

Elizabeth Brondos Fry, PhD

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Education

University of Minnesota, Twin Cities	
Ph.D. in Educational Psychology	2017
(Quantitative Methods in Education program; Statistics Education track)	
Advisors: Dr. Robert delMas and Dr. Andrew Zieffler	
 The Ohio State University, Columbus, Ohio	
M.S. in Statistics	2009
Graduate Interdisciplinary Specialization in College and University Teaching	
Advisor: Dr. Elizabeth Stasny	
 Valparaiso University, Valparaiso, Indiana	
B.S. in Mathematics <i>summa cum laude</i>	2006
B.A. in French <i>summa cum laude</i>	
Christ College Scholar (Interdisciplinary Honors Program)	
Phi Beta Kappa	

Experience

Center for Creative Leadership, Greensboro, NC	
<i>Evaluation Associate (remote)</i>	2022-present
<ul style="list-style-type: none">• Support program evaluation for leadership development, with a focus on the social sector.• Lead evaluation of higher education and nonprofit leadership development initiatives.	
 St. Catherine University, St. Paul, MN	
Department of Mathematics, Data Science and Statistics	
<i>Assistant Professor</i>	2019-2022
 University of Minnesota, Twin Cities	
Department of Educational Psychology	
<i>Lecturer (Full-time faculty)</i>	2017-2019
<i>Teaching Specialist (Full-time faculty)</i>	2015-2017
<i>Graduate Instructor</i>	2012-2015
<i>Graduate Research Assistant</i>	2011-2014

Saint Mary's University of Minnesota, Minneapolis, Minnesota <i>Adjunct Instructor</i>	2012
Columbus State Community College, Columbus, Ohio <i>Adjunct Instructor and Tutor</i>	2010-2011
The Ohio State University, Columbus, Ohio <i>Graduate Teaching Assistant</i>	2009-2010

Certifications and Professional Development

CCL Leading Equitably, Activating Possibility Course for People Leaders and Employee Resource Group Leaders	2023
360 Feedback Assessment Certification	2023
Better Conversations Everyday Leadership Training	2022
Collaborative Institutional Training Initiative (CITI program) Human Research, Social / Behavioral or Humanist Research Investigators and Key Personnel.	2016
St. Catherine University, St. Paul, MN Foundations of Online Course Design course	2020
University of Minnesota, Twin Cities	
TREKS Instructional Technology Program	2018-2019
Preparing Future Faculty Program	2012-2014

Publications

Book Chapters and Editing

Pearsall, S., **Fry, E.B.**, & Kosovich, J.J. (in review). Elevating Neurodivergent Leaders: Cultivating Neuroinclusive Leadership. To be published in D. J. Syvante (Ed), *Neurodiversity in the Workplace: Conceptual and Practical Insights for Increasing Neurodiversity Inclusion*. Charlotte, NC: Information Age Publishing.

Garfield, J., Zieffler, A., & **Fry, E.B.** (2018). What is statistics education? In D. Ben-Zvi, K. Makar, & J. Garfield (Eds.), *International Handbook of Research in Statistics Education* (pp. 37-70). Cham, Switzerland: Springer International Publishing.

Zieffler, A. and **Fry, E.B.** (Eds.). (2015). Reasoning about uncertainty: Learning and teaching Informal Inferential Reasoning. Minneapolis, MN: Catalyst Press.

Scholarly Articles

Legacy, C., Zieffler, A., Fry, E.B., & Vivas Corrales, P. (2024). The Teaching of Introductory Statistics: Results of a National Survey. *Journal of Statistics and Data Science Education*, 32(3), 232–240. <https://doi.org/10.1080/26939169.2024.2333732>

Legacy, C., Zieffler, A., **Fry, E.B.** & Le, L. (2022). COMPUTES: Development of an Instrument to Measure Introductory Statistics Instructors' Emphasis on Computational Practices. *Statistics Education Research Journal*, 21(1).

Justice, N., Morris, S., Henry, V., & **Fry, E.B.** (2020). Paint-by-number or Picasso? A grounded theory phenomenographical study of students' conceptions of statistics. *Statistics Education Research Journal*, 19(2), 76-102.

Justice, N., Le, L., Sabbag, A., **Fry, E.B.**, Ziegler, L., & Garfield, J. (2020). CATALST: A Story of Change. *Journal of Statistics and Data Science Education*, 28 (2), 175-186. Taylor & Francis.

Blog

Fry, E.B., & Schneider, M. (2024). Latinas Leading Change: A Case Study of Leadership Development for Community Impact [Weblog Article]. CCL Innovation. Retrieved from: <https://cclinnovation.org/news-posts/latinas-leading-change-a-case-study-of-leadership-development-for-community-impact/>

Kosovich, J. J., & **Fry, E.B. (2022)**. Are You Lying by Accident? Why Assessment Validity Is Important [Weblog Article]. CCL Innovation. Retrieved from: <https://cclinnovation.org/news-posts/are-you-lying-by-accident-why-assessment-validity-is-important/>

McCoy, K., & **Fry, E.B. (2022)**. Put Me In, Coach: Supporting Developing Leaders Matters More Than You Think [Weblog Article]. CCL Innovation. Retrieved from: <https://cclinnovation.org/news-posts/put-me-in-coach-supporting-developing-leaders-matters-more-than-you-think/>

Technical Publications

Fry E.B., Kosovich, J. J., & Leis, M. (2023). Leadership Indicator for Students: Higher Ed Technical Manual. Greensboro, NC: Center for Creative Leadership.

Conference Proceedings

Fry, E.B. (2018.) Students' conceptual understanding of the relationship between study design and conclusions in an introductory statistics course. In Sorto, M. (Ed.), *Proceedings of the Tenth International Conference on Teaching Statistics*. Kyoto, Japan.

Parker, N., **Fry, E.B.**, Garfield, J., & Zieffler, A. (2014). Graduate teaching assistants' beliefs, practices, and preparation for teaching introductory statistics. In Makar, K. (Ed.), *Proceedings of the Ninth International Conference on Teaching Statistics*. Flagstaff, AZ.

Fry, E.B. (2014). Introductory statistics instructors' practices and beliefs regarding technology and pedagogy. In Makar, K. (Ed.), *Proceedings of the Ninth International Conference on Teaching Statistics*. Flagstaff, AZ.

Presentations

Fry, E.B. (2025, March.) *Hispanic/Latinx Leadership: Grounding in Core Values and Community*. Workshop presented to the Latinx/Hispanic Employee Resource Group and other colleagues at the Center for Creative Leadership.

Fry, E.B. (2023, October.) *Evaluation as a Tool for Social Impact*. Presentation at the 5th Lideramos National Symposium, Kansas City, Missouri.

Fry, E.B. (2021, August.) *Integrating Community-Engaged Work into the Data Science Curriculum*. Paper presented at the virtual International Association for Statistical Education Satellite Conference.

Fry, E.B. (2021, October.) *Engaging Students in Community-Based Learning*. Speed session presented at the virtual Women in Statistics and Data Science Conference.

Fry, E.B. & Le, L. (2021, May.) *Intentional Community-Building throughout the Entire Course*. Breakout session presented at the U.S. Conference for Teaching Statistics.

Fry, E.B., Legacy, C., Zieffler, A., & Le, L. (2020, October.) *The State of Computing in Introductory Statistics*. Poster presented at the virtual Women in Statistics and Data Science Conference.

Fry, E.B. (2018, July.) *Students' conceptual understanding of the relationship between study design and conclusions in an introductory statistics course*. Invited paper presented at the Tenth International Conference of Teaching Statistics, Kyoto, Japan.

Fry, E.B. (2017, August.) *Introductory statistics students' conceptual understanding of study design and conclusions*. Contributed paper presented at the Joint Statistical Meetings, Baltimore, MD.

Fry, E.B. (2017, May.) *Introductory statistics students' conceptual understanding of study design and conclusions*. Poster presented at the United States Conference on Teaching Statistics, State College, PA.

Ziegler, L., **Fry, E.B.**, Beckman, M., Sabbag, A. & Brown, E. (2015, August.) *The quest for good assessments for research and evaluation*. Panel presentation at the Joint Statistical Meetings, Seattle, WA.

Fry, E.B. and Garfield, J. (2015, January.) *What do we know about best practices in teaching the introductory course?* Contributed paper presented at the Joint Mathematics Meetings, San Antonio, TX.

Garfield, J. delMas, R., Zieffler, A., & **Fry, E.B.** (2015, January.) *e-ATLAS: Evaluation and Assessment of Teaching and Learning About Statistics*. Poster presented at the Joint Mathematics Meetings, San Antonio, TX.

Fry, E.B. (2014, July.) *Introductory statistics instructors' practices and beliefs regarding technology and pedagogy*. Contributed paper presented at the Ninth International Conference on Teaching Statistics, Flagstaff, AZ.

Parker, N., **Fry, E.B.**, Garfield, J. & Zieffler, A. (2014, March.) *Graduate Teaching Assistants' beliefs, practices and preparation for teaching introductory statistics*. Poster presented at the Graduate Student Research Day, University of Minnesota, Minneapolis, MN.

Ziegler, L., & **Fry, E.B.** (2014, February). *Battle of the RANDS*. Presentation given at Stat Chat, Macalester College, St. Paul, MN.

delMas, R., **Fry, E.B.**, Le, L., and Sabbag, A. (2013, May). *Evaluating the Impact of Change in Curriculum and Teaching*. Breakout session presented at the United States Conference on Teaching Statistics, Cary, NC.

Fry, E.B. and Isaak, R. (2013, March). *Evaluating Innovative Courses in Introductory Statistics: Resources from the eATLAS Project*. Webinar presented at <http://www.causeweb.org>.

Garfield, J., delMas, R., Zieffler, A., Pearl, D., and **Fry, E.B.** (2013, January). *e-ATLAS (updated): Evaluation and Assessment of Teaching and Learning About Statistics*. Poster presented at the Joint Mathematics Meetings, San Diego, CA.

Fry, E.B., Ziegler, L., Garfield, J., delMas, R., Zieffler, A., Rossman, A., Chance, B., Holcomb, J., Cobb, G., Everson, M., & Le, L. (2013, January). *A flavor of the CATALST Course: Using randomization-based methods in an introductory statistics course*. Invited panel presentation at The Joint Mathematics Meetings, San Diego, CA.

Garfield, J., delMas, R., Zieffler, A., Pearl, D., and **Fry, E.B.** (2012, January). *e-ATLAS: Evaluation and Assessment of Teaching and Learning About Statistics*. Poster presented at the Joint Mathematics Meetings, Boston, MA.

Grants Received

Academic Professional Development Committee grant (St. Catherine University) to develop community-engaged learning-based Data Visualization course, fall 2020.

Courses Taught

St. Catherine University: 2019-2022

STAT 1090: Statistical Analysis

Introductory statistics course for undergraduate students in a wide variety of fields of study.

STAT 3090: Statistical Computing

Statistical learning course intended for undergraduate statistics minors.

STAT 2080: Statistical Modeling

Regression and ANOVA course intended for undergraduate statistics minors.

DSCI 1000: Data Visualization

Introduction to Data Visualization course for undergraduate students, using service-learning in conjunction with [Mapping Prejudice](#)/Welcoming the Dear Neighbor?

DSCI 3200W: Analyzing Social Issues with Data

Writing-intensive course where students learned data wrangling and data visualization, with applications to social issues

STAT 4994: Topics Course: *Data Science with R*

Data visualization and data wrangling for Data Science majors, using R/RStudio.

STAT 2994: Topics Course: *Intermediate Statistical Investigations*

Intermediate statistical methods course intended for statistics minors, with focus on the statistical investigative process and multivariable thinking.

University of Minnesota: 2012-2019

EPSY 5262: Intermediate Statistical Methods

Intermediate statistics course (focusing on multiple regression and ANOVA) designed for master's level graduate students. Taught the course both online and in person.

EPSY 5271: Becoming a Teacher of Statistics

Course intended to prepare excellent teachers of statistics who are well-versed in the current practice, issues, and challenges of statistics education.

EPSY 5261: Introductory Statistical Methods

Introductory statistics course designed for master's level graduate students and upper level undergraduate students, which uses both simulation-based and parametric methods.

Taught the course face-to-face and online.

EPSY 3264: Basic and Applied Statistics

Introductory statistics course for undergraduate liberal arts students, which uses simulation-based methods to teach inference (CATALST; Change Agents in Teaching and Learning Statistics curriculum developed at the University of Minnesota).

St. Mary's University of Minnesota: 2012

PY 620: Statistical Techniques and Research Methods

Introductory statistics for graduate students in psychology programs.

Columbus State Community College: 2010-2011

Math 135: Elementary Statistics

The Ohio State University: 2009-2010

Stat 133: Statistics for the Business Sciences

Stat 145: Introduction to the Practice of Statistics

Honors/Awards

University of Minnesota Doctoral Student **Nominee for the Midwestern Association of Graduate Schools Excellence in Teaching Award** (2017)

Graduate Student Teaching Award, Department of Educational Psychology, University of Minnesota (2015)

Susan L. Huntington Distinguished University Fellowship for graduate studies at The Ohio State University (2007-2009)

Dean's Graduate Enrichment Fellowship for graduate studies at The Ohio State University (2007)

Lubrizol Award for graduate studies in statistics (2007)

Pi Delta Phi, national college honor society for students of French (2005-2006)

Harold and Elizabeth Denig Award, mathematics endowed scholarship (2006)

Nancy Wehmeier Nagel and Robert B. Nagel Award, mathematics award (2005)

Christ College Diversity Award, full tuition scholarship (2002-2006)

Valparaiso University **Dean's List** (2002-2006)

Professional Memberships

Minnesota Evaluation Association

International Leadership Association (ILA) 2023-present

International Association for Statistics Education (IASE) 2018-2019

American Statistical Association (ASA) – section on Statistics Education 2011-2023

Professional Activities	
Co-leader of Latinx/Hispanic Employee Resource Group Center for Creative Leadership	2022-present
CCL Brand Ambassador Center for Creative Leadership	2023-present
Faculty Advisor for Color of STEM; Yarn Arts student organizations St. Catherine University	2020-present
Advanced Placement Statistics Reading, Kansas City, Missouri <i>Reader</i>	2012-2021
Mentor for Student Diversity Group, Department of Educational Psychology, University of Minnesota	2019
Poster convenor for <i>International Conference on Teaching Statistics</i>	2018
Educational Psychology Department Diversity Committee, University of Minnesota	2017-2019
Reviewer: <i>Statistics Education Research Journal</i> (SERJ)	2017-2022
Reviewer: <i>Journal of Statistics and Data Science Education</i> (JSDSE)	2016-2022
Reviewer: <i>Technology Innovations in Statistics Education</i> (TISE)	2013-2022
Writer of <i>Teaching Bits: Statistics Education Articles</i> column Appeared periodically in the <i>Journal of Statistics Education</i> (JSE)	2013-2016
Additional Professional Experience	
<i>Access Assistant for Dr. Joan Garfield</i>	2012-2015
<ul style="list-style-type: none"> Assisted in the planning and coordination of the 2013 Statistical Reasoning, Thinking and Literacy (SRTL) research forum in Two Harbors, Minnesota. Assisted Dr. Garfield in preparing teaching and research materials, such as proofreading and organizing references. 	
John Wiley and Sons <i>Textbook Reviewer</i>	2013

The Ohio State University Student Athlete Support Services Office

Tutor

2010-2011

- Tutored student athletes taking pre-calculus, calculus, introductory statistics, and mathematical statistics courses.

The Ohio State University, Columbus, Ohio

Summer Bridge Program

Course Co-facilitator

2010

- Co-led three-week interactive course about statistics for incoming first-year
- students.

Lutheran Volunteer Corps, Chicago, Illinois

• *Youth Director*

2006-2007