

Name: Christine Lotter

Academic background:

- **Degree: Ph.D. in Curriculum & Instruction, Science Education**
- **Institution: Indiana University, Bloomington**
- **Degree: M.A. in Ecological Anthropology**
- **Institution: University of Georgia**
- **Degree: B.S. in Biology**
- **Institution: University of Miami**

Title(s): Associate Professor

Department(s): Instruction & Teacher Education

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Teaching areas/areas of expertise: Science education, Secondary teaching methods, Secondary education, teacher beliefs, teacher professional development

Selected research studies:

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| 2013-2014 | Thompson, S., Lotter, C. , & Ely, B. STEP: South Carolina Department of Education, Math and Science Partnership Grant. Total Value of Grant: \$215,594 for one year. |
| 2011-2013 | Lotter, C. , Ely, B., Thompson, S. "SIMPLE: Science Inquiry through Modeling Pedagogy, Content Learning, and Evaluation." South Carolina Department of Education, Math and Science Partnership Grant. Total Value of Grant: \$903,080 for three years. |
| 2010-2015 | Yow, J., Lotter, C. , Lopez, G., Dickey, E. & Ely, B. "University of South Carolina Science and Mathematics Teacher Initiative (USC-SMITI)." National Science Foundation, Robert Noyce Scholarship Program. Total Value of Grant: \$1,499,711 for five years. |

Selected publications:

Lotter, C., Yow, J. & Peters, T. (2014). Building a Community of Practice around Inquiry Instruction through a Professional Development Program. *International Journal of Mathematics and Science Education*. 12 (1), 1-23. (DOI: 10.1007/s10763-012-9391-7)

Lotter, C., Rushton, G., Singer, J. (2013). Teacher Enactment Profiles: How Can We Help Move All Teachers toward Inquiry Practice through Professional Development? *Journal of Science Teacher Education*. 24, 1263–1291. (DOI: 10.1007/s10972-013-9361-0)

Marshall, J., Smart, J., Lotter, C., & Sirbu, C. (2011). Comparative analysis of two inquiry observational protocols: Striving to better understand the quality of teacher facilitated inquiry-based instruction. *School Science and Mathematics*. 111 (6), 306-315.

Singer, J., Lotter, C., Gates, A., & Feller, R. (2011). Exploring a model of situated professional development: Impact on classroom practice. *Journal of Science Teacher Education*. 22, 203-227.

Bogiages, C. & Lotter, C. (2011). Modeling natural selection on the web: Using model-based inquiry and wikis to learn about evolution. *The Science Teacher*. 78(2), 34-40.

Rushton, G., Lotter, C. & Singer, J. (2011). Chemistry teachers' emerging expertise in inquiry teaching: the effect of a professional development model on beliefs and practice. *Journal of Science Teacher Education*. 22(1) 23-52.

Lotter, C., Singer, J., & Godley, J. (2009). The influence of repeated teaching and reflection on preservice teachers' views of inquiry and nature of science. *Journal of Science Teacher Education*. 20:553-582.

Feller, R. & Lotter, C. (2009). Teaching strategies that hook classroom learners. *Oceanography*. 22(1) 234-237.

Lotter, C., Harwood, H. & Bonner, J. (2007). The influence of core teaching conceptions on teachers' use of inquiry teaching practices. *Journal of Research in Science Teaching*. 44(9): 1318-1347.

Lotter, C., Harwood, H. & Bonner, J. (2006). Overcoming a learning bottleneck: Inquiry professional development for secondary science teachers. *Journal of Science Teacher Education*. 71(3): 185-216.

Select presentations:

Lotter, C., Thompson, S., Dickenson, T., & Smiley, W. (January, 2014). Middle School Science Teachers' Efficacy and Implementation of Inquiry: Impact of an Inquiry Professional Development Program. Paper to be

presented at the annual meeting of the Association for Science Teacher Education, San Antonio, TX.

Dickenson, T., Lotter, C., & Smiley, W. (April, 2013). Fostering Teacher Efficacy through Professional Development. Presentation at the American Educational Research Association in San Francisco, CA.

Lotter, C. & Thompson, S, Dickenson, T. (April, 2013). Impact of a Professional Development Program on Middle School Teachers' Inquiry Teaching Efficacy. Paper presented at the annual international meeting of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico.

Lotter, C. & Yow, J. (January, 2013). Building a Community of Practice around Inquiry Instruction through a Professional Development Program. Paper presented at the annual meeting of the Association for Science Teacher Education, Charleston, SC.

Lotter, C. & Yow, J. (January, 2012). The Influence of Coach-Teacher Teams Inquiry Professional Development on Middle School Teachers' Use of Inquiry Practices. Paper presented at the annual meeting of the Association for Science Teacher Education, Clearwater, FL.

Lotter, C. & Yow, J. (March, 2012). ICoach-Teacher Teams Professional Development: The Influence of Coach led Reflection, Practice Teaching, and Content Instruction on Middle School Teachers' Use of Inquiry Practices. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Indianapolis, IN.

Bogiages, C., & Lotter, C. (March, 2012). Investigating Teacher Beliefs about the Importance of Scientific Models through Professional Development. Paper presented at the annual meeting of the National Association for Research in Science Teaching Indianapolis, IN.

Selected awards:

2010 NASA Endeavor Pre-service Science Teacher Educator Fellow

Biography:

Dr. Christine Lotter is an Associate Professor in the Department of Instruction and Teacher Education at the University of South Carolina. She earned her Ph.D. in Curriculum and Instruction from Indiana University in 2005. At USC, she teaches high school science methods and general education methods courses for graduate and undergraduate students. She also teaches and supervises science education doctoral students. Dr. Lotter's research interests revolve around the issue of improving secondary teacher education through reform-based teaching strategies. She is specifically interested in teachers' use of inquiry teaching techniques and how their beliefs interact with their practice. She has received over 3.6 million dollars in grant funds to develop high school and middle school inquiry professional development workshops and for scholarship funds from the National Science Foundation for USC's MT and MAT certification programs. Currently, she is a co-investigator on a 3-year SC Mathematics and Science Partnership grant providing inquiry-based professional development to middle school science teachers throughout the state.