

Celeste R. Nicholas
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EDUCATION

Ph.D. in Education, University of Missouri – St. Louis, 2017

University of Missouri, St. Louis, MO, USA
Supporting Field: Science Education

B.A., Psychology. Miami University, 2008

Concentration: Pre-medicine

Credentials: Middle School/Jr HS/HS Life Science Teaching License, Recognition of Excellence,
Grades 5-12 Chemistry Teaching License, State of Indiana

PROFESSIONAL WORK EXPERIENCES

Postdoctoral Researcher in the Learning Sciences, Indiana University, 2018-present

Project: *Teacher Cognition and Learning about Incorporating Science Representations in Elementary Classrooms*
Principal Investigator: Joshua Danish

Postdoctoral Researcher in STEM Education, Indiana University, 2017-2018

Project: *Workplace Simulation Project PLUS (WSP+): Developing future professionals with STEM+C knowledge and 21st Century skills and dispositions*
Principal Investigator: Dionne Cross Francis

Project Director, Indiana University, 2017-2018

Baxter STEM Academy with Balfour Scholars Program

Graduate Teaching Assistant, University of Missouri – St. Louis, 2016-2017

Global Education and Leadership Ed.D. Program

Graduate Research Assistant, University of Missouri – St. Louis, 2015-2016

Missouri STEM Literacy Project

Program Developer & Teaching Partner, Springboard to Learning – St. Louis, 2014-2015

Teacher, 8th Grade Science, Center Grove Schools, 2011-2014

PUBLICATIONS

ARTICLES IN REFERRED JOURNALS

Nicholas, C. & Eastman-Mueller, H. (In Press). Supporting critical social analysis: Empowering processes in a reproductive justice youth program. *Urban Review*.

Cross Francis, D., Tan, V. & **Nicholas, C.** (In Press). Supporting disciplinary and interdisciplinary knowledge development and design thinking in an informal, pre-engineering program: A workplace simulation project. *School Science & Mathematics*.

Nicholas, C., Eastman-Mueller, H. & Barbich, N. (2019). Empowering change agents: Youth organizing groups as sites for sociopolitical development. *American Journal of Community Psychology*. doi: 10.1002/ajcp.12315

Tan, V., **Nicholas, C.**, Scribner, A., & Cross Francis, D. (2019). Enhancing STEM learning through an interdisciplinary, industry-generated project. *Technology and Engineering Teacher*, 79 (1).

Nicholas, C. (2017). SciJourn is magic: Construction of a science journalism community of practice. *Cultural Studies of Science Education*, 12 (2), 275-298. doi: 10.1007/s11422-015-9724-2

Nicholas, C. & Peterson, J. (2015). Biomimicry: The "natural" intersection of biology and engineering. *Science Scope*, 38 (7), 18-24.

NON-REFERREED PUBLICATIONS

Nicholas, C. (2015). Envisioning NGSS. *Science Teachers of Missouri: Missouri Science News*

IN-PROGRESS PUBLICATIONS

Nicholas, C. & Scribner, A. (in draft). Enhancing PBL authenticity by engaging STEM professional volunteers

Nicholas, C., Park Rogers, M., & McClain, J. (in draft). How rural elementary teachers elicit students' funds of knowledge to support learning with science representations.

CURRICULA

Launius, C. & **Nicholas, C.** (2015). IdeaBuilder. *Signature Programs, Springboard to Learning*, St. Louis, MO. Retrieved from <http://www.springboardstl.org/causes/ideabuilder/>

Nicholas, C. (2014). Project health. *Signature Programs, Springboard to Learning*. St. Louis, MO. Retrieved from <http://www.springboardstl.org/causes/project-health/>

AWARDS AND FELLOWSHIPS

University of Missouri-St. Louis. Recruitment Fellowship. \$5000 (Awarded, 2014-2017).

National Science Teachers Association (NSTA) New Science Teacher Academy Fellowship. (Awarded, 2013)

CONFERENCE PARTICIPATION

REFEREED CONFERENCE PRESENTATIONS

Nicholas, C., Keifert, D., Danish, J., & Park Rogers, M. (submitted). *Using teachers' self-selected video of representations during science lessons to inform professional learning designs*. Paper submitted to American Educational Research Association (AERA) Annual Meeting. New York, NY. San Francisco, CA.

Danish, J., **Nicholas, C.**, Hmelo-Silver, C., Park Rogers, M., Cross Francis, D., Enyedy, N., Keifert, D., and Stiso, S. (submitted). *What, how, and why do elementary teachers think about using representations in their science teaching?* Paper submitted to American Educational Research Association (AERA) Annual Meeting. New York, NY. San Francisco, CA.

Park Rogers, M., **Nicholas, C.**, Danish, J., Gerber, A., McClain, J., Phillips, A., Stiso, C., and Zhong, Q. (submitted). *Elementary teachers' developing perceptions of the role of representations in teaching science*. Paper submitted to the Association for Science Teacher Education International Conference. San Antonio, TX.

Park Rogers, M., Danish, J., **Nicholas, C.**, Cross Francis, D. Hmelo-Silver, C. (2019). *Supporting teacher cognition and instruction of science representations in elementary classrooms: A peek into the first year of a multi-year program*. Poster presented at the Association for Science Teacher Education International Conference. Savannah, GA., January.

Cross Francis, D. Tan, V. & **Nicholas, C.** (2018). *Integrated STEM learning in a workplace simulation*. Paper presented at Joint Seminar of Educational Research. University of Warsaw. Warsaw, Poland, May.

Nicholas, C. (2018). *Empowerment within and beyond a youth organizing group*. Paper presented at the American Educational Research Association (AERA) Annual Meeting. New York, NY. April.

Nicholas, C. (2018). *Stepping out of the comfort zone: Reflections on social justice education experiences*. Paper presented at the American Educational Research Association (AERA) Annual Meeting. New York, NY. April.

Nicholas, C. (2018). *"You get treated like young adults:" The meaning of participation in a STEM camp involving industry professionals*. Poster presented at the American Association for the Advancement of Science (AAAS) Annual Meeting. Austin, TX. February.

Nicholas, C. (2017). *Teen science journalists: Multiple modes of writer identity*. Paper presented at the Literacy Research Association Annual Conference. Tampa, FL. November.

Nicholas, C. (2017). *Becoming change agents: Pathways from youth organizing groups to adult civic engagement*. Paper presented at the Annual International Postgraduate Research Conference. Phranakhon Rajabhat University, Bangkok, Thailand. January.

Nicholas, C. (2016). *What does it mean to be a sexual health youth organizer?* Poster presented at The Center for Sex Education National Sex Ed Conference. Atlantic City, NJ. December.

Nicholas, C. & Peterson, J. (2016). *Biomimicry: The "natural" intersection of biology and engineering*. Presentation at the National Science Teachers Association (NSTA) National Conference on Science Education. Nashville, TN. April.

Launius, J.C. & **Nicholas, C.** (2016). *IdeaBuilders: Infusing engineering practices and literature*. Presentation at the National Science Teachers Association (NSTA) National Conference on Science Education, Nashville, TN. April.

Nicholas, C. (2015). *Beyond tanks and tear gas: Combating the invisible enemy in St. Louis*. Paper presented at the Society of Philosophy and History of Education (SOPHE) Annual Meeting, St. Louis, MO. October.

Nicholas, C. (2015). *"SciJournal is awesome": Construction of a science journalism community of practice*. Paper presented at the University of Missouri- St. Louis Graduate Research Fair. April.

Nicholas, C. (2015). *Health education for empowerment across and beyond the curriculum*. Presentation at the Educators for Social Justice Conference, Maplewood, MO. February.

INVITED PRESENTATIONS

Nicholas, C. (2013). *Experience the SciJournal process: Sources and paraphrasing*. Presentation at the Louisville Writing Project Conference, Louisville, KY. August.

GRANT APPLICATIONS AND AWARDS

National Science Foundation Advancing Informal STEM Learning (AISL), November 2018. Co-author with Drs. Dionne Cross Francis and Adam Scribner. Submitted proposal to optimizing the incorporation of STEM professional volunteers in informal educational settings. This proposal was not funded.

Baxter Foundation, December 2017. Co-author with Drs. Dionne Cross Francis and Adam Scribner. Submitted a proposal to fund the implementation and evaluation of a 1-week summer STEM Academy for 25 underrepresented high school students with local industry partner, Baxter Biopharma Solutions. This proposal was funded (\$30,000), with the Academy occurring in July 2018.

St. Louis Blues 14 Fund, August 2015. Co-author with educational non-profit Springboard to Learning. Submitted proposal to fund wider implementation of "Project Health" program aimed at addressing health disparities by increasing health literacy among middle and high school students. This proposal was funded (\$5000).

TEACHING

UNIVERSITY

University of Missouri – St. Louis

EDUC 7630 Learning Community of Practice. Fall 2016, Spring 2017.

Global Education and Leadership Ed.D. cohort

Graduate Teaching Assistant for qualitative methods, IRB compliance, proposal development

COMMUNITY

Springboard to Learning, St. Louis, MO

Project Health: Implemented program in middle school settings

IdeaBuilder: Implemented program in elementary settings

Wentzville Middle School, Wentzville, MO

Ebola in West Africa 2014: Conducted workshop to address misconceptions around epidemic

SERVICE

PROFESSIONAL

AERA, Division G, Social Context of Education Meeting Reviewer	2019-present
AERA, Division C, Science Education: Annual Meeting Reviewer	2017-present
NARST: Event Management of Annual Meeting	2016, 2017
NSTA: Area Conference Proposal Reviewer	2015
Science Teachers of Missouri (STOM): NGSS Curriculum Alignment	2015
Science Teachers of Missouri, (STOM): Board member	2015

CAMPUS

Science Fest	October 27, 2018
Faculty Writing Group	Fall 2017-present
University of Missouri- St. Louis: Thailand Education Exchange Program	2017
Phranakhon Rajabhat University, Bangkok, Thailand	
University of Missouri-St. Louis: Graduate Education Committee	2015-2016

COMMUNITY

Baxter BioPharma Solutions, Innovation Day: Invited Speaker	Sept 14, 2017
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TECHNICAL SKILLS

Proficient in ATLASTi