

MICHAEL HACKER

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PROFESSIONAL PREPARATION

| <i>Date</i> | <i>Degree</i> | <i>Institution</i> | <i>Location</i> |
|-------------|--|------------------------|-----------------|
| 2005 | Ph. D. program, Technology Studies (ABD) | New York University | New York City |
| 1970 | Certificate in School Admin/Supervision | City College of NY | New York City |
| 1968 | M.S. in Education | City College of NY | New York City |
| 1964 | B.S. in Education | City College of NY | New York City |
| 1959 | Science and Mathematics Diploma | Stuyvesant High School | New York City |

APPOINTMENTS

| <i>Dates</i> | <i>Position</i> | <i>Institution</i> |
|--------------|---|--------------------------------------|
| 1999-Present | Co-director, Center for Technological Literacy and co-PI/PI of nine large-scale NSF-funded projects | Hofstra University, Hempstead, NY |
| 1997-2002 | Research Professor | SUNY at Stony Brook, Stony Brook, NY |
| 1984-1997 | Associate State Supervisor for Technology Education | New York State Education Department |
| 1970-1978 | Adjunct Faculty, Department of Technology Education | City College of New York, NYC |
| 1964-1984 | Chairperson and Teacher, Department of Technology | Syosset CSD, Syosset, NY |

PUBLICATIONS

Books and Book Chapters

- Barak, M. and Hacker, M., eds. (2011). *Fostering Human Development through Engineering and Technology Education*. (In Press). Sense Publishers: Amsterdam, The Netherlands.
- Hacker, M., and Kiggins, J. *Gaming to Learn*. In Barak, M. and Hacker, M., eds. (2011). *Fostering Human Development through Engineering and Technology Education*. (In Press). Sense Publishers: Amsterdam, The Netherlands.
- Hacker, M. et al. *Engineering and Technology*. (2010). Delmar Cengage Learning: Clifton Park, NY.
- Hacker, M. and Burghardt, M. D. (2008). *Technology Education: Learning by Design*. 558 pp. Prentice Hall School Division: Upper Saddle River, NJ.
- McAlister, B., Tiala, S., and Hacker, M. (2008). Engineering Content and the Technology Education Curriculum. In *Engineering and technology education: 57th yearbook of the Council on Technology Teacher Education* (Custer and Erikson, eds.). Peoria, IL: Glencoe
- Gordon, A., Hacker, M., and de Vries, M., eds. (1993). *Advanced Educational Technology in Technology Education*. NATO ASI Series. Springer-Verlag: Heidelberg, Germany.
- Hacker, M. and Barden, R. (1993). *Living with Technology*. 560 pp. Delmar Publishers, Inc.: Albany, NY
- Hacker, M. and Barden, R. (1992). *Technology in Your World*. 448 pp. Delmar Publishers, Inc.: Albany, NY.
- Hacker, M., Gordon, A., and de Vries, M., eds. (1991). *Integrating Advanced Technology into Technology Education*. NATO ASI Series. Springer-Verlag: Heidelberg, Germany.
- Hacker, M. and Barden, R. (1990). *Communications Technology*. 448 pp. Delmar Publishers, Inc.: Albany, NY.

Articles and Papers (selected)

- de Vries, M., Hacker, M., and Burghardt, M.D. Teaching Engineering and Technology: A Research Study to Identify Overarching Themes and Instructional Contexts in Engineering and Technology Education. *The Technology and Engineering Teacher*. November, 2010. ITEEA: Reston, VA.
- Rossouw, A., Hacker, M., and de Vries, M. (2010). *Concepts and contexts in engineering and technology education: an international and interdisciplinary Delphi study*. International Journal of Technology and Design Education, DOI: 10.1007/s10798-010-9129-1. SpringerLink. www.springerlink.com/content/4u32551r6h44kx42/
- Hacker, M. and Burghardt, M. D. Addressing Issues Related to Technology and Engineering. *The Technology Teacher*. November 2008. ITEA: Reston, VA.
- Hacker, M. and Burghardt, M. D. *Technology Education Teacher Quality in the STEM Era*. Proceedings of the International Conference on Design and Technology Education Research. PATT/ORT Israel. October 2008.
- Hacker, M. and Burghardt, M. D. (2002). Large-Scale Teacher Enhancement Projects Focusing on Technology Education. *Journal of Industrial Teacher Education*. Volume 39, number 3.
- Hacker, M. (1995). Implementation of Technology Education in New York State, in *Advanced Educational Technology: Research Issues* (Thomas T. Liao, ed.). Proceedings of the NATO Advanced Research Workshop.

- Hacker, M. (1994). A Model for Integrated Mathematics, Science, and Technology Education Staff Development, in *Technology Education in School and Industry* (Blandow and Dyrenfurth, eds.). Proceedings of the NATO Advanced Research Workshop.
- Hacker, M. (1993). Technology Education in New York State, in *Engineering Education: Renewing America's Technology* (L. Grayson, ed.). Frontiers in Education Conference Proceedings. IEEE: Piscataway, NJ.
- Hacker, M. (1993). Implementation Issues in Technology Education, in *Advanced Educational Technology in Technology Education* (Gordon, A., Hacker, M., and de Vries, M., eds.). Proceedings of the NATO ASI.
- Hacker, M. Engineering Preparation. *Ties Magazine*. January-February 1992.
- Hacker, M. Applying Leadership and Strategic Planning Techniques, *The Technology Teacher*. January 1990. ITEA: Reston, VA.

SYNERGISTIC ACTIVITIES

As co-director of the Hofstra Center for Technology Education, I develop and administer projects to advance K-16 STEM literacy. As PI of the NSF-funded SMTE project, I direct a project focused on using online gaming to contextualize STEM instruction. As co-PI of the NSF-funded MiSP project, I provide pedagogical support to the development of math-infused middle school science materials. As project coordinator and co-PI of seven other large-scale NSF Projects, I provided leadership to projects ranging in size from \$1.5M over three years to an \$11.5M project over a five year period. These projects focused on improving mathematics teaching and learning, the development of a commercially published high school technology education textbook program; the development of a framework to infuse gender equity into STEM programs, professional development to STEM teachers, and grades K-14 curriculum development.

As state supervisor for technology education at the New York State Education Department, I had primary responsibility for conceptualizing, managing, and implementing the process of technology education reform and led the development of the state-mandated middle school Introduction to Technology program and the high school Principles of Engineering project. My responsibilities included curriculum and staff development, provision of technical assistance to universities and school districts, assessment development, facility design, and information dissemination. During the generation of the *New York State Learning Standards for Mathematics, Science and Technology*, I managed the development of the technology standards, conducted ongoing discussions with national leaders in mathematics, science, and technology; synthesized input; convened and led writing and review teams; and developed pilot performance assessments.

As a member of the NSF-funded *Standards for Technological Literacy* development team, I collaborated with national educational leaders to develop the national Standards for Technological Literacy.

Selected Professional Activities and Honors

- National Science Foundation Panelist - Teacher Enhancement; IMD; ATE (1991-1993, 1998, 2000, 2001, 2004); ITEST (2006); MSP (2010); ISE (2011).
- Inducted into the International Technology Education Association Academy of Fellows (2004)
- Distinguished Service Citation, Epsilon Pi Tau National Honor Society (2001)
- National Standards for Technological Literacy Writer, International Technology Education Association (1996-2000)
- President's Award, New York State Technology Education Association (1997)
- Consultant to the American Association for the Advancement of Science (1996)
- Consultant to British Technology Enhancement Project (London, 1995)
- Award of Distinction, International Technology Education Association (1995)
- Outstanding State Supervisor Award, ITEA Council of Technology Supervisors (1993)
- Member, National Conceptual Framework for Technology Education Task Force, ITEA (1989-1991)
- IEEE Spectrum Pre-college Math/Science Education Award, Institute of Electrical and Electronic Engineers (1990)
- Outstanding Technology Educator Award, International Technology Education Association (1985)
- President, New York State Technology Education Association (1984-1985)

Projects Administered and Grants Received

- Co-PI, Math Infusion into Science Project (MiSP), NSF Grant #DUE-0927973, \$2.09M, 2009-2012
- PI, Simulations and Modeling in Technology Education (SMTE), NSF Grant #0821965, \$3.2M, 2008-2013
- Project Coordinator and Co-PI, MSTP, NSF Grant #0314910, \$11.5M, 2003-2008
- Project Co-PI, Project ESTEEM, NSF Grant #DUE-0603403, \$720K, 2007-2010
- Project Co-PI, Career Curriculum for Technology (CCfT), NSF Grant #DUE-0603403, \$750K, 2006-2009
- Project Co-Director and Co-PI, NYSPDC, NSF Grant #DUE-0053269, \$1.53M, 2003-2006
- Project Co-Director and Co-Principal Investigator, NYSCATE, NSF Grant #0053269, \$1.5M, 2000-2003
- Project Co-PI, Technology Education on the World Wide Web, NSF Grant #ESI-9911569, \$1M, 2000-2003
- Executive Director and Co-PI, The MSTe Project, NSF Grant #ESI-9618962, \$4.2M, 1997-2002