Appendix

Appendix A1 Extent of evidence

Intervention name	Number of studies	Sample size (schools/students)	Extent of evidence[1]
Cognitive Tutor	2	9/781	Medium to large
Connected Mathematics Project (CMP)	3	100/14,696	Medium to large
I CAN Learn® Pre-Algebra and Algebra	6	729/16,656	Medium to large
Saxon Middle School Math	6	101/3,399	Medium to large
The Expert Mathematician	1	1/70	Small
Transition Mathematics	3	49/972	Medium to large
UCSMP Algebra	2	4/225	Medium to large[2]

nr = not reported

1. A rating of "medium to large" requires at least two studies and two schools across studies in one domain and a total sample size across studies of at least 350 students or 14 classrooms. Otherwise, the rating is "small."
2. The extent of evidence for *UCSMP Algebra* is considered to be medium to large because, across studies, 14 classrooms were included at the time of analysis.

Appendix A2 Targeted population

Intervention name	Targeted students (grade levels)	Students in studies reviewed (grade levels)[1]
Cognitive Tutor	7–12	9
Connected Mathematics Project (CMP)	6–8	6–8
I CAN Learn® Pre-Algebra and Algebra	6–12	8–9
Saxon Middle School Math	6–9	6–9
The Expert Mathematician	6–9	8
Transition Mathematics	7–12	7–9
UCSMP Algebra	7–10	8–9

Note: This table compares targeted grade levels and the grade levels in the studies reviewed by the WWC. Grade levels are related to student age and may affect outcomes due to differences in the students' developmental stages as well as differences in school size and organization.

1. Some of the studies reviewed included students in grades 10 or above, but the findings for those students were not reviewed because those grades were outside the scope of this review.

Appendix A3 Summary of statistically significant[1] or substantively important[2] positive outcomes

Intervention name	Math achievement	
	Statistically significant positive findings[3]	Math achievement across outcomes
Cognitive Tutor		
Morgan & Ritter, 2002	Math achievement grades (end of first and second semesters)	Statistically significant, Substantively important
Schneyderman, 2001	ns	ns, nsi
Connected Mathematics Project (CMP)		
Ridgway, Zawojewski, Hoover, & Lambdin, 2002	ns	ns, nsi
Riordan & Noyce, 2001	Massachusetts Comprehensive Assessment System (MCAS)—math scores	ns[4]
Schneider, 2000	ns	ns, nsi
I CAN Learn® Pre-Algebra and Algebra		
Kirby, 2006, October	Louisiana Educational Assessment Program (LEAP) Grade 8 Mathematics Exam	Statistically significant, Substantively important
Kerstyn, 2001, Algebra 1	ns	ns, nsi
Kerstyn, 2001, Algebra 1 Honors	ns	ns, nsi
Kerstyn, 2001, MJ-3 pre-algebra	ns	ns, nsi
Kerstyn, 2001, MJ-3 Advanced	ns	ns, nsi
Kerstyn, 2002, October, Algebra 1	ns	ns, nsi
Kerstyn, 2002, October, Algebra 1 Honors	ns	ns, nsi
Kerstyn, 2002, October, MJ-3 pre-algebra	FCAT mathematics	Statistically significant, nsi
Kerstyn, 2002, October, MJ-3 Advanced	ns	ns, nsi
Kirby, 2004, September	General Mathematics CST	Statistically significant, Substantively important
Kirby, 2004a, November	Georgia Criterion-Referenced Competency Test (GCRCT) Math Test	Statistically significant, Substantively important
Kirby, 2005, January	Algebra 1 EOC test	Statistically significant, Substantively important
Saxon Middle School Math		
Williams, 1986	End-of-course math test	Statistically significant, Substantively important
Peters, 1992	ns	ns, nsi
Crawford & Raia, 1986	The California Achievement Test (CAT)	Statistically significant, Substantively important
Resendez, Fahmy, & Manley, 2005	The Texas Assessment of Academic Skills (TAAS)—TLI score; The Texas Assessment of Knowledge and Skills (TAKS)	Statistically significant, nsi
Resendez & Manley, 2005	ns	ns[4]
Roberts, 1994	ns	ns, nsi

(continued)

Appendix A3 Summary of statistically significant[1] or substantively important[2] positive outcomes *(continued)*

Intervention name	Math achievement: Statistically significant positive findings[3]	Math achievement: Math achievement across outcomes
The Expert Mathematician		
Baker, 1997	ns	ns, Substantively important
Transition Mathematics		
Baker, 1997	ns	ns, Substantively important negative effect
Hedges et al., 1986	Geometry Readiness	ns, nsi
Thompson et al., 2005	ns	ns, nsi
UCSMP Algebra		
Peters, 1992	ns	ns, nsi
Thompson et al., 2006	Algebra Readiness; Problem Solving and Understanding	ns, Substantively important

na = not studied
ns = not statistically significant
nsi = not substantively important

1. According to the WWC criteria, if a program finds a statistically significant effect, there is less than a 5% chance that this difference is due to chance. The level of statistical significance was calculated by the WWC and, where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within class-rooms or schools and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. See the Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance.
2. For rating purposes, the WWC considers the statistical significance of the findings and the magnitude of the effect, also called the effect size. An average effect size is the sum of all the effect sizes of the student outcomes in a study in a single domain divided by the number of those outcomes. The WWC considers an average effect size across all student outcomes in one study in a given domain to be substantively important if it is equal to or greater than 0.25.
3. No studies showed statistically significant negative effects on math achievement.
4. Student-level effect size could not be computed for this study; whether or not the magnitude of the effect is substantively important is unknown. However, the statistical significance for this study is comparable to other studies and is included in the intervention rating. For further details, see Technical Details of WWC-Conducted Computations.

Appendix A4 Methodology

One hundred and fifty-eight studies provided data on 34 middle school math curricula and were classified by the strength of their designs.[1] To be fully reviewed, a study had to be a randomized controlled trial or a quasi experimental design with evidence of equating between the treatment and comparison groups.

Eligibility for review

Quasi experiments eligible for review include those equating through matching or statistical adjustment, regression discontinuity designs, and single case designs. However, no studies identified for the middle school math review used regression discontinuity or single case designs.

In judging the quality of the evidence, the review considered the properties of measurement instruments used in the studies, the percentage of the original study sample that was lost to follow-up, and any sample characteristics or events that might serve as alternative explanations for the observed effect. For details please see the WWC Evidence Standards. When results were reported for multiple time periods following sample enrollment, the longer term results were included in the review.

The research evidence for programs that have at least one study meeting WWC evidence standards with or without reservations is summarized in individual intervention reports posted on the WWC website. See http://www.whatworks.ed.gov. So far, 21 studies of 7 middle school programs have met evidence standards with or without reservations. The lack of evidence for the remaining programs does not mean that those programs are ineffective; some programs have not yet been studied using a study design that permits the WWC to draw any conclusions about their effectiveness. And some studies were not considered for rating of effectiveness purposes because insufficient information was reported to enable us to confirm statistical findings.

Rating of effectiveness

Each middle school math curriculum that had at least one study meeting WWC standards with or without reservations received a rating of effectiveness for math achievement. The rating of effectiveness aims to characterize the existing evidence base on the intervention within a given domain. The intervention effects based on the research evidence are rated as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.

The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings, the size of the difference between students in the intervention and the comparison conditions, and the consistency in findings across studies (see the WWC Intervention Rating Scheme).

The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. Because of these corrections, the level of statistical significance as calculated by the WWC may differ from the one originally reported by the study authors. For the formulas that we used to calculate statistical significance, see Technical Details of WWC-Conducted Computations. For an explanation, see the WWC Tutorial on Mismatch. If the average effect size across all outcomes in one study in a single domain is at least 0.25, it is considered substantively important, contributing toward the rating of effectiveness. See the technical appendices of the middle school math intervention report for further details.

Extent of evidence

The evidence base rating represents the size and number of independent samples that were assessed for the purposes of analysis of the program effects. A “medium to large” evidence

1. No empirical studies were identified for additional 14 programs during the time period of this review.

base requires at least two studies and two schools across studies of at least 350 students or 14 classrooms. Otherwise, the evidence base is considered to be “small.” The WWC is currently working to define a “large” evidence base. This term should not be confused with external validity, as other facets of external validity—such as variations in settings, important subgroups of students, implementation, and outcome measures—were not taken into account for the purposes of this rating.

Improvement Index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each domain and each study as well as a domain average improvement index across studies of the same intervention (see the Technical Details of WWC Conducted Computations). The improvement index represents the difference between the percentile rank of the average student in the intervention condition and the percentile rank of the average student in the comparison condition. The improvement index can take on values between –50 and +50, with positive numbers denoting results favorable to the intervention group. Unlike the rating of effectiveness, the improvement index is based only on the size of the difference between the intervention and the comparison conditions.

Appendix A5 References

Studies that met WWC standards

Cognitive Tutor® Algebra I

Morgan, P., & Ritter, S. (2002). *An experimental study of the effects of Cognitive Tutor Algebra I on student knowledge and attitude.* Retrieved November 22, 2006, from http://www.carnegielearning.com/research/research_reports/morgan_ritter_2002.pdf

I CAN Learn® Pre-Algebra and Algebra

Kirby, P. C. (2006, October). *I CAN Learn® in Orleans Parish Public Schools: Effects on LEAP 8th grade math achievement, 2003–2004*. (Available from the ed-cet, Inc., 2301 Killdeer Street, New Orleans, LA 70122)

Additional citation for this study:

Kirby, P. C. (2004b, November). *I CAN Learn® in Orleans Parish Public Schools effects on LEAP 8th grade math achievement, 2003–2004.* (Available from the ed-cet, Inc., 2301 Killdeer Street, New Orleans, LA 70122)

The Expert Mathematician

Baker, J. J. (1997). Effects of a generative instructional design strategy on learning mathematics and on attitudes towards achievement. *Dissertation Abstracts International, 58*(7), 2573A. (UMI No. 9800955)

Saxon Middle School Math

Williams, D. D. (1986). *The incremental method of teaching algebra I*. Kansas City: University of Missouri.

Transition Mathematics

Baker, J. J. (1997). Effects of a generative instructional design strategy on learning mathematics and on attitudes towards achievement. *Dissertation Abstracts International, 58*(7), 2573A. (UMI No. 9800955)

Studies that met WWC standards with reservations

Cognitive Tutor® Algebra I

Schneyderman, A. (2001, September). *Evaluation of the Cognitive Tutor Algebra 1 program.* Unpublished manuscript. (Available from Miami-Dade County Public Schools Office of Evaluation and Research, 1500 Biscayne Boulevard, Miami, FL 33132)

Connected Mathematics Project

Ridgway, J. E., Zawojewski, J. S., Hoover, M. N., & Lambdin, D. V. (2002). Student attainment in the Connected Mathematics curriculum. In S. L. Senk & D. R. Thompson (Eds.), *Standards-based school mathematics curricula: What are they? What do students learn?* (pp. 193–224). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Additional citation for this study:

Hoover, M., Zawojewski, J. S., & Ridgway, J. E. (1997, April). *Effects of the Connected Mathematics Project on student attainment*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.

Riordan, J. E., & Noyce, P. E. (2001). The impact of two standards-based mathematics curricula on student achievement in Massachusetts. *Journal for Research in Mathematics Education, 32*(4), 368–398.

Schneider, C. L. (2000). Connected Mathematics and the Texas Assessment of Academic Skills. *Dissertation Abstracts International*, *62*(02), 503A. (UMI No. 3004373)

I CAN Learn® Pre-Algebra and Algebra

Kerstyn, C. (2001). *Evaluation of the I CAN Learn® mathematics classroom: First year of implementation (2000–2001 school year).* (Available from the Division of Instruction, Hillsborough County Public Schools, 901 East Kennedy Blvd., Tampa, FL 33602)

Kerstyn, C. (2002, October). *Evaluation of the I CAN Learn® mathematics classroom: Second year of implementation (2001–2002 school year).* (Available from the Division of Instruction, Hillsborough County Public Schools, 901 East Kennedy Blvd., Tampa, FL 33602)

Kirby, P. C. (2004, September). *Comparison of I Can Learn® and traditionally-taught 8th grade general math student performance on the California Standards Test, Spring 2004*. (Available from the ed-cet, Inc., 2301 Killdeer Street, New Orleans, LA 70122)

Kirby, P. C. (2004, November). *Comparison of I CAN Learn® and traditionally-taught 8th grade student performance on the Georgia Criterion-Referenced Competency Test.* Unpublished manuscript.

Kirby, P. C. (2005, January). *I CAN Learn® Algebra I in Catoosa County, Georgia*. (Available from the ed-cet, Inc., 2301 Killdeer Street, New Orleans, LA 70122)

Saxon Middle School Math

Crawford, J., & Raia, F. (1986). *Analyses of eighth grade math texts and achievement.* Oklahoma City, OK: Oklahoma City Public Schools, Planning, Research, and Evaluation Department.

Peters, K. G. (1992). Skill performance comparability of two algebra programs on an eighth-grade population. *Dissertation Abstracts International, 54*(01), 77A. (UMI No. 9314428)

Resendez, M., & Manley, M. A. (2005). *The relationship between using Saxon Elementary and Middle School Math and student performance on Georgia statewide assessments.* Orlando, FL: Harcourt Achieve.

Resendez, M., Fahmy, A., & Manley, M. A. (2005). *The relationship between using Saxon Middle School Math and student performance on Texas statewide assessments*. Retrieved from Harcourt Achieve Web site: http://saxonpublishers.harcourtachieve.com/HA/correlations/pdf/s/SXMath_Middle_TX_research_web.pdf

Roberts, F. H. (1994). The impact of Saxon Mathematics program on group achievement test scores. *Dissertation Abstracts International, 55*(06), 1498A. (UMI No. 9430198)

Transition Mathematics

Hedges, L. V., Stodolsky, S. S., Mathison, S., & Flores, P. V. (1986). *Transition mathematics: Field study* (Evaluation Rep. No. 85/86-TM-2). Chicago: University of Chicago School Mathematics Project.

Thompson, D. R., Senk, S. L., Witonsky, D., Usiskin, Z., & Kaeley, G. (2005). *An evaluation of the second edition of UCSMP Transition Mathematics*. Chicago: University of Chicago School Mathematics Project.

University of Chicago School Mathematics Project (UCSMP) Algebra

Peters, K. G. (1992). Skill performance comparability of two algebra programs on an eighth-grade population. *Dissertation Abstracts International*, *54*(01), 77A. (UMI No. 9314428)

Thompson, D. R., Senk, S. L., Witonsky, D., Usiskin, Z., & Kaeley, G. (2006). *An evaluation of the second edition of UCSMP Algebra.* Chicago: University of Chicago School Mathematics Project.

Studies that did not meet evidence screens

Accelerated Math

Bach, S. (2001). *An evaluation of Accelerated Math in a seventh grade classroom.* Madison, WI: Renaissance Learning, Inc.[1]

Renaissance Learning, Inc. (1999). *Accelerated Math and Math Renaissance improve math performance (Scientific Research: Quasi-Experimental series).* Retrieved January 5, 2006, from http://research.renlearn.com/research/pdfs/10.pdf[2]

Sadusky, L. A., & Brem, S. K. (2002). *The use of Accelerated Math in an urban Title I elementary school.* Tempe: Arizona State University.[2]

Spicuzza, R., & Ysseldyke, J. E. (1999). *Using Accelerated Math to enhance instruction in a mandated summer school program.* Minneapolis, MN: Minneapolis Public Schools.[3]

Spicuzza, R. Ysseldyke, J. E., Lemkuil, A. Kosciolek, S., Boys, C., & Teelucksingh, E. (2001). *Effects of using a curriculum-based monitoring system on the classroom instructional environment and math achievement.* Minneapolis: National Center on Educational Outcomes, University of Minnesota.[3]

Ysseldyke, J. E., Spicuzza, R., & McGill, S. (2000). *Changes in mathematics achievement and instructional ecology resulting from implementation of a learning information system.* Retrieved January 5, 2006, from University of Minnesota, National Center on Educational Outcomes Web site: http://www.education.umn.edu/NCEO/OnlinePubs/EBASSreport.pdf[2]

Ysseldyke, J. E., & Tardrew, S. P. (2002). *Differentiating math instruction: A large scale study of Accelerated Math (Final report).* Madison, WI: Renaissance Learning, Inc.[3]

Ysseldyke, J. E., Tardrew, S. P., Betts, J., Thill, T., & Hannigan, E. (2003). *Use of an instructional management system to enhance math instruction of gifted and talented students.* Madison, WI: Renaissance Learning, Inc.[3]

Ysseldyke, J., Spicuzza, R., Kosciolek, S., Teelucksingh, E., Boys, C., & Lemkuil, A. (2003). Using a curriculum-based instructional management system to enhance math achievement in urban schools. *Journal of Education for Students Placed at Risk, 8*(2), 247–265.[3]

Addison-Wesley Mathematics basal program

Nerenz, A. G., Stewart, D. M., & Webb, N. L. (1980). *Scaling and summary statistics for the curriculum implementation and program customizing variables. Comparative study of phase IV IGE evaluation project. Phase IV, project paper 80-6.* Madison: Wisconsin University, Research and Development Center for Individualized Schooling. (ERIC Document Reproduction Service No. ED252549)[4]

Webb, N., & Yasui, E. (1992). *The influence of problem context on mathematics performance. Project 2.1: Alternative approaches to assessment in mathematics and science.* Los Angeles: National Center for Research on Evaluation, Standards, and Student Testing. (ERIC Document Reproduction Service No. ED349331)[5]

Adventures of Jasper Woodbury Series

Northeastern Illinois University, Department of Teacher Education. (2000). *Use of interactive video technology to teach middle school mathematics in Chicago schools, September—November, 2000. Final evaluation report.* Chicago: Author. (ERIC Document Reproduction Service No. ED451055)[6]

Algebra Project

Adair, J. D. (1996). Priming the pump: A study of the Algebra Project and its impact on student achievement in mathematics. *Dissertation Abstracts International, 57*(07), 2921A. (UMI No. 9638729)[2]

Davis, F. E., & West, M. M. (2000a). *The impact of Algebra Project on mathematics achievement.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138) **(Study: Brinkley)**[2]

Davis, F. E., & West, M. M. (2000b). *The impact of Algebra Project on mathematics achievement.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138) **(Study: Cambridge)**[7]

Davis, F. E., & West, M. M. (2000c). *The impact of Algebra Project on mathematics achievement.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138) **(Study: Jackson)**[7]

Davis, F. E., & West, M. M. (2000d). *The impact of Algebra Project on mathematics achievement.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138) **(Study: Lanier High School)**[2]

Davis, F. E., & West, M. M. (2000e). *The impact of Algebra Project on mathematics achievement.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138) **(Study: San Francisco)**[7]

Davis, M. M., West, F. E., & Lynch, M. (1998). *The impact of the Algebra Project on student achievement in mathematics: Results in five sites.* (Available from the Program Evaluation and Research Group, Lesley College, 29 Everett Street, Cambridge, MA 02138)[8]

West, F. E., Davis, M. M., Lynch, M., & Atlas, T. (n.d.) *The Algebra Project's middle school intervention in 1997–98: An evaluation report.* Cambridge, MA: Lesley University, Program Evaluation and Research Group.[9]

Algebraic Thinking

Fair, B., & Mannhardt, L. (2003, June). *Algebraic Thinking: Intermediate math program*. Paper presented at the meeting of the Southern Regional Education Board, Austin, TX.[2]

Appalachia Model Mathematics Program

Miller, R., Mills, C., & Tangherlini, A. (1995). The Appalachia Model Mathematics Program for gifted students. *Roeper Review, 18*(2), 138–142.[6]

Cognitive Tutor® Algebra I

Koedinger, K. R., Anderson, J. R., Hadley, W. H., & Mark, M. A. (1997). Intelligent tutoring goes to school in the big city. *International Journal of Artificial Intelligence in Education, 8*(1), 30–43.[2]

Plano, G. S., Ramey, M., & Achilles, C. M. (2005, August). *Implications for student learning using a technology-based algebra program in a ninth-grade algebra course.* Unpublished manuscript. (Available from the Mercer Island School District, 4160 86th Ave. SE, Mercer Island, WA 98040)[10]

Additional citation for this study:

Plano, G. S. (2004). The effects of the Cognitive Tutor® Algebra on student attitudes and achievement in a 9th grade algebra course. *Dissertation Abstracts International, 65*(04), 1291A. (UMI No. 3130130)

Sarkis, H. (2004). *Cognitive Tutor® Algebra 1: Miami-Dade County Public Schools.* Lighthouse Point, FL: The Reliability Group.[2]

CompassLearning

An independent study done by the Odyssey Charter Middle School (2001–2002). (2003). (Available from CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[6]

Assessment II. (2003). (Available from CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[3]

Curricula for CompassLearning. (2003). (Available from CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[9]

Hartley, C. L. (2003). *Partnered study two: Comparative study in a large inner city school district in the Midwest, 2001–2002.* San Diego, CA: CompassLearning, Inc.[3]

Additional citation for this study:

Compass Learning. (2003). *CompassLearning® Report: What Works Clearinghouse.* San Diego, CA: Author.

Manager I and Manager II. (2003). (Available from the CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[8]

School effectiveness report: Riverside Middle School, Pendleton, SC. (2004). (Available from CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[7]

School effectiveness report: Terrell Middle School, Terrell, TX. (2004). (Available from CompassLearning, 9920 Pacific Heights Blvd., San Diego, CA 92121)[7]

Connected Mathematics Project (CMP)

Adams, L. M., Tung, K. K., Warfield, V. M., Knaub, K., Yong, D., & Mudavanhu, B. (2002). *Middle school mathematics comparisons for Singapore Mathematics, Connected Mathematics Program, and Mathematics in Context (including comparisons with the NCTM Principles and Standards 2000).* Retrieved from University of Washington, Department of Applied Mathematics Web site: http://www.amath.washington.edu/~adams/full.ps[8]

Bay, J. M., Beem, J. K., Reys, R. E., Papick, I., & Barnes, D. E. (1999). Student reactions to standards-based mathematics curricula: The interplay between curriculum, teachers, and students. *School Science and Mathematics, 99*(4), 182–188.[9]

Ben-Chaim, D., Fey, J. T., Fitzgerald, W. M., Benedetto, C., & Miller, J. (1997). *Development of proportional reasoning in a problem-based middle school curriculum.* College Park: University of Maryland, Department of Mathematics. (ERIC Document Reproduction Service No. ED412091)[2]

Ben-Chaim, D., Fey, J. T., Fitzgerald, W. M., Benedetto, C., & Miller, J. (1997, April). *A study of proportional reasoning among seventh and eighth grade students.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.[2]

Ben-Chaim, D., Fey, J. T., Fitzgerald, W. M., Benedetto, C., & Miller, J. (1998). Proportional reasoning among 7th grade students with different curricular experiences. *Educational Studies in Mathematics, 36*(3), 247–273.[2]

Cain, J. S. (2002). An evaluation of the Connected Mathematics Project. *Journal of Educational Research, 32*(4), 224–233.[2]

Clarkson, L. M. C. (2001). The effects of the Connected Mathematics Project on middle school mathematics achievement. *Dissertation Abstracts International, 61*(12), 4709A. (UMI No. 9997642)[1]

Griffith, L., Evans, A., & Trowell, J. (2000). *Arkansas grade 8 benchmark exam: How do Connected Mathematics schools compare to state data?* Little Rock: Arkansas State Department of Education.[2]

Krebs, A. S. (1999). Students' algebraic understanding: A study of middle grades students' ability to symbolically generalize functions. *Dissertation Abstracts International, 60*(06), 1949A. (UMI No. 9936570)[9]

Krebs, A. S. (2003). Middle grades students' algebraic understanding in a reform curriculum. *School Science and Mathematics, 103*(5), 233–245.[9]

Lapan, R., Reys, B., Reys, R., & Holliday, G. (2001). *Assessing the performance of middle grade students using standards-based mathematics instructional materials.* (Available from the University of Missouri, 121 Townsend Hall, Columbia, MO 65211)[1]

Lapan, R. T., Reys, B. J., Barnes, D. E., & Reys, R. E. (1998, April). *Standards-based middle grade mathematics curricula: Impact on student achievement.* Paper presented at the meeting of the American Educational Research Association, San Diego, CA.[2]

Lubienski, S. T. (2000a). A clash of social class cultures? Students' experiences in a discussion-intensive seventh-grade mathematics classroom. *Elementary School Journal, 100*(4), 377–403.[9]

Lubienski, S. T. (2000b). Problem solving as a means toward mathematics for all: An exploratory look through a class lens. *Journal for Research in Mathematics Education, 31*(4), 455–482.[9]

O'Neal, S. W., & Robinson-Singer, C. (2003). *The Arkansas statewide systemic initiative pilot of the Connected Mathematics Project: An evaluation report.* Albuquerque, NM: Accountability & Development Associates, Inc.[2]

Reys, R., Reys, B., Lapan, R., Holliday, G., & Wasman, D. (2003). Assessing the impact of standards-based middle grades mathematics curriculum materials on student achievement. *Journal for Research in Mathematics Education, 34*(1), 74–95.[1]

Additional citation for this study:

Reys, R., Reys, B., Lapan, R., Holliday, G., & Wasman, D. (2004). Assessing the impact of standards-based middle grades mathematics curriculum materials on student achievement: Corrections. *Journal for Research in Mathematics Education, 35*(2), 152.

Rickard, A. (1995). Teaching with problem-oriented curricula: A case study of middle-school mathematics instruction. *The Journal of Experimental Education, 64*(1), 5.[9]

Wasman, D. G. (2000). An investigation of algebraic reasoning of seventh- and eighth-grade students who have studied from the Connected Mathematics Project curriculum. *Dissertation Abstracts International, 61*(09), 3498A. (UMI No. 9988711)[2]

Winking, D. (1998). *The Minneapolis Connected Mathematics Project: Year two evaluation.* Retrieved from Minneapolis Public Schools, Teacher and Instructional Services Web site:

http://tis.mpls.k12.mn.us/sites/5df1b159-7ce3-4aa3-8e71-8-e60a7b98e6c/uploads/connected_mathematics_2.pdf[2]

Additional citation for this study:

Winking, D. (2000a). *Minneapolis data: Excerpts from the year two evaluation report.* (Available from the Connected Mathematics Project, Michigan State University, A715 Wells Hall, East Lansing, MI 48824)

Winking, D. (2000b). *Minneapolis data: Excerpts from the year one evaluation report.* (Available from the Connected Mathematics Project, Michigan State University, A715 Wells Hall, East Lansing, MI 48824)[2]

Zawojewski, J. S., Robinson, M., & Hoover, M. (1999). Reflections on developing formal mathematics and the Connected Mathematics Project. *Mathematics Teaching in the Middle School, 4*(5), 324–330.[9]

Connecting Math Concepts (CMC) mathematics program

San Juan Unified School District, Accountability and Organizational Evaluation Department. (2001). *Connecting Math Concepts: An evaluation of first implementation year.* Retrieved from http://www.sanjuan.edu/accountability/program-evaluations/connecting-math-2001.pdf[6]

San Juan Unified School District, Accountability and Organizational Evaluation Department. (2003). *Evaluation of Connecting Math Concepts year 2.* Retrieved from http://www.sanjuan.edu/accountability/program-evaluations/connecting-math-2002.pdf[6]

CORD Applied Math

Alsup, J. K., & Sprigler, M. J. (2003). A comparison of traditional and reform mathematics curricula in an eighth-grade classroom. *Education, 123*(4), 689–694.[2]

Core Plus Mathematics Project (CPMP)

Kahan, J. A. (1999a). *Relationships among mathematical proof, high-school students, and a reform curriculum.* Unpublished doctoral dissertation, University of Maryland. **(Study: Site I)**[11]

Kahan, J. A. (1999b). *Relationships among mathematical proof, high-school students, and a reform curriculum.* Unpublished doctoral dissertation, University of Maryland. **(Study: Site II)**[11]

Kahan, J. A. (1999c). *Relationships among mathematical proof, high-school students, and a reform curriculum.* Unpublished doctoral dissertation, University of Maryland. **(Study: Site III)**[1]

Schoen, H. L., Cebulla, K. J., Finn, K. F., & Fi, C. (2003). Teacher variables that relate to student achievement when using a standards-based curriculum. J*ournal for Research in Mathematics Education, 34*(3), 228–259.[6]

Schoen, H. L., & Ziebarth, S. W. (1997). *A progress report on student achievement in the Core-Plus Mathematics Project field test. Unpublished report.* (Available from Harold L. Schoen, University of Iowa, N287 Lindquist Center, Iowa City, IA 52242)[2]

Verkaik, M. (2000). *CPMP student Performance at Holland Christian High School.* Retrieved from the Core-Plus Mathematics Project Web site: http://www.wmich.edu/cpmp/pdfs/Holland_Chrtn_Stud_Achieve.pdf[12]

Countdown Video IGAP Intervention Tape

Petropoulos, W. Z. (1999). Improving math achievement scores on the Illinois goals assessment program using the Countdown video tape series. *Dissertation Abstracts International, 60*(05), 1491A. (UMI No. 9930583)[5]

Destination Math

FitzPatrick, S. B. (2001). An exploratory study of the implementation of an educational technology in two eighth grade mathematics classes. *Dissertation Abstracts International, 62*(06), 2082A. (UMI No. 3016656)[9]

Riverdeep, Inc. (July, 2001). *Analysis of state math test scores of Pender County (NC) middle school students.* Unpublished report. (Available from Riverdeep, Inc., 100 Pine Street, Suite 1900, San Francisco, CA 94111)[6]

Additional citation for this study:

Riverdeep Interactive Learning Limited (2003e). *Destination MATH: Validation studies.* Novato, CA: Author. **(Study: Pender County School District, North Carolina)**

Riverdeep Interactive Learning Limited (2003a). *Destination MATH: Validation studies.* Novato, CA: Author. **(Study: Chipman Junior High School, Bakersfield, California)**[2]

Riverdeep Interactive Learning Limited (2003c). *Destination MATH: Validation studies.* Novato, CA: Author. **(Study: Highwood Hills Elementary School, St. Paul, Minnesota & Charlotte Middle School, Rochester, New York)**[6]

Riverdeep Interactive Learning Limited (2003d). *Destination MATH: Validation studies.* Novato, CA: Author. **(Study: Mitchell High School, Colorado Springs, Colorado)**[6]

Rivet, J. R. (2001). Student achievement in middle school mathematics: Computer assisted instruction versus traditional instruction. *Dissertation Abstracts International, 63*(09), 3164A. (UMI No. 3065841)[5]

Additional citations for this study:

Riverdeep, Inc. (2002, March). *Comparison study of Destination Math conducted middle schools in Desert Sands (CA).* (Available from the Riverdeep, Inc., 100 Pine Street, Suite 1900, San Francisco, CA 94111)

Riverdeep Interactive Learning Limited (2003b). *Destination MATH: Validation studies.* Novato, CA: Author. **(Study: Desert Sands Unified School District, California)**

FUNdamentallyMATH®

Brown, F., & Boshamer, C. C. (2000). Using computer assisted instruction to teach mathematics: A study. *The NABSE Journal, 4*(1), 62–72.[1]

I CAN Learn® Pre-Algebra and Algebra

Brooks, C. (1999, August). *Evaluation of Jefferson Parish technology grant: I CAN Learn® Algebra I.* Unpublished report submitted to the Superintendent of Jefferson Parish Public Schools.[13]

Brooks, C. (2000, September). *Evaluation of Jefferson Parish technology grant: I CAN Learn® Algebra I.* (Available from the Department of Educational Leadership, University of New Orleans, New Orleans, LA 70148)[2]

Gill, J. C., & Gifford, C. S. (2001). *Evaluation of Jefferson Parish technology grant: I CAN Learn® Algebra I.* Unpublished manuscript, University of New Orleans, LA.[1]

Oescher, J. (2002, January). *I CAN Learn® education success in California.* (Available from JRL Enterprises, Inc., 3520 General DeGaulle Drive, Suite 1100, New Orleans, LA 70114)[1]

Oescher, J., & Kirby, P. C. (2004, December). *I CAN Learn® results in Dallas, Texas: 9th grade 2003–2004.* (Available from JRL Enterprises, Inc., 3520 General DeGaulle Drive, Suite 1100, New Orleans, LA 70114)[1]

Scafide, K. (2004, November). *Effects of I CAN Learn® on math achievement in Gwinnett County Middle School.* (Available from JRL Enterprises, Inc., 3520 General DeGaulle Drive, Suite 1100, New Orleans, LA 70114)[1]

Integrated Mathematics, Science, and Technology (IMaST)

Loepp, F. L., Meier, S., & Satchwell, R. (2000). Integrated program increases test scores. In G. Graube & W. E. Theuerkauf (Eds.), *Proceedings of the International Conference of Scholars on Technology Education.* (pp. 4). Braunschweig, Germany: Technical University Braunschweig.[2]

Savage-Davis, E. M. (1995). An analysis of the effects of an integrated program on the achievement levels, achievement patterns, and application abilities of seventh grade students. *Dissertation Abstracts International, 56*(10), 3829A. (UMI No. 9603521)[6]

Logo

Littlefield, J., Delclos, V. R., Bransford, J. D., Clayton, K. N., & Franks, J. J. (1989). Some prerequisites for teaching thinking: Methodological issues in the study of LOGO programming. *Cognition and Instruction, 6*(4), 331–366.[3]

Simmons, M., & Cope, P. (1990). Fragile knowledge of angle in turtle geometry. *Educational Studies in Mathematics, 21*(4), 375–382.[3]

Math Renaissance®

Renaissance Learning, Inc. (1999). *Accelerated Math and Math Renaissance improve math performance* (Scientific Research: Quasi-Experimental series). Retrieved January 5, 2006, from http://research.renlearn.com/research/pdfs/10.pdf[2]

Mathematics in Context (MiC)

Adams, L. M., Tung, K. K., Warfield, V. M., Knaub, K., Yong, D., & Mudavanhu, B. (2002). *Middle school mathematics comparisons for Singapore Mathematics, Connected Mathematics Program, and Mathematics in Context (including comparisons with the NCTM Principles and Standards 2000).* Retrieved from University of Washington, Department of Applied Mathematics Web site: http://www.amath.washington.edu/~adams/full.ps[8]

Brinker-Kent, L. (2000). Connecting integers to meaningful contexts. *Mathematics Teaching in the Middle School, 6*(1), 62–66.[9]

Meyer, M. R. (1997). Mathematics in Context: Opening the gates to mathematics for all at the middle level. *NASSP Bulletin, 81*(586), 53–59.[9]

Romberg, T. A. (1997). *The development of an "achieved" curriculum for middle school mathematics or Mathematics in Context: A connected curriculum for grades 5–8.* Madison: University of Wisconsin, Wisconsin Center for Education Research.[9]

Shafer, M. C. (2003, April). *The impact of Mathematics in Context on student achievement: Preliminary findings.* Paper presented at the meeting of the National Council of Teachers of Mathematics, San Antonio, TX.[2]

Webb, D. C., Burrill, J., Romberg, T. A., Ford, M., Kwako, J., & Reif, J. (2001). *NCISLA middle school design collaborative second year student achievement technical report.* Madison: University of Wisconsin, National Center for Improving Student Learning and Achievement in Mathematics and Science.[6]

Webb, D. C., Ford, M. J., Burrill, J., Romberg, T. A., Reif, J., & Kwako, J. (2001). *NCISLA middle school design collaborative third year student achievement technical report.* Madison: University of Wisconsin, National Center for Improving Student Learning and Achievement in Mathematics and Science.[6]

Webb, D. C., & Meyer M. R. (2002a). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8*. Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Ames Community School)**[6]

Webb, D. C., & Meyer M. R. (2002b). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Miami-Dade Public Schools)**[6]

Webb, D. C., & Meyer M. R. (2002c). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Michelangelo Middle School)**[6]

Webb, D. C., & Meyer M. R. (2002d). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Palisades School District)**[6]

Webb, D. C., & Meyer M. R. (2002e). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Placer Hills Unified School District)**[6]

Webb, D. C., & Meyer M. R. (2002f). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Prince William County School District)**[6]

Appendix A5 References *(continued)*

Webb, D. C., & Meyer M. R. (2002g). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Providence School District)**[2]

Webb, D. C., & Meyer M. R. (2002h). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Red Clay School District)**[2]

Webb, D. C., & Meyer M. R. (2002i). *Summary Report of Student Achievement Data for Mathematics in Context: A Connected Curriculum for Grades 5–8.* Madison: University of Wisconsin, School of Education, Wilson Center for Educational Research. **(Study: Verona Area School District)**[6]

MathThematics

Bay, J. M., Beem, J. K., Reys, R. E., Papick, I., & Barnes, D. E. (1999). Student reactions to standards-based mathematics curricula: The interplay between curriculum, teachers, and students. *School Science and Mathematics, 99*(4), 182–188.[9]

Billstein, R., & Williamson, J. (2002). Middle Grades MATHThematics: The STEM project. In S. L. Senk & D. R. Thompson (Eds.), *Standards-based school mathematics curricula: What are they? What do students learn?* (pp. 251–284). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.[2]

Lapan, R., Reys, B., Reys, R., & Holliday, G. (2001). *Assessing the performance of middle grade students using standards-based mathematics instructional materials.* (Available from the University of Missouri, 121 Townsend Hall, Columbia, MO 65211)[1]

Lapan, R. T., Reys, B. J., Barnes, D. E., & Reys, R. E. (1998, April). *Standards-based middle grade mathematics curricula: Impact on student achievement.* Paper presented at the meeting of the American Educational Research Association, San Diego, CA.[2]

Reys, R., Reys, B., Lapan, R., Holliday, G., & Wasman, D. (2003). Assessing the impact of standards-based middle grades mathematics curriculum materials on student achievement. *Journal for Research in Mathematics Education, 34*(1), 74–95.[1]

Additional citation for this study:

Reys, R., Reys, B., Lapan, R., Holliday, G., & Wasman, D. (2004). Assessing the impact of standards-based middle grades mathematics curriculum materials on student achievement: Corrections. *Journal for Research in Mathematics Education, 35*(2), 152.

Moving with Math® Extensions

Math Teachers Press, Inc. (2003a, August). *Analysis of results: Arlington Independent School District, Arlington, Texas. Summer school 2002, grades 1–3, 5–6.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (2002a). *Analysis of results using the Moving with Math extensions program, Arlington County School District, special education, summer school 2002, grades 1–6.* Unpublished report.

Math Teachers Press, Inc. (2003b, August). *Analysis of results: Berkeley County School District, Berkeley, South Carolina. Summer school 2001, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (2001b). *Summer school 2001, Berkeley County School District, South Carolina, grades 1–8 analysis of math results using extensions.* Unpublished report.

Math Teachers Press, Inc. (2003c, August). *Analysis of results: Broward Independent School District, Broward County, Florida. Summer school 2002, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (1999a). *Results of Broward summer school 1999, grades 5–8.* Unpublished report.

Math Teachers Press, Inc. (2003d, August). *Analysis of results: Dallas Independent School District, Dallas, Texas. Summer school 1996, grades 4–6.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (1996). *Analysis of Dallas ISD summer school session 1996.* Unpublished report.

Math Teachers Press, Inc. (2003e, August). *Analysis of results: District 7–Bronx, New York, New York. Summer school 2002, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (2000b). *New York School District 7 summer school 2000, grades 1–8 summary of results.* Unpublished report.

Math Teachers Press, Inc. (2003f, August). *Analysis of results: Grand Prairie Independent School District, Grand Prairie, Texas. Summer school, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (1998). *Grand Prairie Independent School District, summer school 1998, grades 6–8 analysis of results.* Unpublished report.

Math Teachers Press, Inc. (1999b). *Results of Minnesota migrant summer school 1999, grades 2–6.* Unpublished report.[6]

Math Teachers Press, Inc. (2003g, August). *Analysis of results: New Orleans Public Schools, New Orleans, Louisiana. Journey to Success summer school, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[6]

Additional citation for this study:

Math Teachers Press, Inc. (2000a). *Journey to Success summer school 2000, New Orleans Public Schools: Analysis of results.* Unpublished report.

Math Teachers Press, Inc. (2002b). *Summer school 2002, District of Columbia Public Schools, grades 1–6 analysis of math results using Moving with Math extensions.* Unpublished report.[6]

Math Teachers Press, Inc. (2002c). *Summer school 2002, Newport News Public Schools, Newport News, Virginia, grades 5–8, analysis of math results using Moving with Math® extensions.* Unpublished report.[6]

Moving with Math® Math by Topic

Math Teachers Press, Inc. (2003h, August). *Analysis of results: Washington, D.C. Saturday S.T.A.R.S., District of Columbia. 2000–2001, grades 1–8.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)[3]

Additional citations for this study:

Math Teachers Press, Inc. (2001a). *Saturday S.T.A.R.S. 2000–2001 District of Columbia Schools, grades 1–8 analysis of math results using math by topic.* Unpublished report.

Math Teachers Press, Inc. (2003i, August). *George Washington University, Center for Equity and Excellence in Education study summary: Student performance data—District of Columbia Public Schools.* (Available from the Math Teachers Press, Inc., 4850 Park Glen Road, Minneapolis, MN 55416)

Voight, J. D., Orr, J. K., & Summers, C. R. (2001). *Evaluation of the District of Columbia Public Schools 1999–2000 Saturday STARS program.* Arlington, VA: George Washington University, Center for Equity and Excellence in Education.

Opening Eyes to Mathematics

Shaughnessy, J. M. (1997). *Updated summary of achievement data collected from sites implementing Math Learning Center* *curriculum.* Portland, OR: Portland State University, Department of Mathematics Education.[2]

Partnership for Access to Higher Mathematics (PATH Mathematics)

Kennedy, P. A., Chavkin, N. F., & Raffled, P. (1995). Analysis of the effects of a mathematics/social work intervention in the middle school. *Research in Middle Level Education, 18*(3), 59–72.[13]

PLATO

Poore, J. H., & Hamblen, J. W. (1983). Improvement of basic mathematical skills with PLATO: An experiment. *Association for Educational Data Systems Journal, 24,* 224–259.[6]

Saxon Middle School Math

Baldree, C. L. P. (2003). *The effectiveness of two mathematical instructional programs on the mathematics growth of eighth grade students.* Unpublished doctoral dissertation, University of Georgia, Athens, GA.[2]

Clay, D. W. (1998). *A study to determine the effects of a non-traditional approach to algebra instruction on student achievement.* Unpublished master's thesis, Salem-Teikyo University, Salem, WV. (ERIC Document Reproduction Service No. ED428963)[1]

FitzPatrick, S. B. (2001). An exploratory study of the implementation of an interactive learning system in two eighth grade mathematics classes. *Dissertation Abstracts International, 62*(06), 2082A. (UMI No. 3016656)[9]

Imrisek, J. P. (1989). *Incremental development: A more effective means of mathematics instruction?* Master's research paper to Bloomsburg University, Bloomsburg, PA.[1]

Lafferty, J. F. (1996). The links among mathematics text, students' achievement, and students' mathematics anxiety: A comparison of the incremental development and traditional texts. *Dissertation Abstracts International, 56*(08), 3014A. (UMI No. 9537085)[1]

Rentschler, R. V. (1994). The effects of Saxon's incremental review on computational skills and problem-solving achievement of sixth-grade students. *Dissertation Abstracts International, 56*(02), 484A. (UMI No. 9518017)[9]

Saxon, J. (1982). Incremental development: A breakthrough in mathematics. *Phi Delta Kappan, 63*(4), 482–84.[1]

Singapore Mathematics

Adams, L. M., Tung, K. K., Warfield, V. M., Knaub, K., Yong, D., & Mudavanhu, B. (2002). *Middle school mathematics comparisons for Singapore Mathematics, Connected Mathematics Program, and Mathematics in Context (including comparisons with the NCTM Principles and Standards 2000).* Retrieved from University of Washington, Department of Applied Mathematics Web site: http://www.amath.washington.edu/~adams/full.ps[8]

The Six Through Eighth Grade Mathematics (STEM) Project

Research Communications Limited (1995a). *An evaluation of the STEM seventh grade modules: Final report.* Missoula: University of Montana, STEM, Mathematics Department.[2]

Additional citations for this study:

Research Communications Limited (1995b). *An evaluation of the STEM seventh grade modules: Summary.* Missoula: University of Montana, STEM, Mathematics Department.

Research Communications Limited (1994). *An assessment of the sixth grade STEM curriculum: Final report.* Missoula: University of Montana, STEM, Mathematics Department.

Successmaker

Andrew Douglas Community Academy, Milwaukee, Wisconsin. (n.d.). (Available from Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, Arizona 85251)[6]

Dedic, H., Rosenfield, S., Cooper, M., & Fuchs, M. (2001). "Do I really hafta?" WebCal, a look at the use of LiveMath software in web-based materials that provide interactive engagement in a collaborative learning environment for differential calculus. *Educational Researcher and Evaluation, 7*(1), 285–312.[14]

Fitzgerald, D., Hughes, P., & Fitzgerald, R. N. (1996). *An evaluation of computer assisted learning in Victorian Schools.* Melbourne, Victoria: Victorian Directorate of School Education.[14]

Herr, P. (2000). *Reaching every student: The Loudoun County story.* Medford, NJ: Information Today Inc.[9]

Jefferson Junior High School, Toledo, Ohio. (n.d.). (Available from Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, Arizona 85251)[6]

Pearson Education Technologies. (2002a). *SuccessMaker evidence of effectiveness: Selected evaluation summaries.* Scottsdale, AZ: Author. **(Study: Hempfield School District, Landisville, Pennsylvania, 1998)**[6]

Pearson Education Technologies. (2002b). *SuccessMaker evidence of effectiveness: Selected evaluation summaries.* Scottsdale, AZ: Author. **(Study: Hueneme Elementary District, Port Hueneme, California)**[6]

Robby, M. A. (2001). *Evaluation report of the effectiveness of Computer Curriculum Corporation's (CCC) SuccessMaker foundation courses.* (Report prepared for the Alvord Unified School District, Riverside, CA)[5]

Simon, C. (2001). *South-Western City Schools: Relationship study for 2000–2001.* Sunnyvale, CA: NCS Learn.[6]

Simon, C., & Tingey, B. (2002, February). *Reading, PA School District PSSA ontarget analysis for 2001 (Spring 2001).* (Available from the Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, Arizona 85251)[6]

Simon, C., & Tingey, B. (2002, December). *Reading, PA School District ontarget analysis for 2001–2002 PSSA and SuccessMaker (Spring 2002).* (Available from the Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, Arizona 85251)[6]

Simon, C., & Tingey, B. (2003, February). *Aiken County Schools: On target analysis for 2001–2002 PACT and SuccessMaker.* (Available from the Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, AZ 85251)[6]

Stovall Middle School, Houston, TX. (n.d.). (Available from Pearson Education Technologies, 6710 East Camelback Road, Scottsdale, Arizona 85251)[6]

Suppes, P., Zanotti, M., & Smith, N. (1991). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Global evaluation for 1990–91.* Palo Alto, CA: Computer Curriculum Corporation.[6]

Additional citations for this study:

Suppes, P., Zanotti, M., & Smith, N. (1988a). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Global evaluation for 1986–87.* Palo Alto, CA: Computer Curriculum Corporation.

Suppes, P., Zanotti, M., & Smith, N. (1988b). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Global evaluation for 1987–88.* Palo Alto, CA: Computer Curriculum Corporation.

Suppes, P., Zanotti, M., & Smith, N. (1989). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Global evaluation for 1988–89.* Palo Alto, CA: Computer Curriculum Corporation.

Suppes, P., Zanotti, M., & Smith, N. (1990). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Global evaluation for 1989–90.* Palo Alto, CA: Computer Curriculum Corporation.

Suppes, P., Zanotti, M., & Smith, N. (1992). *Effectiveness of the CCC CAI Program—Fort Worth Parochial Schools: Evaluations for 1986–91.* Palo Alto, CA: Computer Curriculum Corporation.

Tingey, B., Thrall, T., & Lai, G. (2000). *Monroe County Public Schools evaluation report for 1999–2000.* Sunnyvale, CA: NCS Learn.[6]

Additional citations for this study:

Schoof, L., Ward, G., Tingey, B., Thrall, T., & Lai, G. (2002). *Monroe County Public Schools evaluation report for*

1999–2000, volume 2: Targeted students. Sunnyvale, CA: NCS Learn.
Thrall, T., Tingey, B., & Lai, G. (2000). *Setting courseware targets for FCAT achievement levels: Addendum to Monroe County Public Schools evaluation report for 1999–2000.* Sunnyvale, CA: NCS Learn.
Tingey, B., Thrall, T., Schoof, L., & Lai, G. (2001). *Pasco County Public Schools evaluation report for 1999–2000.* Sunnyvale, CA: NCS Learn.[6]
Underwood, J., Cavendish, S., Dowling, S., Fogelman, K., & Lawson, T. (1994). *Integrated learning systems in UK schools: Final report.* Leicester: Leicester University, School of Education.[14]

Unitedstreaming™

Boster, F. J., Meyer, G. S., Roberto, A. J., Lindsey, L., Smith, R., Strom, R., et al. (2004). *A report on the effect of the Unitedstreaming™ Application on educational performance: The Los Angeles Unified School District mathematics evaluation.* Evanston, IL: Unitedstreaming.[3]

University of Chicago School Mathematics Project (UCSMP) Algebra

Mathison, S., Hedges, L. V., Stodolsky, S., Flores, P., & Sarther, C. (1989). *Teaching and learning algebra: An evaluation of UCSMP ALGEBRA (Evaluation Rep. No. 88/89-ALG-1).* Chicago: University of Chicago.[13]

Interventions with no studies

A+ny where Learning System
Heath Mathematics Connections (textbook series)
Holt Middle School Math (textbook)
Key Math Teach and Practice
Larson Developmental Math Series
Lightspan Achieve Now
Macmillan/McGraw-Hill
Math Advantage (textbook series)
Math Applications and Connections (textbook series published by Glencoe)
Mathematics Plus (textbook series published by Harcourt)
MathScape: Seeing and Thinking Mathematically
Middle Grades Math (textbook series, published by ScottForesman/AddisonWesley)
Middle School Mathematics through Applications Program (MMAP)
Real Math basal mathematics program
Reasoning Mind
Scott Foresman Math Diagnostic & Intervention System

1. Confound: there was only one intervention unit and/or one comparison unit, so the analysis could not separate the effects of the intervention from other factors.
2. Lack of evidence for baseline equivalence: the study, which uses a quasi-experimental design, does not establish that the comparison group was equivalent to the intervention group at baseline.
3. Intervention is not relevant: the intervention does not meet the WWC standards of a core middle school math curriculum.
4. Study is outside the time frame of the review: the parameters for this WWC review specified that interventions were implemented after 1983 but this study involves students that began the intervention prior to 1983.
5. Intervention is not relevant: the implementation length of the curriculum is too short.
6. Does not use a strong causal design: this study does not use a comparison group.
7. Does not use a strong causal design: this study provides no information on the research design and has no authorship.
8. Outcomes measures are not relevant to this review.
9. Does not use a strong causal design: this is a qualitative study.
10. Lack of evidence for baseline equivalence: the study, which was reviewed as a quasi-experimental design, does not establish that the comparison group was equivalent to the intervention group at baseline. This study, which was designed as a regression discontinuity design, does not properly assign students at the cutoff grade.
11. Does not use a strong causal design: there was a change in instrumentation during the study.
12. Sample is not relevant to this review: the parameters for this WWC review specified that students should be in grades 6–9; this study did not disaggregate students in the eligible range from those outside the range.
13. Complete data were not reported: the WWC could not compute effect sizes.
14. Sample is not relevant to the scope of this review: this study does not focus on students in U.S. schools, one of the parameters for this WWC review.