HERLE M. McGOWAN

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Education

Aug 2009	University of Michigan. Ann Arbor, MI Ph.D., Department of Statistics Dissertation: Experimentation Methodologies for Educational Research with an Emphasis on the Teaching of Statistics Co-Chairs: Vijayan Nair and Brenda Gunderson, Department of Statistics Committee: Richard Gonzalez, Departments of Psychology and Statistics Edward Silver, School of Education
May 2005	University of Michigan. Ann Arbor, MI Master of Arts in Statistics
May 2002	Rutgers, The State University of New Jersey. New Brunswick, NJ Bachelor of Arts in Statistics Bachelor of Arts in Economics Highest Honors, Dean's list, Phi Beta Kappa

Employment

2015–present	Associate Teaching Professor, Department of Statistics, North Carolina State University
2011–2015	Assistant Teaching Professor, Department of Statistics, North Carolina State University
2009–2011	Assistant Professor, Department of Statistics, North Carolina State University

Teaching and Professional Development Experience at North Carolina State University

- ST 517: Statistical Methods I
- ST 511: Experimental Statistics for Biological Sciences I
- ST 435: Statistical Methods for Quality and Productivity Improvement
- ST 431: Introduction to Experimental Design
- ST 430: Introduction to Regression Analysis
- ST 401: Experiences in Data Analysis
- ST 372: Introduction to Statistical Inference and Regression
- ST 371: Introduction to Probability and Distribution Theory
- ST 370: Probability and Statistics for Engineers
- ST 350: Economics and Business Statistics
- ST 311: Introduction to Statistics
- ST 101: Statistics by Example
- Curriculum Development: COS 100 (The Science of Change); orientation course for freshman in College of Sciences.
- Statistics Instructor, NC State Executive Education
- Nonparametric Statistics Instructor, Lean Six Sigma Master Black Belt Program, College of Textiles.
- Faculty Mentor: Preparing the Professoriate, Certificate of Accomplishment in Teaching, Park Scholarship, Pack Promise, ST 497 (Professional Experience in Statistics), ST 498 (Independent Study In Statistics), and ST 499 (Research Experience in Statistics)

Service to Professional Societies and the Community

2021–present	Mentor, American Statistical Association (ASA) Section on Statistics and Data Science Education Mentoring Program.
2014–present	ASA DataFest™ Planning Committee.
2013–present	NCSU Liaison, ASA DataFest™ at Duke.
2013–present	Associate Editor, Journal of Statistics and Data Science Education.
2010–present	Consortium for the Advancement of Undergraduate Statistics Education (CAUSE) Activist
2010–present	Reviewer: Journal of Statistics and Data Science Education, Harvard Data Science Review, Statistics Education Research Journal, Technology Innovations in Statistics Education, National Science Foundation Division of Undergraduate Education.
2013–2015	Executive Committee At Large, Section on Statistical Education, American Statistical Association.

Service to North Carolina State University and the College of Sciences

2019–present	College of Sciences Representative, University Faculty Senate. Lead Faculty Senator for the College of Sciences (2021–present). Executive Committee and Co-Chair of Personnel Policy Committee (2020–present).
2019–present and 2012–2016	Council on Undergraduate Education (Chair, 2014–2015). Chair, Rubric Subcommittee (2013–2014). Chair, Review Subcommittee (2015–2016).
2018–present	Senior Awards Selection Committee (Spring Semester), College of Sciences
2017–present	Member, STEM Recourses Advisory Board.
2021	Member, Search Committee for Associate Vice Provost for Academic Personnel & Policy Office of the Executive Vice Chancellor and Provost
2019–2020	Member, Alumni Distinguished Undergraduate Professor Award Committee
2019–2020	Member, Undergraduate Academic Advising Awards Selection Committee
Fall 2019	Member, Outstanding Teacher Award Administrative Advisory Committee.
2017–2019	Member, Faculty Advisory Council, College of Sciences (Co-chair 2017-2018).
2016–2017	Chair, General Education Diversity Task Force.
2015–2016 2011–2012	Teaching Advisory Committee, College of Sciences.
2014–2019	Advisory Board for the Th!nk Quality Enhancement Program.
Spring 2014	Subcommittee (of the COS Honors Committee) to Develop a College Interdisciplinary Honors Program, College of Sciences.
2013–2014	Teaching Awards Selection Committee, College of Sciences.
2013	Faculty Rater and Consultant for the Quantitative Literacy Project

Service to the Department of Statistics, North Carolina State University

2018–present	Co-Advisor, Professional Strategies Working Group.
2013–present	Co-Advisor, Undergraduate Statistics Club.
2011–present	Academic Advisor (Advise more than 60 students annually).
Spring 2020	One of two departmental reviews for Academic Continuity Plans
2019–2020 2018–2019	Graduate (Ph.D.) Admissions Committee
Summer 2016	Qualifier Exam Committee.
Fall 2015 Fall 2012	Beach Trip Committee (Chair, 2012).
Summer 2014	Basic Exam Committee.
Spring 2014	Course Coordinator, Statistics 311 & 312: Introduction to Statistics I & II.
2012–2013	Co-facilitator, Women in Statistics Networking Lunches.
2011–2012	Seminar Committee.

Grants, Awards and Honors

2020	Faculty LEAD Program, Office of Faculty Development, North Carolina State University.
2018	BRIDGES Academic Leadership for Women Program.
2017	Dennis Boos Citizenship Award, Department of Statistics, North Carolina State University
2016	Inducted into the Academy of Outstanding Teachers, North Carolina State University.
2016	Alumni Outstanding Teaching Award, North Carolina State University.
2019 –2022	National Institutes of Health R25 HL147228, Preparing the Next Generation of Biostatisticians in the Era of Data and Translational Sciences (Co-Investigator, 0.3 calendar months effort, $249,789)
2017–2018	Distance Education and Learning Technology Applications, North Carolina State University 201586, Adaptive Learning and Improved Critical Thinking Skills in ST 370 (Additional Participant, $24,000)
2016 –2019	National Institutes of Health R25 HL131490, Engaging, Inspiring, and Preparing the Next Generation of Biostatisticians (Co-Investigator, 0.3 calendar months effort, $737,937)
2013–2016	Engaging, Inspiring, and Preparing the Next Generation of Biostatisticians, National Institutes of Health T15 HL097621. (Co-Investigator, 0.3 calendar months effort, $749,349).
2011–2012	Large Course Redesign Pilot Grant, Distance Education and Learning Technology Applications, North Carolina State University. (Co-Investigator, $29,783).
2010–2011	Faculty Research and Professional Development Grant, North Carolina State University, "Exploring and Improving Students' Reasoning about Statistical Significance." (Principal Investigator, $4,000).

Publications

Wroughton, J.R., **McGowan, H.M.** Weiss, L.V. and Cope, T.M. (2013). "Exploring the Role of Context in Students' Understanding of Sampling." Statistics Education Research Journal 12(2). Available online: http://iase-web.org/documents/SERJ/SERJ12(2)_Wroughton.pdf

Pearl, D.K., Garfield, J.B., delMas, R., Groth, R.E., Kaplan, J.J., **McGowan, H. M.**, and Lee, H.S. (2012), "Connecting Research to Practice in a Culture of Assessment for Introductory College-level Statistics." Available online: http:// www.causeweb.org/research/guidelines/ResearchReport_Dec_2012.pdf.

Woodard, R. D. and **McGowan, H. M.** (2012). "Redesigning a Large Introductory Course to Incorporate the GAISE Guidelines," Journal of Statistics Education, 20(3). Available online: http://www.amstat.org/publications/jse/v20n3/woodard.pdf.

McGowan, H. M. (2011). "Planning a Comparative Experiment in Educational Settings," Journal of Statistics Education, 19(2). Available online: www.amstat.org/publications/jse/v19n2/mcgowan.pdf.

McGowan, H. M. and Gunderson, B. K. (2011). "Using Clickers in a Statistics Classroom," in *Teaching Mathematics with Classroom Voting: With and Without Clickers (MAA Notes Series, Volume 79)*, K. Cline and H. Zullo, (Eds.), Mathematics Association of America.

McGowan, H. M. and Vaughan, J. (2011), "Testing a Student Generated Hypothesis Using Student Data, *Teaching Statistics*," doi: 10.1111/j.1467-9639.2010.00452.x

McGowan, H. M. & Gunderson, B. K. (2010), "A Randomized Experiment Exploring How Certain Features of Clicker Use Effect Undergraduate Students' Engagement and Learning in Statistics," *Technology Innovations in Statistics Education*, 4(1). Available online: http://escholarship.org/uc/item/2503w2np.

McGowan, H. M., Nix, R. L., Murphy, S. A., Bierman, K. L. and CPPRG. (2010), "Investigating the Effects of Selection Bias in Dose-Response Analyses of Preventive Interventions," *Prevention Science*, 11(3), 239-251.

Presentations

Dasmohapatra, S., Glanz, H.S., and **McGowan, H.M.** (July 2020), "Panel on Professional Masters Degrees," virtual invited panel discussion presented at The Statistical and Applied Mathematical Sciences Institute (SAMSI).

McGowan, H.M. (Feb 2020), "Redesigning a Large Introductory Course to Incorporate the GAISE Guidelines," virtual invited talk given to the Penn State Statistics Education Literature Seminar.

Post, J. and **McGowan, H.M.** (May 2017), "Developing R Shiny Applications to Enhance Teaching and Learning," pre-conference workshop presented at the United States Conference on Teaching Statistics (USCOTS).

Bray, A., **McGowan, H.M.**, Hardin, J., Gould, R. (Aug 2014), **"**DataFest: A (Competitive) Celebration of Data," contributed panel discussion presented at the American Statistical Association Joint Statistical Meetings, Boston, Massachusetts.

McGowan, H.M. (Aug 2013), **"**Evaluating a Hybrid Learning Environment in an Introductory Statistics Course," talk presented at the American Statistical Association Joint Statistical Meetings, Montreal, Canada.

McGowan, H.M. (Aug 2013), "Discussing 'Connecting Research to Practice in a Culture of Assessment for Introductory College-Level Statistics'" roundtable discussion presented at the American Statistical Association Joint Statistical Meetings, Montreal, Canada.

McGowan, H. M. (Aug 2012), "Hybrid Courses: The Best of Face-to-Face and Online Learning," roundtable discussion presented at the American Statistical Association Joint Statistical Meetings, San Diego, California.

Endriss, K., Fairbourn, C., **McGowan, H. M.**, Mills, J., Perrett, J. (Aug 2012), "Making the Transition to Online Teaching," talk presented at the American Statistical Association Joint Statistical Meetings, San Diego, California.

McGowan, H. M. and Woodard, R. W. (April 2012). "Capitalizing on Technology for Teaching Large Lecture Courses," poster presented at the Teaching and Learning Symposium, North Carolina State University.

Kaplan, J. J., Bernhard, J. J., Collings, P. B., Genschel, U., and **McGowan, H. M.** (Aug 2011), "Clickers in Statistics Classes: Connecting Research and Practice," talk presented at the American Statistical Association Joint Statistical Meetings, Miami, Florida.

McGowan, H. M., Cope, T., Slauson, L. and Wroughton, J. (July 2011), "The Role of Confirmation and Belief Bias in Introductory Statistics Students' Abilities to Judge the Quality of a Sample," talk presented at the Seventh International Research Forum on Statistics Reasoning, Thinking and Literacy, Utrecht University, The Netherlands.

Wroughton, J., Slauson, L., **McGowan, H. M.**, and Cope, T. (May 2011), "Exploring the Role of Problem Context in Students' Understanding of Sampling," poster presented at the United States Conference on Teaching Statistics, Raleigh, North Carolina.

McGowan, H. M. (April 2011), "Redesigning Large Lecture Courses," talk presented at the 2011 International Indian Statistical Association's Conference on Probability, Statistics, and Data Analysis, Raleigh, North Carolina.

DelMas, R., Lee, H., **McGowan, H. M.** and Pearl, D. (Aug 2010), "Establishing a Career in Statistics Education," invited panel discussion at the American Statistical Association Joint Statistical Meetings, Vancouver, British Columbia.

Cope, T., **McGowan, H. M.**, Slauson, L. and Wroughton, J. (Aug 2010), "College Students' Opinions about Context and Conceptions about Samples," talk presented at the American Statistical Association Joint Statistical Meetings, Vancouver, British Columbia.

McGowan, H.M. (Oct 2010), "Basic Statistics for Research on Your Teaching" Workshop Leader, Office of Faculty Development, North Carolina State University.

McGowan, H. M. (July 2010), "Supporting Statistical Thinking through a Capstone Project," webinar presented by Consortium for the Advancement of Undergraduate Statistics Education (CAUSEweb.org).

Woodard, R., Arroway, P. and **McGowan, H. M.** (April 2010), "Redesigning an Intro Course According to Best Practice Guidelines," poster presented at the North Carolina State University College of Physical and Mathematical Sciences Scope Academy, Raleigh, North Carolina.

Woodard, R., Arroway, P. and **McGowan, H. M.** (Feb 2010), "Redesigning an Intro Course According to Best Practice Guidelines," poster presented at the Emerging Issues Institutes Twenty-fifth Annual Emerging Issues Forum, Raleigh, North Carolina, Raleigh, North Carolina.

McGowan, H. M. (Jan 2010), "Exploring the Impact of Clicker Use Undergraduate Students' Engagement and Learning in Statistics," talk presented at the North Carolina State University College of Education Friday Institute for Educational Innovation.

McGowan, H. M., Gunderson, B. K., and Nair, N. (Jan 2010), "A Randomized Experiment Exploring Features of Clicker Use and Their Impact on Undergraduate Students' Engagement and Learning in Statistics," contributed talk presented at the Joint Mathematics Meeting, San Francisco, California.

Berenson, M., Dawson, D. V., **McGowan, H. M.** and Terry, R. (Aug 2008), "Clickers in the Statistics Classroom," topic contributed panel discussion at the American Statistical Association Joint Statistical Meetings, Denver, Colorado.

McGowan, H. M., Gunderson, B. K., & Wagaman, A. S. (May 2007), "Taking the Group Project to the Next Level," poster presented at the United States Conference for Teaching Statistics, Columbus, Ohio.

McGowan, H. M., Nix, R. L., Murphy, S. A., Bierman, K. L., and Conduct Problems Prevention Research Group. (May 2004), "Investigating Dose-Response Relations in a Preventive Intervention Program for Children with Conduct Problems," poster presented at the Society for Prevention Research meetings, Quebec City, Canada.