Jason M. Bryer, Ph.D.

Assistant Professor and Associate Director

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jbryer

Professional Interests

Teaching and research within K-12, higher education, and data science. Specific areas of interest include reproducible research; self-regulated learning; formative assessment; issues of social justice and equity in education; and statistics and methodology with an emphasis on propensity score analysis and modern graphics.

Education

2014 **Ph.D. Educational Psychology and Methodology**, *University at Albany*, Albany, NY.

2009 **M.S. Educational Psychology and Methodology**, *University at Albany*, Albany, NY.

1999 **B.A. Mathematics**, *The College of Saint Rose*, Albany, NY.

Dissertation

Title A National Study Comparing Charter and Traditional Public Schools Using Propensity Score Analysis.

Committee Robert M. Pruzek (chair), Bruce Dudek (co-chair), Heidi Andrade, Kathryn S. Schiller.

Website https://github.com/jbryer/Dissertation.

Professional Experiences

2020 - present **Assistant Professor and Associate Director**, *CUNY School of Professional Studies*, New York, NY.

- Data Science and Information Systems department.

2019 - 2020 **Research Data Associate**, *Cornell University*, Ithaca, NY.

- Associate for the Special Education Technical Assistance Partnership for DATA to support the data needs for specialists and school districts within New York State. Primary developer of the data.osepartnership.org data dashboard.

2016 - 2020 **Executive Director and Principal Investigator**, *Excelsior College*, Albany, NY.

- Manage FIPSE First in the World grant to develop a Diagnostic Assessment and Achievement of College Skills (DAACS; $2,999,877). DAACS provides incoming students with realtime, actionable feedback about their strengths and weaknesses in critical college skills including self-regulation, math, reading, and writing. Additionally, DAACS provides critical information for predictive analytics at the college. Website: https://www.daacs.net

2015 - 2020 **Adjunct Associate Professor**, *CUNY School of Professional Studies*, New York, NY.

- Courses taught: DATA 606 Statistics & Probability for Data Analytics Website: http://data606.net/

2015 - 2019 **Consultant / Learning Analyst**, *NYS PBIS Technical Assistance Center*, Albany, NY.

- Developed a data system to support Behavior Specialists work with schools within New York State on their implementation of Positive Behavior Interventions and Supports (PBIS). The goal of this website is to consolidate disparate data sources along with custom data entry so that Behavior Specialists can make data based decisions. I also provided statistical support for analyzing the data at the state level. Website: https://pbisny.org

2014 - 2015 **Director of Research & Project Evaluation**, *Excelsior College*, Albany, NY.

- Assisted the College in seeking external grants and provide research support for existing grants. Significant activities included: * Principal Investigator for a Gates Foundation funded grant ($168,572) on the use of adaptive learning technology in Biology and Mathematics. * Lead Evaluator for New York State Higher Education Services Corporation (HESC) grant ($449,438) for the expansion of the Online Writing Lab to NYS Community Colleges.

2009 - present **Adjunct Instructor**, *University at Albany*, Albany, NY.

- Courses taught: EPSY 420 Child & Adolescent Development (Fall 2008, Spring 2009), EPSY 530 Statistics I (Fall 2013, Summer 2014, Fall 2014, Summer 2015), EPSY 887 Computational Statistics (Spring 2013), EPSY 887 Data Science Institute (Fall 2014), EPSY 887 Intro to R for Academic Researchers (Fall 2019), EPSY 630 Statistics II (Spring 2020)

2008 - 2014 **Senior Research Analyst**, *Excelsior College*, Albany, NY.

- Conducted research and data analysis related to the College's mission. This includes developing, administering, and analyzing surveys; analyzing data from the college's student information system; and consulting with individual schools to develop specific measures. I also provided substantial support and training for other Research Analysts within the Office covering topics such as methodology, statistics, and reproducible research.

2008 - 2010 **Research Assistant**, *Head Start University Partnership for Classroom Quality*, Albany, NY.

- Assisted with data collection, entry, maintenance, and analysis to evaluate the effectiveness of behavioral (Positive Behavior Support [PBS]) and literacy interventions using the Response-to- Intervention (RTI) model. Principal investigators: Kevin P. Quinn & Frank R. Vellutino

2008 - 2011 **Webmaster**, *University at Albany, School of Education*, Albany, NY.

- Developed and maintained all School of Education websites.

2006 - 2007 **Graduate Assistant**, *Teaching Mathematics for Understanding, University at Albany*, Albany, NY.

- Developed and led planning sessions with K-8 mathematics teachers in urban school districts on social justice topics in the mathematics curriculum. Assisted in other areas of the project including data collection, conference planning, and development of online professional development courses. Principal Investigators: Abbe Herzig & Vicky Kouba

2006 - 2008 **Senior Applications Developer**, *Excelsior College*, Albany, NY.

- Developed Java applications for distance learning and student management systems.

2004 - 2006 **Senior Software Engineer**, *State University of New York*, Albany, NY.

- Developed web based applications in Java and related technologies as part of a state wide financial and human resource systems.

1999 - 2004 **Software Engineer**, *MapInfo*, Troy, NY.

- Contributed key features as part of a geographic information system (GIS) server application (MapXtreme Java) including API for reading and writing binary GIS data, framework for web based applications, and data binding.

1997 - 1999 **Web Developer**, *Office of the Attorney General*, ALbany, NY.

- Software developer and website designer for the New York State Attorney General's Website.

Teaching Experiences

2015 to present **DATA 606 Statistics and Probability for Data Analytics**, CUNY School of Professional Studies.

- This course covers basic techniques in probability and statistics that are important in the field of data analytics. Discrete probability models, sampling from infinite and finite populations, statistical distributions, basic Bayesian statistics, and non-parametric statistical techniques for categorical data are covered in this course. Each of these statistical concepts will be applied in a variety of real-world scenarios through the use of case studies and customized data sets. Course website: https://DATA606.net

Fall 2022 **DATA 661 Benchmarking Predictive Models**, CUNY School of Professional Studies.

- Benchmarking Predictive Models - Developed an R package with students to benchmark predictive models. Package website: https://github.com/jbryer/mldash

Srping 2022 **DATA 661 Independent Study**, CUNY School of Professional Studies.

- Worked with students on mapping data in R, sentiment analysis, topic modeling, and creating Shiny modules for data import and analysis.

Spring 2020, 2021 **EPSY 630 Statistics II**, University at Albany.

- Emphasis is on statistical inference. Topics include one- and two-way analysis of variance, multiple comparison tests, correlation and regression techniques, chi square, and nonparametric statistics. Course website: https://epsy630.bryer.org

Fall 2019 **EPSY 887 Intro to R for Academic Researchers**, University at Albany.

- This course will explore the skills and tools necessary for conducting data preparation and analysis with R. The first third of the course will focus on learning R. The middle third will explore some of the more common statistical procedures in R including: classification and regression trees; logistic regression; propensity score analysis; missing data imputation; and other topics as time permits. The final third of the class will be left for topics of special interest to students and their research agendas. Course website: http://epsy887.bryer.org

2013 to 2015 **EPSY 530 Statistics I**, University at Albany.

- Descriptive statistics including measures of central tendency and variability, correlation and regression. Introduction to statistical inference, including sampling distributions, significance tests, confidence intervals, and power of tests of significance. Course website: https://github.com/jbryer/EPSY530Summer2015

Fall 2014 **EPSY 887 Data Science Institute**, University at Albany.

- Data Science is the intersection of statistics, computer science, and research. This seminar will introduce the key concepts of data science with an emphasis on data science in education. We will cover the important statistical and programming concepts necessary for conducting reproducible research on large datasets. The open source program R will be used throughout the course. No programming experience is required but at least two semesters of graduate statistics is highly recommended. Course website: https://github.com/jbryer/EPSY887DataScience

April/May 2014 **Applied Propensity Score Analysis with R**, Workshop given at the University at Albany.

- This two day workshop provided an introduction to propensity score methods using R as well as more advanced topics including multilevel PSA, non-binary treatment matching, and bootstrap- ping. Workshop website: http://psa.bryer.org

Spring 2013 **EPSY 887 Institute in Education: Computational Statistics**, University at Albany.

- This seminar will provide an introduction to statistical programming for data analysis with an emphasis on the analysis of large datasets. With the increased availability of large national and international datasets (e.g. PISA, TIMMS, NAEP, ECLS) there is a great opportunity and potential for researchers to address important questions. However, the analysis of large datasets requires special analytical procedures not found in commercial statistics software. Utilizing the open source statistical software R, students will be introduced to the tools and procedures for analyzing large datasets with an emphasis on conducting transparent and reproducible research. Course website: https://github.com/jbryer/CompStats

July 2013 **Introduction to Propensity Score Methods with R**, useR! 2013 Pre-Conference Workshop.

- This workshop will provide participants with a theoretical overview of propensity score methods as well as illustrations and discussion of PSA applications using R.

2011, 2012, 2013, 2015, 2016 **Introduction to R and LaTeX for Institutional Research**, Workshop given at the Northeast Association for Institutional Research.

- This workshop provides an overview as well as hands-on exercises for using R and LaTeX to perform data analysis and report generation. Participants learn to perform basic statistical analyses in R and to generate reports with LaTeX in spreadsheet, presentation, and document formats.

Spring 2009 **EPSY 420 Child & Adolescent Development**, University at Albany.

Fall 2008

- This course covers theory and research in social, emotional, physical, and intellectual development and its application to instruction with an emphasis on late childhood through middle adolescence.

Service Positions

CUNY School of Professional Studies

2023 CUNY SPS Governing Council

2021-2022 CUNY SPS Committee to evaluate and revise the student course evaluations survey

2014-present Founding Organizer of the Albany R Users Group
Website: `http://www.meetup.com/Albany-R-Users-Group`

Dissertation Committees

current Oxana Rosca - Do Incoming Adulte Undergraduate Students Differ from Traditional College Age Undergraduate Students in College Readiness?

2021 David Franklin - Relationship between grit, mindset, and academic achievement

2020 Jana L. Vanderslice-Barr - Demographic Differences in Post-Secondary Outcomes Following Participation in the Diagnostic Assessment and Achievement of College Skills Intervention

2019 Erica Pawlo - Identifying Profiles of Motivational Processes in Online College Students and Their Relations to Multiple Indicators of Academic Success

2018 Kimberly Speershneider - The Differentiated Impact Of Early Entry Into Head Start On Social Competence And Literacy: An Applied Propensity Score Analysis

2015 Chrisopher Valle - Effects Of Criteria-Referenced Formative Assessment On Achievement In Music

2015 Fei Chen - The Impact of Criteria-Referenced Formative Assessment On Fifth Grade Students' Theater Arts And English Language Arts Achievement

Excelsior College

2019-2020 Committee Member, Course Evaluation Committee

Excelsior College

2015-2019 Chair, Diagnostic Assessment & Achievement of College Skills Advisory Committee

2014-2018 Chair, Technology Advisory Committee

2014-2018 Committee Member, Information Technology Council

2017-2018 Committee Member, Academic Affairs Council

2013-2014 Committee Member, Persistence Measure Task Force

2010-2014 Committee Member, Student Learning Support Services Committee

2010-2014 Committee Member, Data Definitions & Quality

2010-2013 Committee Member, Information Technology Operations & Security Committee

2011-2012 Committee Member, Search Committee for Assistant Provost

2009-2010 Committee Member, Early Alert System for Identifying Non-Persistent Students

2009 Chair, Task Force on a Library of Model Courses

2009-2010 Committee Member, System for Storing Information at Excelsior College

City School District of Albany

2011-2012 Committee Member, Grade Configuration Committee; Chair of the Accountability Subcommittee

American Educational Research Association

2009-2011 Treasurer, Studying and Self-Regulated Learning Special Interest Group

2009-2010 Committee Member, Division D Membership Committee

University at Albany, Division of Educational Psychology & Methodology

2007-2008 Treasurer, Graduate Student Organization

Professional Memberships

AERA American Educational Research Association

ASA American Statistical Association

NCME National Council on Measurement in Education

NEAIR North East Association for Institutional Research

SCI Society for Causal Inference

Awards & Grants

2021-2026 Principal Investigator Institute of Education Sciences grant ($3,789,074, R305A210269, Examining the Efficacy, Predictive Power, and Cost Effectiveness of the Diagnostic Assessment and Achievement of College Skills.

2020-2021 Co-Principal Investigator CUNY Interdisciplinary Grant ($40,000), Amplifying Potential: Youth Generated Research on COVID-19 and a vision for how to build back better.

2015 - 2020 Principal Investigator FIPSE First in the World grant ($2,999,877, P116F150077), Diagnostic Assessment & Achievement of College Skills: Personalized Feedback & Targeted Student Supports.

2019 Co-Principal Investigator Strategic Allocation of Resources (StAR) Award to implement DAACS at the University at Albany ($48,500).

2013 - 2015 Principal Investigator Bill & Melinda Gates Foundation grant ($168,572) on the use of adaptive learning technology in introductory Biology and Mathematics courses..

2014 - 2016 Lead Evaluator New York State Higher Education Services Corporation (HESC) grant ($449,438) for the expansion of the Online Writing Lab to NYS Community Colleges..

2013 North East Association for Institutional Research (NEAIR) Ambassador Grant ($800).

2013 Excelsior College, Employee Recognition Award for Excellence in Innovation.

2011, 2012 The Society of Multivariate Experimental Psychology (SMEP), Workshop Travel Award (three separate awards of $1,000 each).

2011 National Center for Educational Statistics Workshop Travel Award ($800).

2009 Association for Institutional Research (AIR) & National Center for Educational Statistics (NCES), Travel Grant ($330).

2009 National Science Foundation, Travel/Research Grant ($1,000).

2009 University at Albany Graduate Student Organization, Travel/Research Grant ($320.00).

2001 Award for Outstanding Performance, MapInfo..

1999 Sister Noel Marie Cronin Award for excellence in Mathematics, College of Saint Rose..

1999 Outstanding Senior Award for Mathematics/Computer Information Systems, College of Saint Rose..

1998, 1999 Service and Appreciation Award, College of Saint Rose..

Publications

Cleary, T., Bryer, J., & Andrade, H. (2023). Using the diagnostic assessment and achievement of college success (DAACS) to promote SRL skills among entry-level college students: Challenges and recommendations. In H. Bembenutty (Ed.), *Directions in teaching and learning*.

Franklin, D., Bryer, J., Lui, A., Andrade, H. L., & Akhmedjanova, D. (2022). The effects of nudges on students' use of the diagnostic assessment and achievement of college skills. *Online Learning Journal*, *26*(2).

Bryer, J., Akhmedjanova, D., Andrade, H., & Lui, A. (2022). The use of predictive modeling for assessing college readiness. In H. Jiao & R. Lissitz (Eds.), *Enhancing effective instruction and learning using assessment data: Theory and practice*. Information Age Publishing.

Franklin, D., Lui, A., Andrade, H. L., Cleary, T., & Bryer, J. (2019). SRL lab announcement. *SSRL SIG Fall Newsletter*, *Fall*.

Franklin, D., Bryer, J., Andrade, H. L., & Lui, A. (2021). Design tests with a learning purpose. *Educational Measurement: Issues and Practice*, *40*(4).

Lui, A. M., Franklin, D., Akhmedjanova, D., Gorgun, G., Bryer, J., Andrade, H. L., & Cleary, T. (2018). Validity evidence of the internal structure of the DAACS self-regulated learning survey. *Future Review: International Journal of Transition, College, and Career Success*, *1*(1).

Anderson, K., Scanlon, D. M., Goatley, V., Gelzheiser, L. M., & Bryer, J. (2013). Impact of changes in literacy course content in teacher education programs on preservice teachers' knowledge. *Teaching and Teaching Education*.

Nagelsmith, L., Bryer, J. M., & Yan, Z. (2012). Measuring motivation and volition of nursing students in non-traditional learning environments. *Journal of Nursing Measurement*, *20*(2).

Bryer, J. M., & Pruzek, R. M. (2011). An international comparison of private and public schools using multilevel propensity score methods and graphics (abstract). *Multivariate Behavior Research*, *46*(6), 1010–1011.

Bryer, J., Daniels, L., Norwood, E., & Applegarth, E. (n.d.). *Excelsior college fact book*. Excelsior College Office of Institutional Research.

Working Papers

Bryer, J. M., Andrade, H., Cleary, T., Lui, A., & Franklin, D. (n.d.). *The efficacy and predictive power of the diagnostic assessment and achievement of college skills on academic success indicators*.

Bryer, J. M., & Pruzek, R. M. (n.d.). *multilevelPSA: An r package for estimating and visualizing multilevel propensity score models.*

Bryer, J. M. (n.d.). *Relationship between intraclass correlation (ICC) and percent agreement.*

Bryer, J. M. (n.d.). *TriMatch: An r package for propensity score analysis of non-binary treatments.*

Bryer, J. M. (n.d.). *PSAboot: An r package for bootstrapping propensity score analysis.*

Bryer, J. M. (n.d.). *The visual display of likert data with the likert package.*

Presentations

Bryer, J. (2023). *Bootstrapping for propensity score analysis.* Society for Causal Inference Annual Meeting. Austin, TX. https://sci-info.org/annual-meeting/

Franklin, D., Andrade, H. L., Bryer, J., & Lui, A. (2023). *He relationships between grit, mindset, and the academic success of adult students at online colleges. [Roundtable presentation].* American Educational Research Association. Chicago, IL. https://www.aera.net/Events-Meetings/Annual-Meeting/2023-Annual-Meeting/

Rosca, O., Colvin, K., Andrade, H. L., & Bryer, J. (2023). *Comparison of reliability coefficients for a single-administration survey. [E-board presentation].* National Council for Measurement in Education. Chicago, IL. https://www.ncme.org/event/annual-meeting

Yu, E., Lui, A., Franklin, D., Akhemdjanova, D., & Bryer, J. (2023). *College students' responses to automated feedback on self-regulated learning. [Paper presentation].* American Educational Research Association. Chicago, IL. https://www.aera.net/Events-Meetings/Annual-Meeting/2023-Annual-Meeting/

Bryer, J. (2023). *Strategies for supporting students' self-regulated learning within the course.* OLC Accelerate. Orlando, FL. https://github.com/jbryer/OLCAccelerate2022

Bryer, J., Lui, A., & Franklin, D. (2022). *Strategies for supporting students' self-regulated learning within the course.* Learning Ideas Conference. New York, NY. https://www.learningideasconf.org/programs/2022

Bryer, J., Andrade, H., & Lui, A. (2019). *Using diagnostic assessment data to advance student success: Results from the diagnostic assessment and achievement of college skills (DAACS) project.* Invited talk at the Nineteenth Annual MARC Conference. College Park, MD.

Bryer, J., & Gorgun, G. (2019). *Relationship between intraclass correlation and percent rater agreement.* Paper presentation at the annual meeting of the National Council on Measurement in Education. Toronto, Canada.

Diana Akhmedjanova, A. L., Andrade, H., & Bryer, J. (2019). *Validity and reliability of the DAACS writing assessment.* Paper presentation at the annual meeting of the National Council on Measurement in Education. Toronto, Canada.

Bryer, J., Lui, A., Andrade, H., Franklin, D., & Cleary, T. (2019). *Efficacy of the diagnostic assessment and achievement of college skills on multiple success indicators.* Roundtable presentation at the annual meeting of the American Educational Research Association, Toronto, Canada.

Pawlo, E., Cleary, T., Slemp, J., Waire, J., Bryer, J., & Gambino, T. (2019). *Academic success in online colleges: The role of self-regulated learning profiles.* Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Bryer, J., Andrade, H., Cleary, T., & Lui, A. (2018). *The diagnostic assessment and achievement of college skills.* Paper presented at the Distance Teaching and Learning Conference,

Madison, WI.

Andrade, H., Bryer, J., & Yagelski, R. (2018). *Developing and validating the DAACS writing assessment.* Paper presented at the Sig Writing Conference in Antwerp, Belgium.

Bryer, J., Sahin, F., Andrade, H., Lui, A., Akhmedjanova, D., & Franklin, D. (2017). *Development of the large scale diagnostic assessments of college skills.* Paper presented at the 48th Annual Meeting of the Northeast Educational Research Association, Trumbull, CT.

Bryer, J. (2015). *Propensity score matching with three groups.* Poster presented at the Atlantic Causal Inference Conference. Philadelphia, PA.

Bryer, J., Choens, A., Corey, M., Goldhirsh, M., & Jurkat, A. (2015). *Data science panel.* Panelist at the University at Albany's Open Source Festival, http://ualbanyasist.com/open-source-festival/osf-2015/.

Bryer, J. M., Mumma, P., Hyman, R., Dhyr, B., Cohen, P., Howard, M., & Hammang, J. M. (2014). *Exploring better learning: Three campuses, two disciplines, and one learning platform.* Panelist at the American Association of State Colleges and Universities. Ft Lauderdale, FL.

Bryer, J. M. (2014). *PSAboot: An r package for bootstrapping propensity score analysis.* Paper presented at the useR! Conference. Los Angeles, CA.

Bryer, J. M., & Speerschneider, K. (2013). *TriMatch: An r package for propensity score matching of non-binary treatments.* Paper presented at the useR! Conference. Albacete, Spain.

Speerschneider, K., & Bryer, J. M. (2013). *likert: An r package for visualizing and analyzing likert-based items.* Paper presented at the useR! Conference. Albacete, Spain.

Bryer, J. M. (2012). *Using the makeR package for managing document building and versioning.* Paper presented at the useR! Conference. Nashville, TN.

Bryer, J. M. (2012). *Comparing charter and traditional public schools using propensity score analysis.* Paper presented at the American Educational Research Association Annual Conference. Vancouver, British Columbia, Canada.

Bryer, J. M., & Pruzek, R. M. (2012). *Moodle: An open way of delivering online courses.* Invited talk given to the School of Education, University at Albany. Albany, NY.

Bryer, J. M., & Daniels, L. (2011). *Measuring all students: An alternative method for retention and completion rates.* Paper presented at the North East Association for Institutional Research 28th Annual Conference. Boston, MA http://www.neair.org/resource/resmgr/confpapers2011/tue

Bryer, J. M., & Pruzek, R. M. (2011). *An international comparison of private and public schools using multilevel propensity score methods and graphics.* Paper presented at the Society of Multivariate Experimental Psychology (SMEP). Norman, OK.

Pruzek, R. M., Danielak, B. A., Bryer, J. M., & Doane, W. E. J. (2011). *Some new developments in graphics for comparing groups.* Paper presented at the Society of Multivariate Experimental Psychology (SMEP). Norman, OK.

Bryer, J. M. (2011). *Visualizing multilevel propensity score analysis.* Paper presented at the useR! Conference. Coventry, UK.

Bryer, J. M. (2011). *Introducing the IPEDS package for r.* Presentation given at the Association for Institutional Research 51st Annual Forum. Toronto, Canada.

Bryer, J. M. (2011). *Software design principles for reproducible research.* Presentation given at the Technologies in Education Conference. Albany, NY.

Bryer, J. M. (2011). *Comparing private and public schools: An international perspective using*

multilevel propensity score analysis. Poster presented at the annual meeting of the University at Albany Division of Educational Psychology & Methodology. Albany, NY.

Bryer, J. M. (2011). *Moodle: An open way of delivering online courses.* Invited Brown Bag talk given to the Division of Educational Psychology & Methodology. Albany, NY.

Bryer, J. M. (2011). *Using r and LaTeX to create the excelsior college fact book.* Presentation given to the Excelsior College community. Albany, NY.

Bryer, J. M. (2010). *Using r and LaTeX for automating reporting.* Paper presented at North East Association for Institutional Research 27th Annual Conference. Saratoga, NY.

Scanlon, D. M., Anderson, K., Gelzheiser, L. M., Goatley, V., Vellutino, F. R., & Bryer, J. M. (2010). *Enhancing knowledge related to research-based early literacy instruction among pre-service teachers (year 3).* Poster presented at the Institute of Education Sciences Principal Investigators conference, Washington, D.C.

Bryer, J. M. (2010). *Introduction to r and LaTeX for institutional research.* Invited presentation at the Association for Institutional Research 50th Annual Forum. Chicago, IL.

Bryer, J. M., Ochal, B., & Wescott, K. (2010). *Comparing charter and public schools with multilevel models.* Poster presented at the annual meeting of the University at Albany Division of Educational Psychology & Methodology. Albany, NY.

Bryer, J. M. (2009). *Locating students: GIS applications for institutional research.* Paper presented at North East Association for Institutional Research 36th Annual Conference. Baltimore, MD http://www.neair2.org/members/Proceedings/2009/proceedings/Monday/11am-12pm/Bryer.LocatingStudents.Paper.pdf.

Bryer, J. M. (2009). *The reliability and validity of the social skills improvement system for head start students.* Paper presented at Northeastern Educational Research Association 40th Annual Conference. Rocky Hill, CT.

Bryer, J. M., Ochal, B., & Westcott, K. (2009). *Accessing the effects of early entry to head start using propensity score analysis.* Paper presented at Northeastern Educational Research Association 40th Annual Conference. Rocky Hill, CT.

Bryer, J. M. (2009). *Using open source software for the management of large datasets.* Paper presented at Directions in Statistical Computing, A Meeting on the Future of Statistical Computing. Copenhagen, Denmark.

Bryer, J. M., Hoss, K., & LaFave, M. (2009). *Using factor analysis to test the reliability and validity of the social skills improvement system for head start students.* Poster presented at the annual meeting of the University at Albany Division of Educational Psychology & Methodology. Albany, NY.

Bryer, J. M., & Nagelsmith, L. (2009). *Using structural equation modeling to explore motivation and volition for nurses in nontraditional learning environments.* Paper presented at American Educational Research Association Annual Conference. San Diego, CA.

Bryer, J. M., & Nagelsmith, L. (2008). *Exploring motivation & volition for adults in non-traditional learning environments.* Paper presented at Northeastern Educational Research Association 39th Annual Conference. Rocky Hill, CT.

Nagelsmith, L., & Bryer, J. M. (2008). *Exploring motivation & volition for adults in non-traditional learning environments.* Paper presented at Albany Consortium for Research in Instructional Design & Theory. Albany, NY.

Bryer, J. M. (2007). *Using bibliographic software to assist research.* Paper presented at Brown Bag series for the Division of Educational Psychology. Albany, NY.

Bryer, J. M. (2007). *Math anxiety in pre-service teachers.* Poster presented at the annual

meeting of the University at Albany Division of Educational Psychology & Methodology. Albany, NY.

Bryer, J. M. (1998). *Those complicated complex roots.* Paper presented at the Hudson River Undergraduate Mathematics Conference. Union College, Schenectady, NY.

Bryer, J. M. (1997). *Computer applications in chaotic dynamical systems.* Paper presented at the Hudson River Undergraduate Mathematics Conference. Williams College, Williamstown, MA.

Software

Bryer, J. M. (2023). *ShinyQDA: R package and shiny application for the analysis of qualitative data.* https://github.com/jbryer/ShinyQDA

Bryer, J. M. (2023). *Mldash: Machine learning dashboard.* https://github.com/jbryer/mldash

Bryer, J. M. (2022). *Brickset: An r package to interface with the brickset.com API for getting data about LEGO sets.* https://github.com/jbryer/brickset

Bryer, J. M. (2022). *Dtedit: Editable DataTables for shiny applications.* https://github.com/jbryer/DTedit

Bryer, J. M. (2022). *ShinyQuiz: Framework for collecting data from users in shiny applications.* https://github.com/jbryer/ShinyQuiz

Bryer, J. M. (2022). *ggBoxes: Two dimensional box and error plots.* https://github.com/jbryer/ggBoxes

Bryer, J. M., & Dudek, B. (2022). *VisualStats: R package for visualizing statistical tests.* https://github.com/jbryer/VisualStats

Bryer, J. M. (2023). *PSAboot: R package for bootstrapping propensity score analysis.* http://github.com/jbryer/PSAboot

Bryer, J. M. (2013). *Likert: R package to analyze likert based items.* http://github.com/jbryer/likert

Bryer, J. M. (2013). *TriMatch: R package for propensity score analysis of non-binary treatments.* http://github.com/jbryer/TriMatch

Bryer, J. M. (2013). *multilevelPSA: R package for estimating and visualizing multilevel propensity score analysis.* http://github.com/jbryer/multilevelPSA

Bryer, J. M. (2013). *Sqlutils: R package for managing a library of SQ files.* http://github.com/jbryer/sqlutils

Bryer, J. M. (2013). *Naep: R package for the national assessment of educational progress.* http://github.com/jbryer/naep

Bryer, J. M. (2010). *Irutils: R package for institutional research.* http://github.com/jbryer/irutils

Bryer, J. M. (2011). *Ruca: R package for estimating urbanicity.* http://github.com/jbryer/ruca

Bryer, J. M. (2010). *Ipeds. R package for interfacing with the integrated postsecondary education data system.* http://github.com/jbryer/ipeds

Bryer, J. M. (2011). *Qualtrics. R package for interfacing with the qualtrics.com survey system.* http://github.com/jbryer/qualtrics

Bryer, J. M. (2004). *FractalJ. Application to support the teaching of chaotic dynamical systems.* http://fractalj.sourceforge.net

Professional Development Coursework Completed

2022 Designing the Data Science Classroom, Mine Cetinkaya-Rundel and Maria Tackett , Rstudio::conf

2021 Bayesian Data Analysis and Stan Workshop, Jonah Gabry, Lander Analystics

2019 Applied Machine Learning, Max Kuhn, Rstudio::conf workshop.

2018 Teach the Tidyverse, Garrett Grolemund, Rstudio::conf workshop.

2017 Advanced Shiny, Joe Cheng, Rstudio::conf workshop.

2015 Targeted Learning, Sherri Rose, Atlantic Causal Inference Conference short course.

2014 Applied Predictive Modeling in R, Max Kuhn, useR! Pre-Conference workshop.

2013 Using Spatial Data, Roger Bivand, useR! Pre-Conference workshop.

2012 Statistical Modeling in the R Context, Bill Venables, useR! Pre-Conference workshop.

2012 Geospatial Data in R and Beyond, Barry Rowlingson, useR! Pre-conference workshop.

2012 Building R Web Applications with Rook, Jeffry Horner, useR! Pre-conference workshop.

2012 Using the School Attendance Boundary Information System (SABINS), Salvatore Saporito and David Van Riper, AERA Mini-Course.

2011 R Development Master Class, Hadley Wickham

2011 Fitting and Evaluating Mixed Models using `lme4`, Douglas Bates.

2011 National Assessment of Educational Progress (NAEP) Database training, National Center for Educational Statistics.

2011 Presenting Data and Information, Edward Tufte.

2010 Handling missing data in R with MICE, Karin Groothuis-Oudshoorn and Stef van Buuren, useR!

2010 Elastic-R, a google docs-like portal for data analysis in the cloud, Karim Chine, useR!

2009 Using IPEDS Data for Institutional Effectiveness, Mary Ann Coughlin, NEAIR Workshop.

2009 Accessing and Analyzing National Databases in Secondary and Higher Education, Terrell L. Strayhorn, AERA Extended Course.

2009 An Introduction to Hierarchical Linear Modeling with R, J. Kyle Roberts, AERA Mini-Course.

2008 An Introduction to Propensity Score Analysis, Robert M. Pruzek, University at Albany.

2008 An Introduction to GIS for Educational Researchers, Mark Hogrebe, Courtney A. Bell, & Charisse A. Gulosino, AERA Mini-Course.

2008 Foregrounding Issues of Equity and Diversity in Mathematics Education Research: Implications for Research Methods and Teacher Development, Ban Battey, et al., AERA Mini-Course.

2008 A “Gentle" Introduction to Statistical Analysis and Teaching with R, Brandon K. Vaughn, AERA Mini-Course.

Graduate Coursework

Completed at the University at Albany

EPSY 522 Adolescent Development
EPSY 530 Statistical Methods I
EPSY 540 Assessment in Education
EPSY 610 Advanced Educational Psychology: Learning & Instruction
EPSY 623 Advanced Developmental Psychology
EPSY 630 Statistical Methods II
EPSY 640 Educational & Psychological Measurement
EPSY 687 Institute in Education: Item Response Theory
EPSY 713 Self-Regulated Learning
EPSY 721 Comparative Theories in Human Development
EPSY 725 Seminar in Human Development: Language Development
ECPY 725 Multivariate Applications in Counseling Psychology
ECPY 726 Analysis of Covariance Structures
EPSY 735 Seminar in Statistics (PSA, bootstrapping, factor analysis)
EPSY 761 History & Issues in Special Education
EAPS 762 Seminar in Advanced Research Methods for Educational Leadership (HLM)
EPSY 780 Seminar in the Profession of Educational Psychology
ETAP 850 Equity, Diversity, & Social Justice in Mathematics & Science Education
EPSY 887 Institute in Education: The Use of R in Educational Psychology
EPSY 887 Institute in Education: Modern Graphics for Social Science Research

Completed at the College of Saint Rose

EDU 506 Educational Foundations
EDU 530 Middle School Education: Theory & Practice
EDU 590 Research Seminar
EPY 500 Educational Research
EPY 502 Survey of Educational Psychology
SEC 515 Curriculum & Instruction in Secondary Schools
SEC 518 Literacy Improvement in Secondary Schools
SEC 522 Methods of Teaching Math in Secondary Schools