

REFERENCES

References marked with an asterisk indicate studies included in the meta-analysis.

- Alessi, S. M., & Trollip, S. R. (1991). Computer-based instruction: Methods and Development (2nd. ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Bangert, R. L., Kulik, J. A., & Kulik, C.-L. C. (1983). Effect of coaching programs on Achievement test performance. Review of Educational Research, *53*, 571-585.
- Brown, H. F. (1996). Students' performance on a paper-mediated versus multimedia Tutorial for learning networking concepts (Doctoral dissertation, Virginia Polytechnic Institute and State University, 1996). Dissertation Abstracts International, *57*, 10A.
- *Burgermeister, J. J. (1989). Effects on achievement of using computer spreadsheets for instruction in cost control curriculum at the undergraduate level (Doctoral dissertation, University of Minnesota, 1989). Dissertation Abstracts International, *51*, 03A.
- Burns, H. L., & Capps, C. G. (1988). Foundations of intelligent tutoring systems: An Introduction. In M. C. Polson, J. J. Richardson, & E. Solloway (Eds.), Foundations of Intelligent tutoring systems (pp. 1-20). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Clark, R. E. (1983). Reconsidering research on learning from media. Review of Educational Research, *53*(4), 445-459.
- Cohen, P. A., & Dacanay, L. S. (1992). Computer-based instruction and health Professions education: A meta-analysis of outcomes. Evaluation and the Health Professions, *15*(3), 259-281.

- Chambers, J.A., & Sprecher, J.W. (1983). Computer-assisted learning: Its use in the classroom. Englewood Cliffs, NJ: Prentice Hall.
- Cooper, H., & Hedges, L. V. (1994). In H. Cooper, & L. V. Hedges (Eds.), The handbook of research synthesis. New York: Russell Sage Foundation.
- *Faryniarz, J. V., & Lockwood, L. G. (1992). Effectiveness of microcomputer simulations in stimulating environmental problem solving by community college students. Journal of Research in Science Teaching, 29(5), 453-470.
- Fern, E. F., & Monroe, K. B. (1996). Effect-size estimates: Issues and problems in interpretation. Journal of Consumer Research, 23(2), 89-105.
- Fletcher, J. D. (1990). The effectiveness of interactive videodisc instruction in defense training and education (IDA Paper P-2372). Alexandria, VA: Institute for Defense Analyses.
- Fletcher, J. D. (1992). Cost-effectiveness of interactive courseware. (ERIC Document Reproduction Service No. ED 355 914)
- Fletcher, J. D. (1997). What have we learned about computer-based instruction in military training? In R. J. Seidel & P. R. Chatelier (Eds.), Virtual reality, training's future? New York: Plenum Press.
- Fletcher, J. D., Hawley, D. E., & Piele, P. K. (1990). Costs, effects, and utility of microcomputer assisted instruction in the classroom. American Educational Research Journal, 27, 783-806.
- Fletcher-Flinn, C.M., & Gravatt, B. (1995). The efficacy of computer-assisted instruction (CAI): A Meta-analysis. Journal of Educational Computing Research, 12(3), 219-242.

- Forcier, R. C. (1996). The computer as a productivity tool in education. Englewood Cliffs, NJ: Prentice Hall.
- Fosnot, C. T. (1984). Media and technology in education: A constructivist view. Educational Communication and Technology Journal, 32, 195-205.
- *Fouad, A. F., & Burleson, J. A. (1997). Effectiveness of an endodontic diagnosis computer simulation program. Journal of Dental Education, 61(2), 289-295.
- Glass, G. V. (1976). Primary, secondary, and meta-analysis of research. Educational Researcher, 5(10), 3-8.
- Glass, G. V., McGaw, B., & Smith, M. L. (1981). Meta-analysis in social research. Beverly Hills, CA: Sage.
- *Gokhale, A. A. (1996). Effectiveness of computer simulation for enhancing higher order thinking. Journal of Industrial Teacher Education, 33(4), 36-46.
- *Gott, S. P. (1989). Apprenticeship instruction for real-world tasks: The coordination of procedures, mental models, and strategies. In E. Z. Rothkopf (Ed.), Review of Research in Education, 15, 97-169.
- *Gott, S.P. (1995). Cognitive technology extends the work environment and accelerates learning in complex jobs. Brooks Air Force Base, TX: Armstrong Lab, Human Resource Directorate. (NTIS No. ADA 303 597/9/XAB)
- Hays, R. T., Jacobs, J. W., Prince, C., & Salas, E. (1992). Flight simulator training effectiveness: A meta-analysis. Military Psychology, 4(2), 63-74.
- Hedges, L. V., & Olkin, I. (1985). Statistical method for meta-analysis. Orlando, FL: Academic Press.

- Hedges, L. V., Shymansky, J. A., & Woodworth, G. (1989). Modern methods in meta-analysis: A practical guide. Washington, D.C.: National Science Teachers Association.
- Hmelo, C. E. (1989-1990). Computer-assisted instruction in health professions Education: A review of the published literature. Journal of Educational Technology Systems, 18(2), 83-101.
- *Hwang, Y.- F. (1989). The effectiveness of computer simulation in training programmers for computer numerical control machining. (Doctoral Dissertation, Iowa State University, 1989). Dissertation Abstracts International, 50-09A.
- *Janniro, M. J.(1993). Effects of computer-based instruction on student learning of psychophysiological detection of deception test question formulation. Journal of Computer-Based Instruction, 20(2), 58-62.
- Jarunee, M. (1996). The effects of computer-assisted instruction on the achievements and Attitudes of private postsecondary vocational-technical students in a supplementary English course in Thailand. (Doctoral dissertation, University of North Texas, 1996). Dissertation Abstracts International, 57, 04A.
- *Johnson, M.S. (1994). Validation of an active multimedia courseware package for the integrated damage control training technology (IDCTT) trainer. Monterey, CA: Naval Postgraduate School. (NTIS No. ADA 286 207/6/XAB)
- *Johnson, S. D., Flesher, J. W., Ferej, A., & Jehn, J-C. (1992). Application of cognitive theory to the design, development, and implementation of a computer-based troubleshooting tutor. Berkeley, CA: National Center for Research in Vocational Education, University of California at Berkeley.

- *Kennison, W. E. (1990). Job skills education program (JSEP) test plan study: Effects of JSEP on acquisition and retention of job skills (Final Report, January 1989 - November 1989). Fort Monroe, VA: Education Division, Individual Training Directorate, ODCST, TRADOC.
- Kulik, C.-L., & Kulik, J. A. (1991). Effectiveness of computer-based instruction: An updated analysis. Computers in Human Behavior, *7*, 75-94.
- Kulik, C.-L. C., Kulik, J. A., & Shwalb, B. J. (1986). The effectiveness of computer-based adult education: A meta-analysis. Journal of Educational Computing Research, *2* (2), 235-252.
- Kulik, J. A. (1994). Meta-analytic studies of findings on computer-based instruction. In E. L. Baker & H. F. O'Neil, Jr. (Eds.) Technology assessment in education and training. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kulik, J. A., & Kulik, C.-L. C. (1988). Meta-analysis: Historical origins and contemporary practice. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED 297 015)
- Kulik, J. A., & Kulik, C.-L. C. (1989). Meta-analysis in education. International Journal of Education Research, *13*(3), 221-340.
- Kulik, J. A., Kulik, C.-L. C., & Bangert-Drowns, R. L. (1985). Effectiveness of Computer-based education in elementary schools. Computers in Human Behavior, *1*, 59-74.
- Lajoie, S. P., & Lesgold, A. (1989). Apprenticeship training in the workplace: Computer-coached practice environment as a new form of apprenticeship. Machine-mediated

learning, 3, 7-28.

Liao, Y.-K. C., & Bright, G. W. (1991). Effects of computer programming on cognitive Outcomes: A meta-analysis. Journal of Educational Computing Research, 7(3), 251-268.

*Livergood, N. D. (1994). A study of the effectiveness of a multimedia intelligent tutoring system. Journal of Educational Technology Systems, 22(4), 337-344

*Malec, V.M., & Luszczak, M. (1987). Field evaluation of interactive simulation for maintenance training: SH-3 Helicopter Electromechanical Bladefold System (NPRDC Report No. TR-88-2). San Diego, CA: Navy Personnel Research and Development Center.

Mullen, B., & Rosenthal, R. (Eds.). (1985). Basic meta-analysis: Procedures and programs. Hillsdale, NJ: Lawrence Erlbaum Associates.

*Ogle, T. D., Birkenholz, R. J., & Stewart, B. R. (1989). Assessing the effect of a lecture/discussion teaching strategy with a microcomputer drill and practice component. Journal of Vocational Education Research, 14(2), 67-81.

Orlansky, J., & String, J. (1979). Cost-effectiveness of computer-based instruction in military training (IDA Paper P-1375). Alexandria, VA: Institute for Defense Analyses.

Ouyang, R. (1993). A meta-analysis: Effectiveness of computer-assisted instruction at the level of elementary education (K-6). (Doctoral dissertation, Indiana University of Pennsylvania, 1993). Dissertation Abstracts International, 54, 02A.

*Parchman, S.W., Ellis, J.A., Christinaz, D., & Vogel, M. (1997). Evaluation of three computer based instructional strategies in basic electricity and electronics training

- (NPRDC Report No. TR-98-1). San Diego, CA: Navy Personnel Research & Development Center. (NTIS No. ADA 332 176/7/XAB)
- Pedhazur, E. J., & Schmelkin, L. P. (1991). Measurement, design, and analysis: An integrated approach. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Resnick, L. B. (1987). Education and learning to think. Washington, D.C.: National Academy Press.
- Regian, J. W., & Shute, V. J. (1992). Automated instruction as an approach to Individualization. In Regian, J.W. & Shute, V.J. (Eds.). Cognitive approaches to Automated instruction. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Roblyer, M. D., Castine, W. H., & King, F. J. (1988). Assessing the impact of computer-based instruction: A review of recent research. New York: Haworth Press.
- Rosenthal, R. (1984). Meta-analytic procedures for social research. Beverly Hills, CA: Sage.
- Ryan, A. W. (1990). Meta-analysis of achievement effects of microcomputer applications in elementary schools. (Doctoral dissertation, New York University, 1990). Dissertation Abstracts International, 51, 12A.
- Simonson, M. R., & Thompson, A. (1997). Educational Computing Foundations (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.
- *Shlechter, T. M., Bessemer, D. W., & Kolosh, K.P. (1992). Computer-based simulation systems and role-playing: An effective combination for fostering conditional knowledge. Journal of Computer-Based Instruction, 19(4),110-114.
- Shute, V. J. (1991). Meta-evaluation of four intelligent tutoring systems: Promises and products. Brooks Air Force Base, TX: Manpower and Personnel Research

- Division. (NTIS No. ADA 243 267).
- *Shute, V. J., & Gawlick-Grendel, L.A. (1996). Experimental approach to teaching and learning probability: Stat Lady. Lackland Air Force Base, TX: Galaxy Scientific Corporation (NTIS No. ADA 316 969/5/XAB).
- *Shute, V. J., & Glaser, R. (1990). A large scale evaluation of an intelligent discovery World: Smithtown. Interactive Learning Environments, 1, 51-77.
- *Shute, V. J., Glaser, R., & Raghavan, K. (1989). Inference and discovery in an explanatory laboratory. In P. L. Ackerman, R. J. Sternberg, & R. Glaser (Eds.), Learning and individual differences. New York: Freeman.
- Spencer, K. (1988). The psychology of educational technology and instructional media. New York: Routledge.
- *Spotts, D.S. (1992). Comparison of computer-based training and conventional classroom training for technical instruction (Report No. AFIT/CI/CIA-94-010). Wright-Patterson Air Force Base, OH: Air Force Institute of Technology (NTIS No. ADA 281 825).
- Steinberg, E. R. (1990). Computer-assisted instruction: A synthesis of theory, practice, and technology. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Whitley, Jr., B. E. (1997). Gender differences in computer-related attitudes and behavior: A meta-analysis. Computers in Human Behavior, 13(1), 1-22.
- *Yuill, N. C. W. (1991). The effects of computerized problem-solving simulations on critical thinking skills of baccalaureate nursing students. (Doctoral dissertation, Texas Woman's University, 1991). Dissertation Abstracts International, 52, 8B.