider range of cognitive language strategies and had higher learning outcomes than the untrained group.

Gillies, R. M. & A. F. Ashman (2000). The effects of cooperative learning on students with learning difficulties in the lower elementary school. The Journal of Special Education 34(1): 19-27.

The goal of this study was to see the effects of providing training in cooperative learning on the behavior and learning outcomes of children with learning difficulties. The participants were 3rd graders working in cooperative learning groups in social studies. Students in the training group had less off-task behavior and learned more than those in the control group.

Hernandez Garduno, E. L. (2001). The influence of cooperative problem solving on gender differences in achievement, self-efficacy, and attitudes toward mathematics in gifted students. Gifted Child Quarterly 45(4): 268-82.

This study examined gender differences in achievement and affective variables in a sample of gifted students in 7th and 8th grade. Students were assigned to either a cooperative problem solving math condition or a competitive whole group condition. The treatment was two weeks long. Results showed no achievement differences. Students in the competitive condition had more favorable attitudes towards math.

Hertz-Lazarowitz, R., V. B. Kirkus, N. Miller. (1992). Implications of current research on cooperative interaction for classroom application. Interaction in Cooperative Groups: The theoretical anatomy of group learning, ch. 11. R. Hertz-Lazarowitz and N. Miller. Cambridge, UK, Cambridge University Press.

This summarizing chapter of a collection of research reports discusses cognitive, affective, and developmental factors that should be taken into consideration when using cooperative groups in the classroom. It includes a discussion of the possible reasons for effectiveness of cooperative learning. These reasons (p. 256) include a) increased attention due to a shift in classroom routine, b) personal empowerment from responsibility for one's own learning, c) peer support for engagement and perseverance, d) peer norms that discourage 'social loafing', e) promotion rather than prohibition of peer assistance, and f) mastery goals oriented toward learning rather than toward norms or performance processes.

Linchevski, L. and B. Kutscher (1998). Tell me with whom you're learning, and I'll tell you how much you've learned: Mixed-ability versus same-ability grouping in mathematics. Journal for Research in Mathematics Education 29(5): 533-54.

This is a report of three studies examining effects of mixed-ability (untracked) versus same ability (tracked) systems on 7th and 8th grade students of different ability levels in math. Results indicate that weak students made gains in mixed-ability as opposed to same-ability grouping, but that mixed-ability grouping was not detrimental to high-ability children in mixed-ability as opposed to same-ability grouping.

Matthews, M. (1992). Gifted students talk about cooperative learning. Educational Leadership: 48-50.

This article reports results of interviews with gifted students in grades 6-8 concerning whether they prefer working in cooperative learning groups with other gifted students or with children of mixed abilities. The students interviewed saw no benefits for themselves of working in mixed-ability groups, and they resented having to explain things to their peers. The author recommends implementing cooperative learning carefully with gifted students.

McMahon, S. L. and V. J. Goatley (1995). Fifth graders helping peers discuss texts in student-led groups. The Journal of Educational Research 89(1): 23-33.

This study qualitatively examined how 5th graders who had experience with student-led groups interacted with peers who did not have experience. The results indicated that children did figure out how to effectively facilitate each other's learning, but that monitoring by teachers was essential to the process.

Mueller, A. & T. Fleming. (2001). Cooperative learning: Listening to how children work at school. Journal of Educational Research 94(5): 259-265.

This study examined interactions of 29 sixth and seventh grade students as they worked in six cooperative groups over a period of five weeks on a science project. Data included audiotapes of groups' interactions, student interviews, audiotaped conversations with the teacher, videotapes, and written self-evaluations of the children. The study found that most of the group members enjoyed the process and demonstrated a good understanding of the science concepts at the end. Audiotapes of group interactions revealed that students used language either to propose ideas related to the task or to gain social or organizational agreement.

Mulryan, C., M. (1994). Perceptions of Intermediate students' cooperative small-group work in mathematics. Journal of Educational Research 87(5): 280-290.

This study observed interactions of 5th and 6th graders working together cooperatively in math and interviewed students and teachers about their perceptions of small group work in math. A major finding was that high achievers participated more than low achievers in the small groups.

Nath, L. R. and S. M. Ross (2001). The influence of a peer-tutoring training model for implementing cooperative groupings with elementary students. Educational Technology Research and Development 49(2): 41-56.

This study examined whether children (grades 2-6) who are trained in peer tutoring techniques collaborate more effectively in cooperative learning in reading than students who do not. Results of the study were inconsistent.

O'Connor, R. E. and J. R. Jenkins (1996). Cooperative learning as an inclusion strategy: The experience of special education students. Exceptionality 6: 29-52.

This study examined the experience of low achieving 3rd through 6th grade students in cooperative learning groups. The researchers found that special education students are often excluded from group processes.

Palincsar, A. S., Y. David, et al. (1991). Examining the context of strategy instruction. Remedial and Special Education 12(3): 43-53.

This article discusses several different types of reading and writing instruction. It also introduces a Collaborative Problem Solving procedure, and describes a study comparing this procedure to direct instruction and reciprocal teaching. Participants of the study were in 3rd grade. The study found that the Collaborative Problem Solving condition was most effective for heterogeneous groups when assessing comprehension. Reciprocal teaching and collaborative problem solving were more effective than direct instruction for high achievers. There was no significant difference among instructional conditions for low achievers.

Peklaj, C. and B. Vodopivec (1999). Effects of cooperative versus individualistic learning on cognitive, affective, metacognitive and social processes in students. European Journal of Psychology of Education 14(3): 359-373.

This study examined effects of cooperative learning versus individualistic learning on the following variables in 5th graders: academic achievement in math and Slovene language, attitudes towards subject matter, metacognition, and social functioning. The study found strong positive effects of cooperative learning on achievement in both math and Slovene language, but no differences between the two conditions for the other variables.

Pomplun, M. (1996). Cooperative groups: Alternative assessment for students with disabilities? *The Journal of Special Education, Vol. 30* (1), pp. 1-17.

This study examined the results for 5th grade students with mild disabilities who participated in a state science assessment involving cooperative groups. The study found that students with disabilities did not negatively affect a group's performance on the assessment. Also, the achievement scores for students with disabilities were consistent with expectations for those students.

Qin, Z., D. W. Johnson, et al. (1995). Cooperative versus competitive efforts and problem solving. Review of Educational Research 65(2): 129-143.

The goal of this meta-analytic study was to assess whether cooperative or competitive efforts are better for learning in problem solving. The study found that cooperation resulted in higher-quality problem solving than did competition.

Ramsay, S. G. and H. C. Richards (1997). Cooperative learning environments: Effects on academic attitudes of gifted students. Gifted Child Quarterly 41(4): 160-68.

This study examined the attitudes of gifted and non-gifted middle school children (grades 6-8) toward cooperative learning (CL). They found that gifted children may have better attitudes towards subjects in which CL is not a dominant form of instruction.

Randall, V. (1999). Cooperative learning: Abused and overused? Gifted Child Today Magazine 22(2): 14-16.

This article discusses potential problems with cooperative learning (CL) as a teaching strategy. The author suggests that CL models may be unfair to children, that low ability children sometimes don't participate in CL groups, that high ability children sometimes resent having to teach their peers, and that CL tends to be used for lower level tasks only. She suggests CL be used very sparingly.

Robinson, A. (1990). Cooperation or exploitation? The argument against cooperative learning for talented students. Journal for the Education of the Gifted 14: 9-17.

This article describes some of the limitations and potential problems of cooperative learning, especially as they relate to gifted students. The author does not reject the model of cooperative learning, but rather suggests ways in which it may be misused with gifted students. The disadvantages to gifted students include the limiting of instruction to the materials and pace of the grade level group. The author also emphasizes that cooperative learning is often used as a substitute in the place of opportunities that will meet the needs of gifted students.

Robinson, A. (1997). Cooperative learning for talented students: Emergent issues and implications. Handbook of Gifted Education. N. Colangelo and G. A. Davis. Boston, Allyn and Bacon: 243-52.

This article reviews research on cooperative learning (CL) and gifted students. Major conclusions of the review are: 1) that not much research has been carried out examining the impact of CL on gifted students; and 2) that the research that exists indicates that some of the common fears regarding CL and gifted students may be warranted.

Ross, J. A. and E. Smyth (1995). Differentiating cooperative learning to meet the needs of gifted learners: A case for transformational leadership. Journal for the Education of the Gifted 19(1): 63-82.

This article begins by acknowledging that cooperative learning has been described as exploitation of the gifted. However, the author goes on to argue that heterogeneous groups are a way to develop leadership skills in gifted students, which is an important and underdiscussed element of gifted education.

Slavin, R. E. (1990). Ability grouping, cooperative learning and the gifted. Journal for the Education of the Gifted 14: 3-8.

In this article the author argues that gifted programs may be appropriate when they involve true acceleration, but not when they involve enrichment. Further, meeting the needs of children of all ability levels is best achieved by reducing tracking and increasing the use of cooperative learning. However, the author points out that cooperative learning can be used effectively within tracked classes.

Slavin, R. E. (1990). Response to Robinson: Cooperative learning and the gifted: Who benefits? Journal for the Education of the Gifted 14: 28-30.

This article discusses whether or not cooperative learning is appropriate for gifted children. The author points out that research in this area was virtually nonexistent, but that research on cooperative learning and high ability children shows no difference in effectiveness between high and low ability children. Further, heterogeneous class grouping using cooperative learning may be most appropriate for social studies, literature and science, while accelerated classes for gifted children may be most appropriate for math and reading. Cooperative learning can be used in the accelerated classes, however. Participants of the study were in elementary-middle school.

Slavin, R. E. (1991). Synthesis of research on cooperative learning. Educational Leadership: 71-82.

This article synthesizes research showing benefits of cooperative learning, and provides an overview of several different cooperative learning models, including Student Team Learning, Jigsaw, and Group Investigation. The author concludes that cooperative learning can improve inter-group relations, self-esteem, and academic achievement in many subjects.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. Contemporary Educational Psychology 21: 43-69.

This article describes four major theoretical perspectives that could account for the effectiveness of cooperative learning: motivational, social cohesion, developmental, and cognitive elaboration. It also discusses the factors that make cooperative learning work more or less effectively, paying particular attention to group goals and individual accountability. The article ends by identifying areas in need of

further research such as the conditions under which group goals and individual accountability may not be necessary, effects of cooperative learning on gifted students, and outcomes in senior high schools, post secondary institutions, and early elementary students.

Stevens, R. J. and R. E. Slavin (1995). The cooperative elementary school: Effects on students' achievement, attitudes and social relations. American Educational Research Journal 32(2): 321-351.

This article describes a study examining implementation of a two-year cooperative learning program in two treatment schools. The study also monitored three comparison schools in the same district with similar student achievement, ethnicity and socioeconomic status. After the second year there was a significant difference favoring the treatment schools on several achievement and social outcomes. Participants of the study were in 2nd through 6th grade.

Sutherland, K. S., J. H. Wehby, et al. (2000). The effectiveness of cooperative learning with students with emotional and behavioral disorders: A literature review. Behavioral Disorders 25(3): 225-238.

This study is a meta-analysis of research on the effectiveness of cooperative learning (CL) for students with emotional and behavioral disorders. The analysis included eight studies. Results of the research are mixed. The researchers conclude that CL shows promise for students with behavioral and emotional disorders, but more high quality research is needed.

Webb, N. M. (1980). A process-outcome analysis of learning in group and individual settings. *Educational Psychologist*, Vol. 15 (2), PP. 69-83.

This article presents models of individual learning and learning in a group context, and discusses behavior and achievement of students under each condition. The author argues that student learning depends more on individual student experiences in the setting than on whether they are in a group or individual setting.

Webb, N. M. (1989). Peer interaction and learning in small groups. International Journal of Educational Research 13: 21-39.

This article discusses the relationship between student interaction (i.e., giving and receiving explanations, asking for and receiving help) and learning in small groups. The author argues that student ability, gender, personality, and group composition based on ability and gender are predictors of peer interaction in small groups.

Webb, N. M. (1992). Testing a theoretical model of student interaction and learning in small groups. Interaction in cooperative groups: The theoretical anatomy of group learning. R. Hertz-Lazarowitz and N. Miller. New York, Cambridge University Press: 102-119.

This article outlines a theoretical model to explain the relationship between peer interaction and learning in small groups. Then it describes a study designed to test the various features of that model. Participants of the study were in 11th grade. The study found that students performed successfully on tests when they indicated a need for help, received adequate help, and applied that help to solve the problem. The students were also successful when they were given elaborated help as opposed to non-elaborated help. The effects of students not participating in group discussions depended on ability level. Higher ability students were more likely to learn the material without participating in the group discussion.

Webb, N. M. and C. M. Kenderski (1984). Student interaction and learning in small-group and whole-class settings. The social context of instruction: Group organization and group processes. L. C. Peterson, F. Wilkinson, F. Spinelli and S. R. Swing. Orlando, Academic: 153-170.

This article describes a study whose goal was to examine the interactions of 7th and 8th grade children working in small groups in order to explore the relationship between interaction and student learning, and to compare this relationship to the same variables in whole class instruction. Major findings were that giving explanations predicted learning, and that receiving no explanation in response to a question was negatively correlated with learning. There was no achievement difference between whole-class instruction and the small group work.

Webb, N. M., K. M. Nemer, & S. Zuniga. (2002). Short circuits or superconductors? Effects of group composition on high-achieving students' science assessment performance. *American Educational Research Journal*, Vol. 39 (4), pp. 943-989.

This article examined achievement outcomes and group interactions of high-achieving 8th grade students in homogeneous high-achieving groups and in heterogeneous groups. The study found that high-achieving students in homogeneous groups performed well. High-achieving students in some of the heterogeneous groups performed as well as the homogeneous groups, but high-achieving students in other heterogeneous groups did not. The types of group interactions, such as quality of helping behavior and student support for each other, predicted the performance of the high-ability students in heterogeneous groups more than either student ability or the overall ability level of the group.

Webb, N. M., K. M. Nemer, et al. (1998). Equity issues in collaborative group assessment: Group composition and performance. American Educational Research Journal 35(4): 607-51.

This article addresses the issue of whether group assessment is fair. A study of 7th and 8th graders found that individuals perform differently depending on the composition of their group, which may be unfair.

Webb, N. M., J. Troper, et al. (1995). Constructive activity and learning in collaborative small groups. Journal of Educational Psychology 87: 406-423.

This study examined types of interaction related to learning by 7th graders in small groups. The study found that receiving explanations and providing elaborate explanations were the best predictors of achievement.

Reciprocal Teaching

King, C. M. and L. M. Johnson (1999). Constructing meaning via reciprocal teaching. Reading Research and Instruction 38(3): 169-86.

This study found that reciprocal teaching was effective at helping 5th graders understand science text. It also found that the quality of implementation of reciprocal teaching by teachers had an impact on the amount of student learning that occurred.

Lederer, J., M. (2000). Reciprocal teaching of social studies in inclusive elementary classrooms. Journal of Learning Disabilities 33(1): 91-106.

This study examined the effectiveness of reciprocal teaching with 4th to 6th graders in social studies. Some of the students had learning disabilities. The study found that students in experimental classrooms did significantly better on comprehension measures than control classrooms, and that this effect was still evident after 60 days.

Marston, D., S. L. Deno, et al. (1995). Comparison of reading intervention approaches for students with mild disabilities. Exceptional Children 62(1): 20-37.

This study compared several different instructional approaches in reading for students with disabilities. Approaches compared in the study included peer tutoring, reciprocal teaching, microcomputer applications, effective teaching principles and direct instruction. The researchers conclude that they would recommend direct instruction with basal, computer-assisted instruction and reciprocal teaching.

Rosenshine, B. and C. Meister (1994). Reciprocal teaching: A review of the research. Review of Educational Research 64(4): 479-530.

This study is a review of research on reciprocal teaching (RT). Sixteen studies were included in the analysis. Results of the studies were generally favorable toward RT when experimenter-developed tests were used to measure outcomes and generally unfavorable when standardized tests were used.

Rosenshine, B. and C. C. Meister (1996). Teaching students to generate questions: A review of the intervention studies. Review of Educational Research 66(2): 181-221.

This article reviews research on interventions in which students have been taught to generate questions as a way to improve their comprehension of academic material. The study found that generally having children make up questions about the material they had read resulted in gains on comprehension. Generating questions as part of teacher-led instruction was as effective as question generation taught in the context of reciprocal teaching.