

CURRICULUM VITA

Brian J. Reiser

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Education:

- University of Pennsylvania, 1974–1976, BA in Psychology, 1977.
- New York University, 1977–1979, MA in Psychology, 1979.
- Yale University, 1979–1983, Department of Psychology: Cognitive Science Program. Ph.D. in Psychology, December 1983.

Selected Professional Experience:

- 1993–present: Chair, Learning Sciences Ph.D. Program, Northwestern University.
- 1992–present: Associate Professor of Education and Faculty of the Institute for the Learning Sciences, Northwestern University.
- 1985–1992: Assistant Professor, Department of Psychology, Princeton University.
- 1983–1985: Research Associate, Department of Psychology, Carnegie-Mellon University.

Grants and Contracts:

- ? *KDI: Creating a Corpus of Learning-Situated Design Guidelines and Software Components: A Foundation for Educational Software Research and Development.* 10/99-9/02. Subcontract from University of Michigan (Soloway et al, PIs).
- ? *Developing Teacher Leaders in Science and Technology Programs,* Lucent Technologies, Bell Labs Innovations. \$445,758 for three years (10/99-9/02). Co-Principal Investigator with L. Gomez and D. Edelson.
- ? *Creating and Supporting an Inquiry Culture in High School Science Classrooms,* James S. McDonnell Foundation. \$683,108 for four years (12/97-11/01). Co-Principal Investigator with J. Spillane.
- ? *Promoting Reflective Inquiry in Knowledge-Rich Investigation Environments,* National Science Foundation. \$950,395 for three years (10/97-9/00). Co-Principal Investigator with L. Gomez and D. Edelson.

- ? *Supporting Teachers' Adoption of Inquiry-Based Curricula*. State of Illinois Board of Higher Education, Dwight D. Eisenhower Professional Development Program (Co-PI Robert Chang). \$45,000 for one year (1/96-9/96).
- ? *Supportive Inquiry-based Learning Environments*. The Advanced Research Projects Agency, Computer Aided Education and Training Initiative. (Co-PIs Louis Gomez, Roy Pea, Danny Edelson). \$197,329 for two years (6/95-5/97).
- ? *Scaffolding Scientific Thinking And Construction Of Models Of Biological Mechanisms*. James S. McDonnell Foundation, Cognitive Studies for Educational Practice. \$425,796 for 3 years (3/95-2/98).
- ? *The Learning Sciences Ph.D. Program: Building a Scientific Infrastructure for Applications of Advanced Technologies for Teaching and Learning*. NSF Graduate Research Traineeship Program. \$537,500 for 5 years (9/94-8/99).
- ? *Memory and Use of Examples in Problem Solving*. Office of Naval Research. \$341,986 for 3 years (11/90 – 11/93).
- ? *Graphical Representations and Causal Models in Intelligent Interactive Learning Environments*. Army Research Institute for the Behavioral and Social Sciences. \$470,810 for 3 years (9/90 – 8/93).
- ? *Pedagogical Strategies of Expert Tutors*. Spencer Foundation, Small Grants Program. \$7,500 for 1 year (5/90 – 4/91).
- ? *Causal Models in the Acquisition and Instruction of Programming Skills*. Army Research Institute for the Behavioral and Social Sciences. \$208,992 for 3 years (9/87 – 8/90).

Offices, Consulting, and Awards:

- 1997-1998, Spencer Foundation Major Grants Program, Program Advisory Committee.
- 1995-1996: President, *Special Interest Group on Education in Science and Technology*, American Educational Research Association.
- 1995-1996: Consultant to District 225 (New Trier High School), on a study to review the organizational changes needed to implement their goals for reforms in teaching/learning and integration of technology.
- 1993: Consultant to *Psychological Software Tools*, Pittsburgh, PA. Consulted on the design of a new interface designed to be more easily learned for the Micro Experimental Laboratory system, a software package used by hundreds of psychologists to design psychological studies.
- 1986–1988: Consultant to *Educational Testing Service*, project supported by Office of Research and Improvement, U. S. Department of Education.
- 1990–1991: President, *Special Interest Group on Artificial Intelligence and Education*, American Educational Research Association.
- 1990–1994: Advisory Board, Program in Cognitive Studies for Educational Practice, *James S. McDonnell Foundation*.
- Invited participant in *NATO Science Committee Workshop on New Directions in Educational Technology*, November 1988.

- Awarded the Princeton University Class of 1936 Bicentennial Preceptorship, 7/1/88–6/30/91.
- Invited participant in *National Research Council Workshop on Human Factors in Expert Systems*, Washington, DC, December 1986.

Program Committes

- East-West Conference on Emerging Computer Technologies in Education
- International Conference on Artificial Intelligence and Education
- International Conference on Intelligent Tutoring Systems.
- International Conference on the Learning Sciences

Editorial Boards:

- 1990–present: *Interactive Learning Environments*
- 1990–present: *Journal of the Learning Sciences*

Reviewer for:

Air Force Office of Scientific Research	J. of Experimental Psych: General
Cognition and Instruction	J. of Experimental Psych: LMC
Cognitive Psychology	Journal of Memory and Language
Cognitive Science	Memory and Cognition
Cognitive Science Conference	National Science Foundation
AERA Conference	AI and Education Conference

University Service

- 1992–1999: Information Technology Coordinating Council
- 1999–present: Chair, SESP Faculty Executive Committee
- 1994–1998: SESP Dean’s Cabinet
- 1992–1994: SESP Undergraduate Committee
- 1994–1995: SESP Ad-Hoc Curriculum Committee
- 1993–1994: SESP Strategic Planning Committee

Community Service

- 1993–1994: Evanston Township High School Teaching and Learning Planning Committee.

Research Interests:

Cognition and Instruction, Interactive Learning Environments, Scientific Reasoning, Problem Solving, Learning.

Teaching Experience:

Graduate:

- Design of Learning Environments

- Science Education: Theory and Practice (for Ph.D. and teacher preparation students)
- Teaching Inquiry-Based Science with Technology (a course for practicing teachers)
- Research Methods in the Learning Sciences
- Cognitive Science Models of Learning and Problem Solving
- Learning in Context

Undergraduate:

- Cognitive Science, Education, and Learning
- Artificial Intelligence and Human Cognition
- Artificial Intelligence Programming

Professional Affiliations:

Am. Assoc. for Artificial Intelligence	Am. Educational Research Assoc.
Am. Psychological Society	Cognitive Science Society
Psychonomics Society	

Invited Workshop and Conference Talks:

Reiser, B. J., & Anderson, J. R. (1985). *Evaluating an intelligent tutor for programming*. Paper presented in the Symposium Learning Issues for Intelligent Tutoring Systems, Deutsches Institut fur Fernstudien, Universitat Tubingen, West Germany.

Reiser, B. J. (1986). *Modeling Knowledge for a Programming Tutor*. Paper presented in the Intelligent Computer Assisted Instruction Workshop. Windermere, Cumbria, UK, April 1986.

Reiser, B. J. (1986). *Knowledge Structures in Comprehension and Memory*. Paper presented in the Symposium "Story Comprehension and Production" in the Eleventh Annual Boston University Conference on Language Development, Boston, MA, October 1986.

Reiser, B. J. (1987). *Knowledge Acquisition and Organization*. Paper presented in the regional symposium Artificial Intelligence in Fundamental and Applied Research, Villanova University, January 1987.

Reiser, B. J. (1987). *An Intelligent Tutoring System for Programming: Implications for Intelligent Testing*. Paper presented in the Conference on AI and Testing, Educational Testing Service, March 1987.

Reiser, B. J. (1988). *Knowledge Representation and Explanation in Intelligent Tutoring Systems for Problem Solving*. Paper presented at the New England Regional Computing Program Conference on Courseware and Education, Hartford, CT, February 1988.

Reiser, B. J. (1988). *Using Causal Models for Explanation in an Intelligent Tutoring System for Programming*. Paper presented in the Conference on Intelligent

- Tutoring Systems and Computer Assisted Instruction, Pittsburgh, PA, March 1988.
- Reiser, B. J. (1989). *Problem Solving and Explanation in Intelligent Tutoring Systems*. Paper presented in the Seminar on Computers and Learning, Tortola, BVI, Social Science Research Council, June 1989.
- Reiser, B. J. (1990). *Teaching Problem Solving with Interactive Learning Environments*. Paper presented in Computing in Science Education, a workshop sponsored by the Pew Science Program, Haverford, PA, January 1990.
- Reiser, B. J. (1995). *Facilitating the Acquisition of Mental Models of Programming with GIL: An Integrated Planning and Debugging Learning Environment*. Invited keynote talk at the Psychology of Programming Workshop, Edinburgh, Scotland, Jan 1995.
- Reiser, B. J. (1995). *Guided Inquiry in Biology*. Invited participant, Problem and Project-based Approaches to Learning, EduTech Institute, Georgia Institute of Technology, Dec 1995.
- Reiser, B. J. (1996). *Guided Inquiry Learning Environments for Biology*. Invited participant in a workshop sponsored by the U. S. Office of Naval Research on *Issues in Interactive Multimedia*. Las Cruces, NM, Feb 1996.
- Reiser, B. J. (1999) *Supporting Investigation and Argumentation in Science Classrooms*. Presentation at the Cognitive Science Colloquium, Georgia Institute of Technology, 11/99 and at the Cognition and Instruction 30th Carnegie Symposium, 6/99.
- Reiser, B. J. (1999) *Designing Technology-Infused Inquiry Curricula*. Invited to present at the National Science Foundation, Learning and Intelligent Systems Principal Investigators Conference, Georgetown University, 3/99.

Papers Presented:

- Reiser, B. J., Black, J. B., & Lehnert, W. G. (1982). *Thematic units in the writing of stories*. Paper presented at the Annual meeting of American Educational Research Association, New York.
- Reiser, B. J., Galambos, J. A., & Black, J. B. (1982). *Retrieval from semantic and autobiographical memory*. Paper presented at the Twenty-third Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Black, J. B. & Reiser, B. J. (1983). *Constructing functionally useful memories during reading*. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal.
- Reiser, B. J. (1987). *Causal models in programming*. Paper presented at the Third International Conference on Artificial Intelligence and Education, Pittsburgh, PA.

- Reiser, B. J. (1987). *Intelligent tutoring systems for problem solving*. Paper presented in a Symposium on New Technologies in Computer-Based Learning at the Twenty-ninth International Conference of the Association for the Development of Computer-Based Instructional Systems, Oakland, CA, November 1987.
- Reiser, B. J. (1988). *Diagnosing and modeling individual student differences in intelligent tutoring systems*. Paper presented in the Panel "Dealing with Diversity: Approaches to Individual Differences in Human-Computer Interaction" held at CHI'88, The Conference on Human Factors in Computing Systems, Washington DC.
- Reiser, B. J. (1989). *Pedagogical strategies for human and computer tutoring*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 1989.
- Reiser, B. J. (1989). *An intelligent tutoring system for facilitating students' reasoning about computer programs*. Paper presented at NECC '89: National Educational Computing Conference, Boston, MA, June 1989.
- Reiser, B. J., & Ranney, M. (1990). *Visual representations in intelligent tutoring and exploratory systems for programming*. Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, April 1990.
- Merrill, D. C., Reiser, B. J., & Landes, S. (1992). *Human tutoring: Pedagogical strategies and learning outcomes*. Paper presented at the Annual Meeting of the American Educational Research Association, San Fran., CA, April 1992.
- Merrill, D. C., & Reiser, B. J. (1993). *Scaffolding learning with reasoning-congruent learning environments*. Keynote talk presented in the Workshop on Graphical Representations, Reasoning, and Communication, World Conference on Artificial Intelligence in Education, Edinburgh, Scotland, August 1993.
- Merrill, D. C., & Reiser, B. J. (1994). *Using informal knowledge in formal domains: Intuitions and notations sometimes clash*. Paper presented at AERA, New Orleans, LA.
- Reiser, B. J., Merrill, D. C., Neel, K., Ranney, M., & Trafton, J. G. (1994). *Reasoning-congruent learning environments and explanatory guidance: Theory and results of the GIL Tutoring Project*. Interactive Symposium presented at AERA, New Orleans, LA.
- Smith, B. K., & Reiser, B. J. (1995). *Interactive story systems: They're not just for entertainment anymore*. Paper presented at the AAAI Spring Symposium on Interactive Story Systems.
- Smith, B. K., Agganis, A., & Reiser, B. J. (1995). *Children and artificial life revisited*. Working Notes of the IJCAI-95 Workshop on Entertainment and Artificial Intelligence/Artificial Life, Montreal, Canada.
- Baumgartner, E. & Reiser, B. J. (1996). *Engaging students in inquiry through design*. Paper presented at AERA, New York.

- Tabak, I., Smith, B. K., Sandoval, W. A., Agganis, A., & Reiser, B. J. (1996). *BGuILE: Supporting inquiry in a learning environment for biology*. Paper presented at AERA, New York.
- Williams, S., Bareiss, R., & Reiser, B. J. (1996). *ASK Jasper: A multimedia publishing and performance support environment for design*. Paper presented at AERA, New York.
- Reiser, B. J. (1997). *Engaging students in scientific inquiry in learning environments for biology*. Paper presented at the 163rd National Meeting of the Association for the Advancement of Science, Seattle, WA, 2/97.
- Baumgartner, E., & Reiser, B. J. (1997). *Inquiry through design: Situating and supporting inquiry through design projects in high school science classrooms*. Paper presented at NARST, Chicago, IL.
- Sandoval, W. A., & Reiser, B. J. (1997). *Evolving explanations in high school biology*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Baumgartner, E., & Reiser, B. J. (1998). *Strategies for supporting student inquiry in design tasks*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.
- Radinsky, J. Loh, B., Reiser, B. J., Gomez, L. (1998). *Software design to support flexible adaptation of inquiry support tools to classroom practices*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.
- Reiser, B. J., Tabak, I., Sandoval, W., & Steinmuller, F. (1998). *Teaching evolutionary reasoning and argumentation*. Paper presented at the Twentieth Annual Meeting of the Cognitive Science Society, Madison, WI.
- Sandoval, W. A., Tabak, I., Smith, B. K., Steinmuller, F., & Reiser, B. J. (1998). *BGuILE: Iterative design of a technology-supported biological inquiry curriculum*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.
- Tabak, I., & Reiser, B. J. (1998). *BGuILE: Developing Strategic and Conceptual Knowledge in Technology-Supported High School Biology Classes*. Paper presented at the 1998 Annual Meeting of the National Association for Research in Science Teaching, San Diego, CA.
- Tabak, I., Sandoval, W. A., Smith, B. K., Steinmuller, F., & Reiser, B. J. (1998). *BGuILE: Facilitating Reflection as a Vehicle Toward Local and Global Understanding*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.
- Tabak, I., Sandoval, W. A., & Reiser, B. J. (1998). *Teachers' support of students' biological inquiry: Making use of artifacts of students' reasoning*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.

Sandoval W. A., Daniszewski K., Spillane J. P., & Reiser B. J. (1999) *Teachers' Discourse Strategies for Supporting Learning Through Inquiry* Presented at the 1999 Annual Meeting of the American Educational Research Association, Montreal, Canada.

Tabak, I., & Reiser, B. J. (1999) *Steering the Course of Dialogue in Inquiry-Based Science Classrooms*. Paper presented at the 1999 Annual Meeting of the American Educational Research Association, Montreal, Canada

Publications:

1978-1982

Kosslyn, S. M., Ball, T. M., & Reiser, B. J. (1978). Visual images preserve metric spatial information: Evidence from studies of image scanning. *Journal of Experimental Psychology: Human Perception and Performance*, 4, 47-60.

Lehnert, W. G., Black, J. B., & Reiser, B. J. (1981). Summarizing narratives. *Proceedings of the Seventh International Joint Conference on Artificial Intelligence*, Vancouver, BC.

Reiser, B. J. (1981). Character tracking and the understanding of narratives. *Proceedings of the Seventh International Joint Conference on Artificial Intelligence*, Vancouver, BC.

Reiser, B. J., Lehnert, W. G., & Black, J. B. (1981). Recognizing thematic units in narratives. *Proceedings of the Third Conference of the Cognitive Science Society*, Berkeley, CA.

Reiser, B. J., & Black, J. B. (1982). Processing and structural models of comprehension. *Text*, 2, 225-252.

Reiser, B. J., Black, J. B., & Abelson, R. P. (1982). Retrieving memories of personal experiences. *Proceedings of the Fourth Annual Conference of the Cognitive Science Society*, Ann Arbor, MI.

Schank, R. C., Collins, G. C., Davis, E., Johnson, P., Lytinen, S., & Reiser, B. J. (1982). What's the point? *Cognitive Science*, 6, 255-275.

1983-1984

Kosslyn, S. M., Reiser, B. J., Farah, M. J., & Fliegel, S. L. (1983). Generating visual images: Units and relations. *Journal of Experimental Psychology: General*, 112, 278-303.

Reiser, B. J. (1983). *Contexts and indices in autobiographical memory*. Ph.D. thesis, Technical Report #24, Cognitive Science Program, Yale University.

Reiser, B. J., & Black, J. B. (1983). The roles of interference and inference in the retrieval of autobiographical memories. *Proceedings of the Fifth Annual Conference of the Cognitive Science Society*, Rochester, NY.

- Anderson, J. R., Boyle, C. F., Farrell, R. G., & Reiser, B. J. (1984). Cognitive principles in the design of computer tutors. *Proceedings of the Sixth Annual Conference of the Cognitive Science Society*, Boulder, CO.
- Black, J. B., Galambos, J. A. & Reiser, B. J. (1984). Coordinating discovery and verification research. In D. Kieras and M. Just (Eds.), *New methods in reading comprehension research*. Hillsdale, NJ: Erlbaum.
- Braine, M. D. S., Reiser, B. J., & Rumin, B. (1984). Some empirical justification for a theory of natural propositional logic. In G. H. Bower (Ed.), *The psychology of learning and motivation*, Volume 18.
- Farrell, R. G., Anderson, J. R., & Reiser, B. J. (1984). Interactive student modelling in a computer-based LISP tutor. *Proceedings of the Sixth Annual Conference of the Cognitive Science Society*, Boulder, CO.
- Farrell, R. G., Anderson, J. R., & Reiser, B. J. (1984). An interactive computer-based tutor for LISP. *Proceedings of the 1984 National Conference on Artificial Intelligence*, Austin, TX.
- Mckendree, J., Reiser, B. J., & Anderson, J. R. (1984). Tutorial goals and strategies in the instruction of programming skills. *Proceedings of the Sixth Annual Conference of the Cognitive Science Society*, Boulder, CO.
- Reiser, B. J. (1984). Directed search in autobiographical memory. *Proceedings of the First Annual Workshop on Theoretical Issues in Conceptual Information Processing*, Atlanta.

1985-1986

- Anderson, J. R., Boyle, C. F., & Reiser, B. J. (1985). Intelligent tutoring systems. *Science*, 228, 456-462.
- Anderson, J. R., & Reiser, B. J. (April, 1985). The LISP tutor. *Byte*, 10, 159-175.
- Reiser, B. J., Anderson, J. R., & Farrell, R. G. (1985). Dynamic student modelling in an intelligent tutor for LISP programming. *Proceedings of the Ninth International Joint Conference on Artificial Intelligence*, Los Angeles, CA.
- Reiser, B. J., Black, J. B., & Abelson, R. P. (1985). Knowledge structures in the organization and retrieval of autobiographical memories. *Cognitive Psychology*, 17, 89-137.
- Reiser, B. J., Black, J. B., & Lehnert, W. G. (1985). Thematic knowledge structures in the understanding and generation of narratives. *Discourse Processes*, 8, 357-389.
- Reiser, B. J. (1986). Knowledge-directed retrieval of autobiographical memories. In J. L. Kolodner & C. K. Riesbeck (Eds.), *Experience, memory, and reasoning* (pp. 75-93). Hillsdale, NJ: Erlbaum.
- Reiser, B. J. (1986). The encoding and retrieval of memories of real-world experiences. In J. A. Galambos, R. P. Abelson, & J. B. Black (Eds.), *Knowledge structures*. Hillsdale, NJ: Erlbaum.

Reiser, B. J., Black, J. B., & Kalamarides, P. (1986). Strategic memory search processes. In D. C. Rubin (Ed.), *Autobiographical memory*. New York: Cambridge University Press.

1987-1988

Anderson, J. R., Corbett, A. T., & Reiser, B. J. (1987). *Essential LISP*. Reading, MA: Addison-Wesley.

Anderson, J. R., Boyle, C. F., Farrell, R. G., & Reiser, B. J. (1987). Cognitive principles in the design of computer tutors. In P. Morris (Ed.), *Modelling cognition*. New York: John Wiley and Sons.

Chambers, J. A., Friend, K., Reiser, B. J., & Stevens, D. J. (1987). Symposium: The near future of computer-based education. *Proceedings of the International Conference on Computer Assisted Learning in Post-secondary Education*, University of Calgary, May 5-7, 1987.

Reiser, B. J. (1987). The content of event knowledge structures. *Proceedings of the Ninth Annual Conference of the Cognitive Science Society*, Seattle, WA.

Faries, J. M., & Reiser, B. J. (1988). Access and use of previous solutions in a problem solving situation. *Proceedings of the Tenth Annual Conference of the Cognitive Science Society* (pp. 433-439). Montreal, PQ.

Reiser, B. J. (1988). Predictive inferencing in autobiographical memory retrieval. In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory: Current research and issues*, Volume 1, Memory in everyday life (pp. 269-276). New York: John Wiley and Sons.

Reiser, B. J., Friedmann, P., Gevins, J., Kimberg, D., Ranney, M., & Romero, A. (1988). A graphical programming language interface for an intelligent LISP tutor. *Proceedings of CHI'88, Conference on Human Factors in Computing Systems* (pp. 39-44). ACM, New York.

Reiser, B. J., Friedmann, P., Kimberg, D., & Ranney, M. (1988). Constructing explanations from problem solving rules to guide the planning of programs. *Proceedings of ITS-88: The International Conference on Intelligent Tutoring Systems* (pp. 222-229). Montreal, PQ.

1989-1990

Faries, J. M., & Reiser, B. J. (1989). *BATBook: An online book and problem solving environment for the study of skill acquisition*. Technical Report #40, Cognitive Science Laboratory, Princeton University.

Ranney, M., & Reiser, B. J. (1989). Reasoning and explanation in an intelligent tutoring system for programming. In G. Salvendy & M. J. Smith (Eds.), *Designing and using human-computer interfaces and knowledge based systems: Proceedings of the Third International Conference on Human-Computer Interaction* (pp. 88-95). New York: Elsevier Science Publishers.

- Reiser, B. J. (1989). Pedagogical strategies for human and computer tutoring. Technical Report #38, Cognitive Science Laboratory, Princeton University. (Eric Document Reproduction Service No. ED 316 185)
- Reiser, B. J., Ranney, M., Lovett, M. C., & Kimberg, D. Y. (1989). Facilitating students' reasoning with causal explanations and visual representations. In D. Bierman, J. Breuker, & J. Sandberg (Eds.), *Proceedings of the Fourth International Conference on Artificial Intelligence and Education*. Springfield, VA: IOS.
- Bauer, M. I., & Reiser, B. J. (1990). Incremental envisioning: The flexible use of multiple representations in complex problem solving. *The Proceedings of the Twelfth Annual Conference of the Cognitive Science Society* (pp. 317-324). Hillsdale, NJ: Erlbaum.
- Bauer, M. I., & Reiser, B. J. (1990). The flexible use of multiple representations in AI problem solvers. *The Proceedings of the 1990 AAAI Symposium on Model-Based Reasoning*.
- Faries, J. M., & Reiser, B. J. (1990). Terrorists and spoiled children: Retrieval of analogies for political arguments. *Proceedings of the 1990 AAAI Symposium on Case-Based Reasoning*.

1991-1992

- Reiser, B. J., Beekelaar, R., Tyle, A., & Merrill, D. (1991). GIL: Scaffolding learning to program with reasoning-congruent representations. *The Proceedings of the International Conference on the Learning Sciences* (pp. 382-388). Association for the Advancement of Computing in Education.
- Trafton, J. G., & Reiser, B. J. (1991). Providing natural representations to facilitate novices' understanding in a new domain: Forward and backward reasoning in programming. *The Proceedings of the Thirteenth Annual Conference of the Cognitive Science Society* (pp. 923-927). Hillsdale, NJ: Erlbaum.
- Merrill, D. C., Reiser, B. J., Beekelaar, B., & Hamid, A. (1992). Making processes visible: Scaffolding learning with reasoning-congruent representations. In C. Frasson, G. Gauthier, & G. I. McCalla (Eds.), *Intelligent tutoring systems: Second International Conference, ITS-92* (pp. 103-110). Berlin, Germany: Springer-Verlag.
- Merrill, D. C., Reiser, B. J., Ranney, M., & Trafton, J. G. (1992). Effective tutoring techniques: A comparison of human tutors and intelligent tutoring systems. *The Journal of the Learning Sciences*, 2, 277-305.
- Reiser, B. J., Kimberg, D. Y., Lovett, M. C., & Ranney, M. (1992). Knowledge representation and explanation in GIL, an intelligent tutor for programming. In J. H. Larkin & R. W. Chabay (Eds.), *Computer-assisted instruction and intelligent tutoring systems: Shared goals and complementary approaches* (pp. 111-149). Hillsdale, NJ: Erlbaum.

1993-1994

- Trafton, J. G. & Reiser, B. J. (1993). The contributions of studying examples and solving problems to skill acquisition. *The Proceedings of the 1993 Conference of the Cognitive Science Society* (pp. 1017-1022). Hillsdale, NJ: Erlbaum.
- Merrill, D. C., & Reiser, B. J. (1994). Scaffolding effective problem solving strategies in interactive learning environments. In A. Ram & K. Eiselt (Eds.), *Proceedings of the Sixteenth Annual Conference of the Cognitive Science Society*, (pp. 629-634). Atlanta, GA: Erlbaum.
- Smith, B. K. & Reiser, B. J. (1994). You can learn a lot from film scoring. *Proceedings of the Workshop on Artificial Intelligence, Artificial Life, and Entertainment, AAAI-94*, Seattle, WA.

1995-1996

- Merrill, D. C., Reiser, B. J., Merrill, S. K., & Landes, S. (1995). Tutoring: Guided learning by doing. *Cognition and Instruction*, 13, 315-372.
- Sandoval, W. A., Trafton, J. G., & Reiser, B. J. (1995). The effects of self-explanation on studying examples and solving problems. *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society*, Pittsburgh, PA.
- Tabak, I., Sandoval, W. A., Smith, B. K., Agganis, A., Baumgartner, E., & Reiser, B. J. (1995). Supporting collaborative guided inquiry in a learning environment for biology. In J. L. Schnase & E. L. Cunnius (Eds.), *Proceedings of CSCS '95: The First International Conference on Computer Support for Collaborative Learning* (pp. 362-366), Mahwah, NJ: Erlbaum.
- Tabak, I., Smith, B. K., Sandoval, W. A., & Reiser, B. J. (1996). Combining general and domain-specific strategic support for biological inquiry. In C. Frasson, G. Gauthier, & A. Lesgold (Eds.), *Intelligent Tutoring Systems: Third International Conference, ITS '96*, (pp. 288-296). Montreal, Canada: Springer-Verlag.
- Williams, S., Bareiss, R., & Reiser, B. J. (1996). An environment for supporting independent, individualized learning and problem solving. *Proceedings of the Second International Conference on the Learning Sciences*. Evanston, IL.

1997-1998

- Loh, B., Radinsky, J., Reiser, B. J., Gomez, L. M., Edelson, D. C., & Russell, E. (1997). The Progress Portfolio: Promoting reflective inquiry in complex investigation environments. In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer Supported Collaborative Learning '97*, (pp. 169-178). Toronto, Ontario, Canada.
- Smith, B. K., & Reiser, B. J. (1997). What should a wildebeest say? Interactive nature films for high school classrooms. In *ACM Multimedia*, New York: ACM Press.

- Tabak, I., & Reiser, B. J. (1997). Complementary roles of software-based scaffolding and teacher-student interactions in inquiry learning. In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer Support for Collaborative Learning '97*, (pp. 289-298). Toronto, Canada.
- Tabak, I., & Reiser, B. J. (1997). *Domain-specific inquiry support: Permeating discussions with scientific conceptions*. In *Proceedings of From Misconceptions to Constructed Understanding*, Ithaca, NY.
- Loh, B., Radinsky, J., Russell, E., Gomez, L. M., Reiser, B. J., & Edelson, D. C. (1998). The Progress Portfolio: Designing Reflective Tools for a Classroom Context. In *Proceedings of CHI 98*, . Los Angeles, CA: ACM Press.
- Smith, B. K., & Reiser, B. J. (1998). National Geographic unplugged: Designing interactive nature films for classrooms. In *Proceedings of CHI 98*, Los Angeles, CA: ACM Press.

1999-present

- Loh, B., Reiser, B.J., Radinsky, J., Edelson, D.C., Gomez, L.M., Marshall, S. (in press). Developing reflective inquiry practices: A case study of software, the teacher, and students. In K. Crowley, C. Schunn, & T. Okada, (Eds.), *Designing for science: Implications from everyday, classroom, and professional settings*. Mahwah, NJ: Erlbaum.
- Reiser, B.J., Spillane, J. P., Steinmuller, F., Sorsa, D., Carney, K., Kyza, E. (in press). Investigating the mutual adaptation process in teachers' design of technology-infused curricula. To appear in *Proceedings of The International Conference on the Learning Sciences 2000*.
- Reiser, B. J., Tabak, I., Sandoval, W. A., Smith, B. K., Steinmuller, F., Leone, T. J. (in press). BGuILE: Strategic and conceptual scaffolds for scientific inquiry in biology classrooms. In S.M. Carver & D. Klahr (Eds.), (2001). *Cognition and Instruction: Twenty-five years of progress*. Mahwah, NJ: Erlbaum.

Software Published:

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