

Senior Lecturer, Education Department, Ben Gurion University of the Negev
P.O. Box 653, Beer Sheva, 84105, Israel; itabak@bgu.ac.il; 972-8-646-1827 (phone); 972-8-647-2897 (fax)

Education

1999 (December) **Ph.D., Learning Sciences;** Northwestern University [Thesis & peer reviewed published software]
1991 **B.S.E, Computer Engineering;** The University of Michigan - Ann Arbor

Research Interests

- Study the relationship between professional identity development and subject-matter learning
- Develop models of knowledge construction through distributed mediating agents and media
- Design technological supports for complex reasoning in naturalistic settings

Fellowships and Awards

2006 AERA Division C Jan Hawkins Award for Early Career Contributions to Humanistic Research and Scholarship in Learning Technologies
2003 - 2004 Mandel Fellowship for Research in Education (in residence, Mandel Leadership Institute)
2001 NARST Outstanding Doctoral Research Award
2000 - 2003 Guastalla Fellowship for the Advancement of Science Education, Rashi-Sacta foundation (at BGU)
2000 - 2001 Spencer Advanced Studies Institute (PI: Hoadley & Sandoval)
1999 - 2000 NIMH Postdoctoral Fellowship in Applied Human Development (at UCLA)
1998 - 1999 Spencer Dissertation Year Fellowship
1996 (summer) Summer Program in Research for Graduate Students, Educational Testing Service (ETS)
1995 - 1997 NSF Training Grant Fellowship
1994 - 1995 NSF Graduate Fellowship for Women and Minorities in Engineering

Grants

2007 – (2010) European Union FP7 Science in Society (with partners from 6 other EU countries)
2004 - 2005 Mandel Leadership Institute Research Grant
2003 - 2004 Seed Grant, Ben Gurion University (based on high score on Israel Science Foundation proposal)
2001 - 2001 Seed Grant, Faculty of Humanities and Social Sciences, BGU
1999 - 2000 Center for Innovative Learning Technologies Seed Grant (with Linn and Eylon)
1998 - 1999 Northwestern University Dissertation Grant

Editorships, Editorial Boards and Review Panels

2006 – ongoing Associate Editor, Journal of the Learning Sciences
2003 NSF Science of Learning Centers (Catalyst) Review Panel
2004 - ongoing Editorial Board, Journal of the Learning Sciences
2001- 2003 Review Board, Journal of the Learning Sciences

Ad hoc Reviews

Journals (1) Cognition & Instruction; (2) Science Education; (3) Journal of the Learning Sciences; (4) Computers & Education; (5) International Journal of Science Education; (6) Dapim (Hebrew); (7) Script (Hebrew); (8) Learning & Instruction (9) Instructional Science; (10) Pragmatics & Cognition
Conferences (1) AERA Annual Meeting; (2) Ayala (Israeli National Education Conference); (3) International Conference of the Learning Sciences; (4) ICCE
Proposals (1) Israeli Science Foundation (ISF) (2) Open University (Israel; technological course proposal); (3) Mandel Leadership Institute Faculty Research Grants Program;

Program Committees

2007 CSCL 2007 – Workshops co-chair; Computer Support for Collaborative Learning conference
2004 ICLS 2004 – International relations co-chair; Sixth International Conference of the Learning Sciences.
2004 2004 Ayala – program committee (meeting of the Israeli Association for Research in Education);
2002 ICLS 2002 – International relations co-chair; Fifth International Conference of the Learning Sciences

Professional Appointments

- 2009 (June) President, International Society of the Learning Sciences
2005 - ongoing Board of Directors, International Society of the Learning Sciences (elected position)
2005 - 2006 Early Career Research Affiliate, Center for Curriculum Materials in Science (CCMS)
2002 - ongoing Science Park Steering Committee, Rashi-Sacta Foundation, Beer-Sheva, Israel

Academic Appointments

- 2009 - ongoing Chair, Medical Education, Faculty of Medicine, The Hebrew University of Jerusalem
2006 - ongoing Chair: Learning, Instruction & Technology Program, Ben Gurion University, Israel
2000 - ongoing Lecturer (Assistant Professor), Education Department (Learning, Instruction & Technology Program), Ben Gurion University, Israel
1999 - 2000 Postdoctoral Fellow, Graduate School of Education (Psychological Studies in Education), UCLA

Research Experience

- 2009 **The Hebrew University of Jerusalem, Israel: Senior Lecturer, Center for Medical Education**
• Reasoning processes in Evidence-based Medicine
• Citizenship and science: laypersons' health-care related evidence-based decisions
• Epistemological development: cross-domain and cross-cultural studies (sociocultural perspective)
• Design-based research methods
- 2000 - 2008 **Ben Gurion University of the Negev, Israel: Senior Lecturer (2008), Department of Education**
• Motivation and epistemology in e-learning in science
• The interactions between subject-matter learning and identity formation
• Concomitant changes in conceptual, strategic and epistemic knowledge in the context of inquiry-based learning in science
• Epistemological development: cross-domain and cross-cultural studies (sociocultural perspective)
• Design-based research methods
- 1999 - 2000 **University of California, Los Angeles: NIMH Postdoctoral Fellow in Applied Human Development; Faculty mentors: Yasmin Kafai, Deborah Stipek**
• Examine teacher practices in a technology-supported classroom (Kafai's KIDS project)
• Examine development of scientific critiquing skills using Web-based tools (in collaboration with Marcia Linn and Bat Sheva Eylon)
- 1995 - 1999 **Northwestern University: Research Assistant for Brian Reiser**
BGuILE, learning environments to support student-directed inquiry
• Developed computer-based learning environment, and supervised development team
• Collaborated with teachers on design of curriculum and materials for a unit on evolution
• Qualitative and quantitative data analysis, interviews and classroom observations
• Co-authored grant proposal to McDonnell foundation, awarded 1998
- 1996 (summer) **Educational Testing Service: Research Fellow for Ann Kindfield**
• Assessment of Genscope (BBN), visualization tool for Mendelian Genetics.
• Analyzed pre- post- tests for genetics concepts
• Developed instruments assessing understanding of scientific models
- 1993-1994 **Educational Testing Service: Senior Research Assistant for Drew Gitomer**
HyDRIVE, intelligent tutoring system for troubleshooting aircraft hydraulics.
• Designed and implemented modules in HyDRIVE
• Developed content materials for the system
- 1989-1992 **The University of Michigan: Research Assistant for Elliot Soloway**
GPC, software for programming instruction; MFB, training software (Apple Computer, Inc.)
• Conducted and analyzed verbal protocol (think aloud) sessions
• Recommended improvements for the design of the software

Thesis and project advisement

PhD Theses	in progress: E-Portfolios and Professional Identity Formation
MA Theses	6 completed , topics include: telementoring & epistemology; motivation and technology in learning; technology and learning disabilities; teachers' professional lives; alternative conceptions of probability; two conference presentations, one article under submission; 4 in progress: reasoning in evidence-based medicine, teaching special populations, negotiation strategies in self-advocacy of learning disabled children, digital gaming and social cognition
MA Final Projects	5 completed topics include: reflection in online learning environments, teachers' attitudes and use of technology, learning processes in online learning environments, conceptions of the nature of science [2 advised in collaboration with Dr. Rikki Rimor; 1 in collaboration with Dr. Gad Alexander]; 10 literature reviews completed as the culminating requirement of a masters of science teaching on a range of topics in the field.

Teaching experience

'08 – '09	Lecturer for Introduction to Qualitative Research Methods , undergraduate course, Ben Gurion University of the Negev, Beer Sheva, Israel
'07 – '08	Lecturer for Gaming and Identity , undergraduate seminar, Ben Gurion University of the Negev, Beer Sheva, Israel
'06 - ongoing	Lecturer for Project Seminar: Designing and Evaluating Computational and Networked Learning Environments , graduate course, Ben Gurion University of the Negev, Beer Sheva, Israel
'04 - ongoing	Lecturer for Qualitative Research Methods , graduate course, Ben Gurion University of the Negev, Beer Sheva, Israel
'01 - ongoing	Lecturer for Classroom Discourse: Face to Face vs. Technology Supported , graduate course, Ben Gurion University of the Negev, Beer Sheva, Israel
'00 - ongoing	Lecturer for Design of Computer-based Learning Environments (Practicum on School-based interventions) , graduate seminar, Ben Gurion University of the Negev, Beer Sheva, Israel
'00 - '03	Lecturer for Cognitive Approaches to Science Education , graduate course, Ben Gurion University of the Negev, Beer Sheva, Israel
09/98-05/00	Guest lectures in graduate seminars in Educational Technology , UCLA, CA
1/98-3/98	Teaching assistant for Design of Learning Environments , graduate seminar, MS.Ed, Ph.D and MA students. Instructor Brian Reiser. Northwestern University, Evanston, IL.
9/96-12/96	Teaching assistant for Learning in Context: Cognitive Science Foundations of the Learning Sciences , graduate and undergraduate seminars. Instructor Louis Gomez. Northwestern University, Evanston, IL.
1/96-3/96	Teaching assistant for Science Education: Theory and Practice , graduate seminar. Instructor Brian Reiser. Northwestern University, Evanston, IL.
1/96-2/96	Co-instructor in Explorations in Ecology and Evolution , biology enrichment class (middle school), Center for Talent Development, Northwestern University, Evanston, IL.
1/92 - 5/92	Assistant instructor for Pascal course , Community High School, Ann Arbor, MI.
9/88 - 5/89	Teacher of Hebrew , Beth Israel religious school, Ann Arbor, MI.
8/84 - 6/86	Instructor for Infantry and Instruction Techniques , army service IDF, Israel.

Teacher Professional Development

7/97	Co-instructor in "BGulle, using the Finch Scenario in High School Classrooms" CoVis Summer Teacher Workshops, Evanston, IL.
7/95	Co-organizer and instructor, two week workshop with local teachers developing complementary activities for the BGulle investigation software.

Professional Experience and Service

Mentor in Mentor in Eighth National Doctoral Consortium for Science Education, Sacta-Rashi Foundation, October 5-7, 2008, Nir Ezion, Israel.

Mentor in First Timer's Workshop, ICLS 2008, June, 2008, Utrecht, The Netherlands

Mentor in Early Career Workshop, CSCL 2007, July, 2007, New Brunswick, NJ.

Consultant on evaluation of e-learning R&D for iClass (EU FP6 project: intelligent cognitive-based open online learning system)

BGU-UCLA Academic Exchange Program, July, 2005 (Competitive application & travel stipend)

2005, 2006, 2007 Student Paper Award Committee: Education in Science & Technology/Advanced Technologies for Learning (SIG, American Educational Research Association)

Invited participant: American Association for the Advancement of Science – Center for Curriculum Materials in Science Knowledge Sharing Institute, July 2004.

ICLS 2004 Junior Faculty Workshops (Competitive application & stipend award)

Mentor in Spencer Foundation “Career Trajectory” Session for 2002-2003 Dissertation Year Fellows, April 22, 2003, Chicago, IL.

Invited session chair: Mixed-Methods; First Inter-Disciplinary Israeli Conference on Qualitative Methods, 2002.

Mentor in Fifth National Doctoral Consortium for Science Education, Sacta-Rashi Foundation, October 7-9, 2002, Nir Ezion, Israel.

ICLS 2002 Junior Faculty Workshops (Competitive application & stipend award)

Co-chair and session organizer AERA 1998, AERA 1999, AERA 2002

University committees: Faculty of Humanities and Social Sciences representative to LAM DAN Steering Committee, university outreach for science and knowledge enrichment for youth, Ben Gurion University of the Negev (2004-ongoing)

Departmental committees: B.A. committee (2002-ongoing); Computer lab coordinator (2004- ongoing); Room Allocation (ad-hoc summer 2003); Library liason (2000-ongoing)

Thesis workshop at the Spencer Fellowship Winter Forum (February 1999). Faculty mentors: James Greeno, Rogers Hall, Geoffrey Saxe, and Marcia Linn

Doctoral Consortium (competitive & stipend), **CSCL 1997.** Faculty mentors: Tom Duffy, Barry Fishman, Louis Gomez, Mark Guzdial, and Nancy Songer

Workshops coordinator, 1991 National Educational Computing Conference

- Supervised development and distribution of multimedia composition software
- Participated in organizing and leading workshops (22 sessions)

Demonstration suite, 1990 National Educational Computing Conference

- Brochure production and demonstrations

Publications

Refereed Journals

Tabak, I., Reiser, B. J. (2008). Software-Realized Scaffolding for Cultivating a Disciplinary Stance. *Pragmatics & Cognition*, 16 (2), pp. 307-354.

Tabak, I. (2006). Prospects of Change at the Nexus of Policy and Design. *Educational Researcher* 35 (2), pp. 24-30.

Tabak, I. (2005). Are disciplinary distinctions pertinent to multicultural education?: A view from science. *Multicultural Perspectives* 7 (4), pp. 33-38.

Tabak, I., Weinstock, M. (2005). Knowledge is knowledge is knowledge? The relationship between personal and scientific epistemologies, *Canadian Journal for Science, Mathematics and Technology Education* 5(3), pp. 307-328.

Tabak, I., (2004). Synergy: A Complement to Emerging Patterns of Distributed Scaffolding. *Journal of the Learning Sciences*, 13 (3), pp. 305-355 .

Tabak, I. (2004). Reconstructing Context: Negotiating the Tension between Exogenous and Endogenous Educational Design. *Educational Psychologist*, 39 (4), pp. 225-233.

Tabak, I., Baumgartner, E., (2004). The Teacher as Partner: Exploring Participant Structures, Symmetry and Identity Work in Scaffolding. *Cognition and Instruction*, 22 (4), pp. 393-429.

Neuman, Y., Weinstock, M., Tabak, I., (2004). Missing the Point or Missing the Norms?: On Epistemological Norms as Predictors of Students Ability to Identify Fallacious Arguments. *Contemporary Educational Psychology*, 29 (1), pp. 77-94.

Neuman, Y., Tabak, I., (2003). Inconsistency as an Interactional Problem: A Lesson from political rhetoric. *Journal of Psycholinguistic Research*, 32 (3), 251-267.

Design-Based Research Collective* (2003). Design-Based Research: An Emerging Paradigm for Educational Inquiry. *Educational Researcher*, 32 (1), pp. 5-8. *Theme Issue: The Role of Design in Educational Research*.

***Note:** "Design Based Research Collective" refers to the members of the Spencer Advance Studies Institute on Design-Based Research, of which I am a member. Authors contributed equally to this paper.

Peer Reviewed Archival Proceedings

Tabak, I. (2002). Teacher as monitor, mentor or partner: Uncovering participant structures involved in supporting student-directed inquiry, *Proceedings of The Fifth International Conference of the Learning Sciences*. Seattle, WA.

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., 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.

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 CSCL '95: The First International Conference on Computer Support for Collaborative Learning*, (pp. 362-366). Bloomington, IN: Erlbaum.

Chapters

Tabak, I., & Weinstock, M. (2008). A sociocultural exploration of epistemological beliefs. In M. S. Khine (Ed.), *Knowing, Knowledge, and Beliefs: Epistemological Studies across Diverse Cultures* (pp. 177-196). Amsterdam: Springer.

Reiser, B. J., Tabak, I., Sandoval, W. A., Smith, B., Steinmuller, F., Leone, T. J., (2001) BGuILE: Strategic and Conceptual Scaffolds for Scientific Inquiry in Biology Classrooms. In S.M. Carver & D. Klahr (Eds.). *Cognition and Instruction: Twenty five years of progress*. Mahwah, NJ: Erlbaum

Note: the chapters in this book were peer reviewed.

Guzdial, M., Soloway, E., Blumenfeld, P., Hohmann, L., Ewing, K., Tabak, I., Brade, K., & Kafai, Y. (1992). The Future of CAD: Technological Support for Kids Building Artifacts. In D. Balestri, S. Ehrmann, & D. L. Feguson (Eds.), *Learning to Design, Designing to Learn: Using Technology to Transform the Curriculum* Norwood, NJ: Ablex.

Chapters (continued)

Soloway, E., Guzdial, M., Brade, K., Hohmann, L., Tabak, I., Weingrad, P., & Blumenfeld, P. (1992). Technological Support for the Learning and Doing of Design. In M. Jones & P. H. Winne (Eds.), *Foundations and Frontiers of Adaptive Learning Environments* New York, NY: Springer-Verlag.

Ph.D. Thesis

Tabak, I. (1999). Unraveling the Development of Scientific Literacy: Domain-Specific Inquiry Support in a System of Cognitive and Social Interactions, *Dissertation Abstracts International* (Vol. A 60, pp. 4323). Evanston, IL.: Northwestern University.

Peer Reviewed Software

Tabak, I., Reiser, B. J., Sandoval, W. A., Leone, T. J., & Steinmuller, F. (2001). BGuILE: The Galapagos Finches - The Struggle for Survival [Computer software]. In J. R. Jungck (Ed.), *The BioQuest Library VI*. San Diego, CA: Harcourt Academic Press.

Invited Presentations

Tabak, I. (2007, June). Effect and Affect: Science learning and identity formation in technology-infused classrooms. *Weizmann Institute*, Rehovot, Israel.

Tabak, I. (2007, April). Objects, Subjects, and Subjectivity. *Jan Hawkins Award Lecture, Annual Meeting of the American Educational Research Association, Chicago, IL*.

Tabak, I (2006, June), Keynote, Fifth Conference of the Cyprus Computer Using Educators Group (CCUEG), Nicosia, Cyprus.

Tabak, I (2005, December). How Classroom Cultural Tools Construct Identity and Subject-Matter Learning in the Science Classroom. *Technion*, Haifa, Israel.

Tabak, I. (2004) A call for constructing a pattern language for educational reform. Session discussing ramifications of the Dovrat report (recent government sanctioned reform initiative), *Ayala conference* (meeting of the Israeli Association for Research in Education).

Tabak, I. (2002) Ways of knowing, doing and talking: multicultural dimensions in science education. Science section-head lecture, *Ayala conference* (meeting of the Israeli Association for Research in Education).

Tabak, I. (2002). Shall a wolf dwell with a lamb? Combining quantitative and qualitative methods in educational research. *Israeli Center for Qualitative Methods*, Ben Gurion University, Israel.

Tabak, I. (2001). Teacher and Software as Interrelated Agents in a Distributed Scaffolding System to Support Inquiry:

- King's College, London; UK
- Technion, Haifa; Israel
- Weizmann Institute, Rehovot, Israel

Presentations

Tabak, I., Weinstock, M., Zviling-Beiser, H., (2009). Epistemology & Learning in the Disciplines: Cross-domain Epistemological Views of Science versus Humanities Students. *In 2009 Annual Meeting of the National Association for Research in Science Teaching*, Orange Grove, CA.

Tabak, I., Weinstock, M. (2007). Developmental Psychology Meets Nature of Science: Informing Inquiry-based Science Curricular Design. *In CCMS Fifth Knowledge Sharing Institute at the Association for the Advancement of Science (AAAS)*, Washington DC.

Halperin, M., Tabak, I. (2005). A Qualitative Exploration of Secondary Students' Motivational Orientations. *In 2005 Annual Meeting of the American Educational Research Association*.

Tabak, I., Sandoval, B. (2005). "Who are we and what can we be?": The extent to which different configurations of students, teachers and materials foster a sense of agency. *In 2005 Annual Meeting of the American Educational Research Association*.

Tabak, I., Kaplan, A., Deutsch, Y. (2003). Adaptive Motivational Changes through an Internet-supported Investigation Activity. *In 2003 Annual Meeting of the American Educational Research Association*.

Presentations (continued)

- Tabak, I. (2002). Teacher as monitor, mentor or partner: participant structures to support inquiry-based science learning. *In 2002 Ayala conference (meeting of the Israeli Association for Research in Education).*
- Tabak, I. (2002). Navigating the Tension between Engineered and Emergent Activity Structures: Some Challenges in Working Towards a Theory of Context. *In 2002 Annual Meeting of the American Educational Research Association, New Orleans, LA.*
- Tabak, I. (2001). Old Wine in New Bottles: Towards a Practice-based Definition of a Culture of Inquiry in Science Classrooms. *In 2001 Annual Meeting of the American Educational Research Association, Seattle, WA.*
- Tabak, I. & Reiser, B.J., (2000) Exploring a Range of Student-Directed Inquiry Processes and their Influence on the Construction of Scientific Conceptions. *In 2000 Annual Meeting of the National Association for Research in Science Teaching, New Orleans, LA.*
- Tabak, I., & Reiser, B. J. (1999). Steering The Course of Dialogue in Inquiry-Based Science Classrooms. *In 1999 Annual Meeting of the American Educational Research Association, Montreal, Canada.*
- Tabak, I., Reiser, B.J., Spillane, J.P. (1999). BGuILE: Teachers, Students and Materials Interacting to Construct Biological Knowledge. *In CILT99 The 1999 Annual CILT Conference, San Jose, CA.*
- Tabak, I., & Reiser, B. J. (1998). BGuILE: Developing Strategic and Conceptual Knowledge in Technology-Supported High School Biology Classes. *In 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. *In 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.*
- Sandoval, W. A., Tabak, I., Smith, B. K., Steinmuller, F., & Reiser, B. J. (1998). BGuILE: Iterative Design of a Technology-Supported Biological Inquiry Curriculum. *In 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.*
- Reiser, B. J., Sandoval, W. A., Smith, B. K., & Tabak, I. (1998). Teachers' Support of Students' Biological Inquiry: Making Use of Artifacts of Students' Reasoning. *In 1998 Annual Meeting of the American Educational Research Association, San Diego, CA*
- Reiser, B. J., Tabak, I., Sandoval, W. A., & Steinmuller, F. (1998). Teaching Evolutionary Reasoning and Argumentation. *In Twentieth Annual Meeting of the Cognitive Science Society, Madison, WI.*
- 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.*
- Tabak, I., Smith, B. K., Sandoval, W. A., & Agganis, A. (1996). BGuILE: Supporting Inquiry in a Learning Environment for Biology. *In 1996 Annual Meeting of the American Educational Research Association, New York, NY.*
- Tabak, I. 1996 - 1999, yearly presentations in the Learning Sciences sponsored brown bag colloquium.
- Guzdial, M., Soloway, E., Hohmann, L., Tabak, I., Brade, K., Konemann, M., Walton, C., & Robinson, B. (1992). Student Outcomes Using the GPCeditor. *In Annual Meeting of the American Educational Research Association, San Francisco, CA.*
- Hayes, P. J., Tabak, I., & Soloway, E. (1989). Consistency and Saliency: Interface Issues in Macintosh Fundamentals and Beyond. *Presented at Apple Computer, Inc., Cupertino, CA*
- Hayes, P. J., & Tabak, I. (1989). MFB: Navigational Issues in a HyperText Training System. *In HCI Workshop at the Cognitive Science and Machine Intelligence Lab (CSMIL), The University of Michigan, Ann Arbor, MI*

Technical and Research Reports

- Hibino, S., Tabak, I., & Soloway, E. (1992). Key Criteria for User Training: Approachability, Proficiency and Applicability. Unpublished manuscript. The University of Michigan, Ann Arbor.
- Soloway, E., Hayes, P. J., & Tabak, I. (1989). Final Project Report: Facilitating Enhanced Learning in Macintosh Fundamentals and Beyond. Apple Computer, Inc., Cupertino, CA.