

JONATHAN T. SHEMWELL

Curriculum Vitae

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PUBLICATIONS

- Chase, C. C., Shemwell, J. T., & Schwartz, D. L. (2010). Explaining across contrasting cases for deep understanding in science: An example using interactive simulations. *Proceedings of the 9th International Conference of the Learning Sciences*, Chicago.
- Furtak, E. M., Shavelson, R. J., Shemwell, J. T., & Figueroa, M. (in press). To teach or not to teach through inquiry: is that the question? In S. Carver & J. Shrager (Eds.), *The journey from child to scientist: Integrating cognitive development and the education sciences*. Washington, D.C.: American Psychological Association.
- Furtak, E. M., Ruiz-Primo, M. A., Shemwell, J. T., Ayala, C. C., Brandon, P., Shavelson, R. J., et al. (2008). On the fidelity of implementing embedded formative assessments and its relation to student learning. *Applied Measurement in Education*, 21(4), 360-389.
- Furtak, E. M., Hardy, I., Beinbrech, T., Shavelson, R. J., & Shemwell, J. T. (2010). A framework for analyzing reasoning in science classroom discourse. *Educational Assessment*.
- Shemwell, J. T., & Furtak, E. M. (2010). Scientific argumentation and science discussion: A study of conceptually rich (and poor) student talk. *Educational Assessment*.
- Shemwell, J. T., & Furtak, E. M. (2009). Argument-driven formative assessment and conceptual science learning. Annual Meeting of the American Educational Research Association, San Diego.
- Shemwell, J.T., & Furtak, E.M. (2009), Problems with argumentation for conceptual science learning: when arguments and explanations diverge. *Annual Meeting of the European Association for Research on Learning and Instruction*, Amsterdam.
- Shemwell, J. T., Fu, A. C., Figueroa, M., Davis, R. D., & Shavelson, R. J. (2010). Assessment in schools - secondary science. In P. Peterson, D. Baker & B. McGaw (Eds.), *International encyclopedia of education* (3rd ed., pp. 300-310). Oxford: Elsevier.

EDUCATION

- 2011 **Stanford University**, Stanford, CA
Ph.D., Science Education
- 2003 **National Board for Professional Teaching Standards**
Secondary Science Certification and State of Illinois Master Teacher
- 1998 **Northwestern University**, Evanston, IL
Certified (Alternative) Teacher
- 1993 **United States Navy**, Office of Naval Reactors, Washington, D.C.
Certified Nuclear Engineer Officer
- 1990 **Johns Hopkins University**, Baltimore, MD
M.S. Applied Physics
- 1989 **United States Naval Academy**, Annapolis, MD
B.S. Physics, with distinction

PROFESSIONAL EXPERIENCE

- 2011 - Present **Assistant Professor of Education and Cooperating Assistant Professor of Physics,**
University of Maine, Orono, ME
- 2006 - 2011 **Graduate Student Researcher,** Stanford University School of Education, Stanford, CA
- 1998-2006 **High School Physics Teacher,** Chicago Public Schools, Chicago, IL
- 1996-1998 **Mechanical Engineer,** General Electric Company, Chicago, IL
- 1994-1996 **Flag Lieutenant,** North Atlantic Treaty Organization, Lisbon, Portugal
- 1989-1994 **Navy Nuclear Submarine Officer,** primarily USS Michigan (SSBN 727), Bangor, WA

ACADEMIC HONORS

- 2007 **Stanford Interdisciplinary Graduate Fellow**