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Professional Preparation

University of North Carolina, Chapel Hill, NC	Biology	B.S. 1997
University of North Carolina, Chapel Hill, NC	Science Education	M.A.T. 1998
North Carolina State University, Raleigh, NC	Science Education	Ph.D., 2006

Appointments

20012-Present	Associate Professor, College of Education, Clemson University
2006-2012	Assistant Professor, College of Education, Clemson University
1998-2004	Science Teacher, Cardinal High School, Raleigh, NC

Selected Publications

1. Cook, M., & Visser, R. (2014). Multimedia presentations of mitosis: An examination of split-attention, modality, redundancy, and cueing. *Journal of Educational Multimedia and Hypermedia* 23(2): 5-21.
2. Chow, A.T., Chong, J., Cook, M., & White, D.L. (2014) Vanishing fireflies: A citizen scientist project promoting scientific inquiry, service-learning, sustainability, and stewardship. *Science Education & Civic Engagement* 6(1): 23-31.
3. Cook, M. & Deaton, C.C.M. (2012). On the case: Implementing environmental science case studies helps students experience science in a meaningful way. *Science and Children* 50(1): 70-73.
4. Cook, M. (2011). Teachers' use of visual representations in the science classroom. *Science Education International* 22(3): 175-184.
5. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (2011). In-service teachers' perceptions of online learning environments. *Quarterly Review of Distance Education* 12(2): 73-80.
6. Quigley, C., Marshall, J.C., Deaton, C.C.M., **Cook, M.**, & Padilla, M. (2011). Challenges to inquiry teaching and suggestions for how to meet them. *Science Educator* 20(1): 63-70
7. Cook, M., Wiebe, E.N., Carter, G. (2009). The influence of prior knowledge on viewing and interpreting graphics with macroscopic and molecular representations. *Science Education* 92(5): 848-867.
8. Cook, M., Carter, G., & Wiebe, E.N. (2008). The interpretation of cellular transport graphics by students with low and high prior knowledge. *International Journal of Science Education* 30(2): 241-263.

9. Cook, M. (2008). Problem-based learning as the backbone for educational game design. In L.A. Annetta (Ed.), *Serious Educational Games: From Theory to Practice* (pp. 57-63). Rotterdam, Netherlands: Sense Publishers.
10. Cook, M.P. (2006). Visual representations in science education: The influence of prior knowledge and cognitive load theory on instructional design principles. *Science Education* 90(6): 1073-1091.

Prior Research Efforts

- PI on a NSF Noye grant that seeks to recruit and retain STEM majors into secondary mathematics and science teaching professions (2011-present). Manage all administrative and financial aspects of the \$1.2 million project.
- Co-PI on a US EPA P3 grant to develop a mobile phone app that provided an opportunity for citizens to participate in a community-based environmental monitoring (2013-2014). Engaged in training citizen scientists and researching motivations for participation and changes in understandings and attitudes toward science.
- Engaged in research to determine how professional development for science teachers influences student content knowledge, understanding of science practices, and attitudes toward science (funded by the Mathematics and Science Partnership from 2006-2012 and Improving Teacher Quality grants from 2009-2013).
- Co-PI on a NSF IEECE grant using tablet PCs and digital inking to investigate the cognitive processes used by engineering students when solving problems (2009-2013).
- Engaged in research to determine how students learn from representations in science, published in outlets such as *Science Education* and the *International Journal of Science Education*, and draws heavily from frameworks in cognitive science.