

## SHAUN KELLOGG, PH.D.

### EDUCATION

#### **NORTH CAROLINA STATE UNIVERSITY (RALEIGH, NC)**

Doctor of Philosophy in Curriculum & Instruction  
Dissertation: *Patterns of Peer Interaction and Mechanisms Governing Social Network Structure in Massively Open Online Courses for Educators*

#### **WESTERN MICHIGAN UNIVERSITY (KALAMAZOO, MI)**

Master of Arts in Educational Technology

#### **MICHIGAN STATE UNIVERSITY (EAST LANSING, MI)**

Post BA Certification Program in Elementary Education

#### **UNIVERSITY OF MICHIGAN (ANN ARBOR, MI)**

Bachelor of Arts in Classical Languages and Literature

### RESEARCH, EVALUATION & CAPACITY-BUILDING

#### **NORTH CAROLINA STATE UNIVERSITY (RALEIGH, NC)**

*Senior Director – Friday Institute for Educational Innovation (2020 - Present)*

Dr. Kellogg is the current director of Learning Analytics and Data Science and prior director of Program Evaluation and Education Research. He leads mixed-methods and data-intensive research, evaluation, and capacity-building efforts designed to improve and assess educational programs, policy, and practice in North Carolina and beyond.

Since 2011, Dr. Kellogg has helped secure over \$15M in contracts and grants funded by local, state, and national agencies. Select projects include:

- [Learning Analytics in STEM Education Research Institute](#) (PI, \$993,150). The LASER institute trains early and mid-career STEM education researchers in learning analytics and educational data science methods and techniques.
- [Selection and Evaluation of Advanced Teachers Measurement Study](#) (PI, \$1,349,214). The goal of this study is to improve practices and measures that school, district, and state leaders use to select and evaluate Advanced Teachers.
- [North Carolina Advanced Teaching Roles](#) (PI, \$448,999). Implementation and impact evaluation of a statewide performance-based compensation and advanced teaching roles program to improve teaching and learning outcomes.
- [Recovering from COVID-Learning-Loss with ASSISTments](#) (Co-PI, \$700,000). A partnership with the ASSISTments Foundation, Worcester Polytechnic Institute and WestEd to support learning acceleration and recovery.
- [At Home Learning Initiative: Classroom Connections](#) (PI, \$369,512). Short-form broadcast math and literacy lessons developed by and featuring North Carolina teachers, aimed K-3 students to support learning during the pandemic.

*Interim Executive Director – Friday Institute for Educational Innovation (2022-2023)*

- [SparkNC Strategic Planning and Evaluation](#) (PI, \$89,602). Developed a comprehensive and responsive evaluation plan and helped guide programmatic strategies, outcomes, measures for assessing and improving program impact.

- [When Summer Learning Succeeds](#) (PI, \$121,636). The aim of this evaluation was to provide actionable on the implementation and impact of the summer programs designed to support student re-engagement and academic recovery.
- [North Carolina Education Corps Evaluation](#) (Co-PI, \$389,901). In partnership with Duke, this evaluation examines the impact of high-dosage tutoring on early-literacy and math achievement in grades 3-5.

*Senior Research Scholar – Friday Institute for Educational Innovation (2017-2020)*

- [NC New Teacher Support Program](#) (PI, \$263,000). Impact evaluation of NTSP coaching model on teacher retention and student achievement.
- [The North Carolina Digital Learning Initiative](#) (PI, \$250,000). Research, evaluation, and technical assistance to support implementation of the NC Digital Learning Plan.
- [Arlington Public Schools 1:1 Study](#) (PI, \$50,000). Assessment of the impact of transitioning to one device per student on teaching and learning outcomes.

*Research Scholar – Friday Institute for Educational Innovation (2014-2017)*

- [Massively Open-Online Courses for Educators](#) (Co-PI, \$500,000). Hewlett Foundation funded study to develop and study scalable online professional learning for in-service educators.
- [Participate, Inc.](#) (Co-PI, \$212,000; PI Jeni Corn). Analytics dashboard development and evaluation to refine online platform, global ed and dual-language programs.

*Research Associate – Friday Institute for Educational Innovation (2011-2014)*

- [A Network Perspective on Peer Supported Learning in MOOC-Eds](#) (PI, \$30,000). Bill and Melinda Gates funded research to study network mechanisms governing peer interaction in Massively Open Online Courses for Educators (MOOC-Eds).
- [Online Communities of Practice](#) (Investigator, \$302,000; PI Glenn Kleiman). USED funded research to study and replicate sustainable teacher communities.
- [North Carolina Race to the Top Evaluation](#) (Lead Evaluator; PI, Glenn Kleiman, \$2.9M). Evaluation of implementation and impact online professional development.

**TEACHING  
EXPERIENCE**

**HIGHER EDUCATION**

*Assistant Teaching Professor – NC State University (2014-Present)*

Develop and teach courses in educational data analytics and led the development of the [Graduate Certificate Program in Learning Analytics](#), a year-long program designed to provide students with applied experience using computational approaches (e.g. machine learning, text mining, and social network analysis) to understand and improve learning and the contexts in which learning occurs. Courses developed and taught include:

- ECI 586 – An Introduction to Learning Analytics
- ECI 587 – Machine Learning in Education
- ECI 588 – Text Mining in Education
- ECI 589 – Analyzing Learning Network

*Graduate Teaching and Research Assistant – NC State University (2009-2011)*

Responsible for co-teaching undergraduate and graduate level courses in Instructional Technology and Design and contributing towards publications in peer-reviewed journals.

**K-12 PUBLIC SCHOOLS**

*Elementary Teacher (2001-2010)*

Taught a culturally and socioeconomically diverse group of students who consistently met or exceeded expected achievement growth; Provided district professional development on Math & Language Arts curriculum and technology integration; Served as grade level chair and member of curriculum and school improvement teams. Teaching roles include:

- 4<sup>th</sup> Grade General Education Teacher, Hoke County Schools (NC)
- 2<sup>nd</sup> and 5<sup>th</sup> Grade General Education Teacher, Lakeview School District (MI)
- 1<sup>st</sup> Grade Special Education Paraprofessional, East Lansing Schools (MI)
- K-12 Substitute Teacher, Ingham Intermediate School District (MI)

#### **PEACE CORPS**

*Teacher of English as a Foreign Language, Alexandria, Romania (1999-2000)*

Developed and Taught English language units in grades 5-11; Organized volunteer programs with the local library and orphanage; Trained new volunteers in adapting to life and teaching in Romania.

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#### **HONORS & AWARDS**

William C. Friday Doctoral Fellow  
NCCTM Outstanding Elementary Math Teacher of the Year  
Hoke County Teacher of the Month & Math Teacher of the Year  
Congressional Scholar 8th District, North Carolina  
Peace Corps Certificate of Service

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#### **ACADEMIC SERVICE**

Past member and chair of the College of Education research committee; Co-editor of Meridian, an educational technology journal; and Dissertation committee member for:

- Jeanne McClure: *Topic: Engagement Patterns in Online Professional Development for of Statistics Educators*. (Expected Graduation, Spring 2024)
- Heather Barker: *Topic: Motivation, Engagement, and Professional Growth of Participants in Online Professional Development for Statistics Educators*. (Graduated Spring 2021)
- Ha Nguyen: *Topic: MOOC as Professional Development for English Language Teachers in Developing Countries*. (Graduated Spring 2020)
- Jim Creager: *Agency and Pacing in a Professional Development Open Online Course with a Flexible Content Pathway and Release Schedule* (Graduated Fall 2019)
- Rob More: *Examining the Influence of Massive Open Online Course Pacing Condition on the Demonstration of Cognitive Presence*. (Graduated Spring 2017)
- Shea Kerkhoff: *Designing Global Futures: A Mixed Methods Study to Develop and Validate the Teaching for Global Readiness Scale*. (Graduated Fall 2016)

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#### **PUBLICATIONS & REPORTS**

##### **SELECT REFEREED JOURNAL ARTICLES**

Barker, H., Lee, H., Kellogg, S. & Anderson, R. (2024). The viability of topic modeling to identify participant motivations for enrolling in online professional development. *Online Learning*, 28(1), 175-195.

Huggins, E. S., & Kellogg, S. (2020). Technology-enabled personalized learning: A promising practice in need of robust research. *School Science and Mathematics*, 120(1), 1-3.

Akoglu, K., Lee, H., Kellogg, S. (2019). Participating in a MOOC and professional learning team: How a blended approach to professional development makes a difference. *Journal of Technology and Teacher Education*, 27(2), 129-163.

Acree, L., Kellogg, S., Gibson, T., Mangum, N., Wolf, M. A., & Branon, S. (2017). Supporting School Leaders in Blended Learning with Blended Learning. *Journal of Online Learning Research, 3*(2), 105-143.

Ezen-Can, A., Boyer, K. E., Kellogg, S., & Booth, S. (2015). Unsupervised modeling for understanding MOOC discussion forums: A learning analytics approach. In *Learning Analytics and Knowledge Conference*. Poughkeepsie, New York.

Kellogg, S. & Edelmann, A. (2015). A Massively Open Online Course for Educators social network dataset. *British Journal of Educational Technology*. doi:10.1111/bjet.12168

Oliver, K., & Kellogg, S. (2015). Credit Recovery in a Virtual School: Affordances of Online Learning for the At-Risk Student. *Journal of Online Learning Research, 1*(2), 191-218.

Kellogg, S., Booth, S. & Oliver, K. (2014). Patterns of participant interaction and mechanisms governing network structure in MOOCs for educators. *International Review and Research in Open and Distant Learning, 15*(5), *Special Issue: Research into Massive Open Online Courses*.

Booth, S. E., & Kellogg, S. B. (2014). Value creation in online communities for educators. *British Journal of Educational Technology*. doi:10.1111/bjet.12168

Oliver, K. M., Kellogg, S., & Patel, R. (2013). An investigation into reported differences between online foreign language instruction and other subject areas in a virtual school. *The Computer Assisted Language Instruction Consortium (CALICO) Journal, 29*(2), 269-296.

Oliver, K. M., Kellogg, S., Townsend, T., & Brady, K. (2010). Needs of elementary and middle school teachers developing online courses for a virtual school. *Distance Education, 31*(1), 55-75.

Oliver, K., Kellogg, S. B., & Patel, R. (2010). An Investigation into Reported Differences Between Online Math Instruction and Other Subject Areas in a Virtual School. *Journal of Computers in Mathematics and Science Teaching, 29*(4), 417-453.

#### **SELECT EVALUATION & TECHNICAL REPORTS**

NC Education Corps. (2024). *Advancing educational excellence through engaged community*. Report Prepared for the North Carolina General Assembly. Raleigh, NC.

Kellogg, S., Pham, L., Bausell, S., Thrasher, E., Young, T., Birkett, J., & Arenas, A. (2023). *Advanced Teaching Roles: Evaluation Report*. Prepared for the North Carolina Department of Public Instruction. Raleigh, NC.

Kellogg, S., Sperling, J., Fischer, A., Wyman-Roth, N., (2022). *When Summer Learning Succeeds: Context, Conditions, and Strategies that Maximize Impact*. Report prepared for the North Carolina Department of Public Instruction. Raleigh, NC.

Kellogg, S., Huggins, E., Birkett, J., & Davis, R. (2020). *Annual NC New Teacher Support Program Annual report*. Prepared for the NC New Teacher Support Program. Greenville, NC.

Kellogg, S. (2020). *Digital Learning Device Project: Phase II Study Findings*. Prepared for the Arlington Public Schools Board of Education. Arlington, VA.

Kellogg, S., & Antoszyk, E. (2019). *Rowan-Salisbury Schools Comprehensive Renewal Evaluation Plan*. Prepared for the Rowan-Salisbury Schools. Salisbury, NC.

Kellogg, S. (2019). *Arlington Public Schools 1:1 Evaluation: Preliminary Findings from Phase I*. Prepared for the Arlington Public Schools Board of Education. Arlington, VA.

Samberg, M., Rosof, L., Halstead, L., Kellogg, S. (2019). *Collaborative Purchasing Recommendations: Final Report*. Prepared for the North Carolina Department of Public Instruction. Raleigh, NC.

Kellogg, S., Weiss, S. (2019). *North Carolina Digital Learning Initiative Student Impact Brief*. Prepared for NC House Representative Craig Horn. Raleigh, NC.

Kellogg, S., Murray, D., Samberg, M. (2018). *Digital Content Strategic Priorities 2018-2020*. Prepared for the North Carolina Department of Public Instruction. Raleigh, NC.

Kellogg, S., & Steinbrecher, S. (2018). *Participate Annual Evaluation Report*. Report. Prepared for Participate, Inc. Chapel Hill, NC.

Kellogg, S. (2018). *Public Media North Carolina Research and Evaluation Agenda*. Prepared for UNC-TV. Research Triangle Park, NC.

Kellogg, S., Kleiman, G. (2017). *MOOC-Ed Evaluation Final Summative Report*. Prepared for the Hewlett Foundation. Menlo Park, CA.

Kellogg, S., Acree, L., Wolf, M., & Maser, R. (2017). *Learning Differences Summative Evaluation Report*. Prepared for the Oak Foundation. Chapel Hill, NC.

Kellogg, S., & Maser, R. (2016). *Hamilton County 1:1 Technology Initiative Summative Evaluation Report*. Prepared for the Public Education Foundation and the Benwood Foundation. Chattanooga, TN.

Kellogg, S., & Bryant, L. (2016). *Houston ISD End of Year Evaluation Report for Participate, Inc.* Chapel Hill, NC.

Booth, S., Cambridge, D., Kellogg, S. & Perez-Lopez, K. (2014). *Exploratory research on designing online communities*. U.S. Department of Education. Washington, D.C.

Smart, A., Bryant, L., Kellogg, S., Corn, J., Weiss, S., Parker, B., Ramierez, A., Walton, M. (2014). *Fourth annual Race to the Top professional development evaluation report. Final report*.

Kellogg, S., Corn, J., & Booth, S. (2012). *Race to the Top online professional development evaluation: Year 1 report*.

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## PRESENTATIONS & WORKSHOPS

### SELECT PEER REVIEWED PRESENTATIONS & WORKSHOPS

Kellogg, S., McClure, J., Smyslova, D., Jiang, S., Mushi, D. (2024). *Social Network Analysis for Newbies: Theory, Applications, and Analysis. Proceedings of the 24th International Conference on Learning Analytics and Knowledge (LAK24)*. Kyoto, Japan.

Kellogg, S., McClure, J., Smyslova, D., Jiang, S., Mushi, D., Baker, R. (2024). *Learning to Teach with (and Learn from!) the LASER Curriculum. Proceedings of the 24th International Conference on Learning Analytics and Knowledge (LAK24)*. Kyoto, Japan.

Kellogg, S., McClure, J., Bodong, C., Poquet, S. (2023). *An Introduction to Social Network Analysis and Education Research: Core Concepts and Applications with R. American Education Research Association Virtual Research Learning Series*.

Kellogg, S., Baker, R., Yu, R., Rutledge, J., Bernanki, M., Rosenberg, J. (2023). Graduate Programs in Learning Analytics Workshop: Core Competencies, Curriculum, and Instruction. *Proceedings of the Annual Meeting of the American Education Research Association (AERA)*. Chicago, IL.

Kellogg, S., McClure, J., Houchins, J., Jiang, S., Mushi, D. (2023). An Introduction to Learning Analytics with R. *Proceedings of the Annual Meeting of the American Education Research Association (AERA)*. Chicago, IL.

McClure, J., Mushi, D., Jiang, S., & Kellogg, S. (2023). The state of teaching about algorithmic bias and fairness in Learning Analytics programs. *Proceedings of the 23rd International Learning Analytics and Knowledge Conference*. Arlington, TX.

Glaser, J, Moore, R., Kellogg, S., & Luo, T. (2020). Networked posters: Identifying predictors of prestige, prominence, and interaction in a MOOC discussion forum. *Paper presentation at the Association for Educational Communications & Technology International Convention (AECT)*. Jacksonville, FL.

Creager, J. H., Wiebe, E. N., & Kellogg, S. B. (2018). Time to shine: Extending certificate deadlines to support open online teacher professional development. *Paper presentation at the Annual Meeting of the American Education Research Association (AERA)*. New York, NY.

Corn, J., Kellogg, S., & Smart, A. (2016). The Great Migration: District, State, and National Perspectives on the Digital Learning Transition. *Panel presentation at the Annual Meeting of the American Education Research Association (AERA)*. Washington, D.C.

Kellogg, S. (2015). Innovative Approaches to Evaluation: Real-Time Evaluation. *Panel at the Annual Meeting of the American Evaluation Association (AEA)*. Chicago, IL.

Kellogg, S., Booth, S. & Corn, J. (2014). North Carolina's Race to the Top online professional development initiative: Year 2. *Paper presented at the Annual Meeting of the American Evaluation Association (AERA)*. Washington, D.C.

Kellogg, S. (2014). Patterns of peer interaction and mechanisms governing social network structure in MOOCs for educators. *Preconference Session on Innovation in Higher Education*. Bill and Melinda Gates Foundation, Seattle, WA.

Kellogg, S., Booth, S. & Corn, J. (2014). North Carolina's Race to the Top online professional development initiative: Year 2. *Paper presented at the Annual Meeting of the American Evaluation Association (AERA)*. Philadelphia, PA.

Kellogg, S., Booth, S. & Corn, J. (2013). Working together to improve North Carolina's Race to the Top online professional development. *Paper presented at the Annual Meeting of the American Evaluation Association (AEA)*. Washington, D.C.

Cambridge, D., Perez-Lopez, K., Booth, S., & Kellogg, S. (2013). How online communities create value. *Paper presented at the Annual Conference of the International Society for Technology in Education (ISTE)*. San Antonio, TX.

Kellogg, S. & Corn, J. (2012). Racing to the Top online professional development. *Roundtable presentation at the Annual Conference of the International Society for Technology in Education (ISTE)*. San Diego, CA.

Kellogg, S. & Oliver, K. (2011). Credit recovery in a virtual school: student needs and the affordances of online learning. *Paper presented at the Annual Meeting of the American Educational Research Association (AERA)*. New Orleans, LA.

Kellogg, S. (2011). A comparison of online discussions in promoting community and discourse. *Paper presented at the Annual Meeting of the Eastern Educational Research Association (EERA)*. Sarasota, FL.

#### **SELECT NON-RESEARCH PRESENTATIONS**

Kellogg, S., Pham, L., Bausell, S. (2023). *Advanced Teaching Roles: Evaluation Report. Presentation to North Carolina State Board of Education*. Raleigh, NC.

Moody, L., & Kellogg, S. (2021). NC Digital Learning Plan: Progress Update & Priorities. *Presentation to North Carolina State Board of Education*. Raleigh, NC.

Moody, L., & Kellogg, S. (2019). Rowan-Salisbury Schools Renewal System Update. *Presentation to North Carolina State Board of Education*. Raleigh, NC.

Kellogg, S. (2019). APS 1:1 Study Phase I: Preliminary Findings. *Presentation to North Arlington Public Schools Board of Education*. Arlington, VA.

Kellogg, S. (2016). Social network analysis in education. *Presentation to the Quantitative Methods Working Group*. North Carolina State University, Hunt Library Visualization Lab, Raleigh, NC.

Kellogg, S. (2015). Innovative Approaches to Educational Evaluation: Real-Time Evaluation. *Panel Session at the Annual Meeting of the American Evaluation Association*. Chicago, IL.

Kellogg, S. (2014). Social network analysis in education. *Presentation to the Quantitative Methods Working Group*. North Carolina State University, College of Education, Raleigh, NC.

Booth, S., Kellogg, S. (2013). Design-based research in online communities. *Presentation to the International Association for K-12 Online Learning (iNACOL)*.

Kellogg, S. (2011, March). Making the most of Moodle in the elementary classroom. *Presentation at the North Carolina Technology in Education Society Annual Conference (NC-TIES)*. Raleigh, NC.

Oliver, K., & Kellogg, S. (2010, March). Increasing interaction in your online course. *Presentation at the North Carolina Technology in Education Society Annual Conference (NC-TIES)*. Raleigh, NC.