Celeste R. Nicholas
Postdoctoral Research Associate
Indiana University, Bloomington, IN, USA

2058 W.W. Wright Education Building
201 North Rose Avenue
Bloomington, Indiana 47405

Email: celrnich@iu.edu
Website: www.CelesteNicholas.com
Office Phone: (812) 856 6480

EDUCATION

Ph.D. in Education, May 2017
University of Missouri – St. Louis
Supporting Field: Science Education

Met course requirements for Indiana teaching licensure, 2011
Anderson University, Anderson, IN
Teach for Indiana Program (TIP)

Completed one year of medical training, 2009
Indiana University School of Medicine

B.A., Psychology, 2008
Miami University, Oxford, OH
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 Research Associate in STEM Education. 2017-present
Indiana University, Bloomington, IN

Teacher Cognition and Learning about Incorporating Science Representations in Elementary Classrooms. PI: Joshua Danish

- Instructional coach for elementary teachers using representations in science lessons.
- Design and implement professional development workshops.
- Oversee data collection, management, and analysis.
- Liaison between project teams at IU, Vanderbilt University, and UCLA.

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

- Directed implementation of interdisciplinary STEM unit in a local high school to modeled after a local defense industry workplace.
- Based on data from the first iteration, optimized project for use in other partner schools.
- Facilitated partnership between school, university, and industry stakeholders.

Baxter STEM Academy with Balfour Scholars Program. PI: Dionne Cross Francis

- Developed sustainable partnership with local biopharma industry.
- Designed and implemented residential academy for underrepresented high school students involving volunteers from biopharma field. Students designed and presented solutions for manufacturing, transport, and administration of vaccines in developing countries.
- Analyzed student assessments and interviews to inform program design.

Graduate Teaching Assistant, University of Missouri – St. Louis, 2016-2017
Global Education and Leadership Ed.D. Program
- Led qualitative research workshops for Ed.D. students nearing dissertation stage.

Graduate Research Assistant, University of Missouri – St. Louis, 2015-2016
Missouri STEM Literacy Project
- Instructional coach for secondary STEM teachers in St. Louis region on literacy integration within content areas.

Program Developer & Teaching Partner, Springboard to Learning – St. Louis, 2014-2015
- Developed and implemented programs in St. Louis-area elementary and middle schools on 1) literature and engineering and 2) health disparities and chronic disease.

Teacher, Center Grove Community School Corporation, Greenwood, IN, 2011-2014
8th Grade Science Teacher, Center Grove Middle School North
- Developed and implemented inquiry-based middle school science units aligned with standards.

Research Assistant, Health Services Research and Development, Indianapolis VAMC, 2008-2009
- *Intervention for Stroke Improvement using Redesign Engineering.* PI: Linda Williams
- Audited neurology charts of stroke patients to assess adherence to evidence-based practices.

Research Assistant, Regenstrief Institute – Indianapolis, 2004 – 2005
- *Stepped Care for Affective Disorders and Musculoskeletal Pain,* PI: Kurt Kroenke
- Recruited and interviewed participants in a randomized control trial involving interventions for participants with musculoskeletal pain and depression.

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.

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. 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. 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.

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.

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.

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.

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.

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

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.

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.

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.

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.

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). *"SciJourn is awesome": Construction of a science journalism community of practice.* Paper presented at the University of Missouri- St. Louis Graduate Research Fair.

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

INVITED PRESENTATIONS

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

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 twice ($30,000), with the Academy occurring in July 2018 and 2019.

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

UNIVERSITY

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

COMMUNITY

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

TECHNICAL SKILLS

Proficient in ATLASti, Markdown