

**M. H. CLARK, Ph.D.**  
**CURRICULUM VITAE**

**CONTACT INFORMATION**

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M. H. Clark, Ph.D.  
Methodology, Measurement and Analysis  
Department of Educational and Human Sciences  
College of Education and Human Performance  
P. O. Box 161250  
University of Central Florida  
Orlando, FL 32816-1250  
e-mail: M.H.Clark@ ucf.edu

**EDUCATION**

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- 2004 Ph.D. in Experimental Psychology  
Specialized in Research Design and Statistics  
The University of Memphis, Memphis, TN  
Dissertation: *Can propensity scores reduce bias caused by regression to the mean in quasi-experiments that use matching?*  
Advisor: William R. Shadish, Ph.D.
- 2000 M.S. in Psychology  
Specialized in Research Design and Statistics  
The University of Memphis, Memphis, TN  
Thesis: *A laboratory experiment comparing assignment methods using propensity scores*  
Advisor: William R. Shadish, Ph.D.
- 1995 B.A. in Psychology  
Minors in Mental Health, Theater, and European History  
Armstrong State University, Savannah, GA  
Senior Thesis: *Social preferences among sibling and non-sibling rats*  
Advisor: W. Keith Douglass, Ph.D.

**PROFESSIONAL POSITIONS**

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- 2017-present Associate Lecturer and Coordinator, Department of Educational and Human Sciences, University of Central Florida, Orlando, FL
- 2010-2017 Lecturer and Coordinator, Department of Educational and Human Sciences, University of Central Florida, Orlando, FL

- 2013-2015 Evaluation Analyst, Program Evaluation and Educational Research Group, University of Central Florida, Orlando, FL
- 2004-2010 Assistant Professor, Department of Psychology, Southern Illinois University Carbondale, Carbondale, IL
- 2003-2004 Instructor, Department of Psychology, Southern Illinois University Carbondale, Carbondale, IL

## **RESEARCH INTERESTS**

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### Quantitative Methodology

General research interests focus on applied statistics in behavioral research and comparing experimental and quasi-experimental designs. Specific research interests include selection bias in non-randomized experiments, assessing bias in randomized studies with differential attrition, statistical adjustments to correct for those biases, propensity scores, methods for creating and controlling parameters in computer simulations, and psychometrics.

### Substantive

Applied interests include academic motivation and performance in higher education, individual differences, and substance abuse.

## **PEER REVIEWED PUBLICATIONS**

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1. Rindskopf, D. M., Shadish, W. R., & **Clark, M. H.** (under review). Using Bayesian correspondence criteria to compare results from a randomized experiment and a quasi-experiment allowing self-selection. *Evaluation Review*.
2. Kisbu-Sakarya, Y., Cook, T. D., Tang, Y., & **Clark, M. H.** (under review). Comparative regression discontinuity: A stress test of what happens with modest sample sizes. *Evaluation Review*.
3. **Clark, M. H.**, & Hoffman, N. G. \* (under review). An examination of the relationship between propensity score balance and bias reduction in quasi-experiments. *Journal of Experimental Education*.
4. D'Attoma, I., Camillo, F., & **Clark, M. H.** (2017). A comparison of bias reduction methods: Clustering versus propensity score based methods. *Journal of Experimental Education*. doi: 10.1080/00220973.2017.1391161
5. Hallberg, K., Cook, T. D., Steiner, P. M., & **Clark, M. H.** (2016). The role of pretests in reducing selection bias in quasi-experiments: Evidence from three within-study comparisons. *Prevention Science*. doi: 10.1007/s11121-016-0732-6

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\* This author is a graduate student who wrote this paper or gave this presentation under my supervision.

6. Wing, C., & **Clark, M. H.** (2016). What can we learn from a doubly randomized preference trial? An instrumental variables perspective. *Journal of Policy Analysis and Management*, *36*, 418-437. doi: 10.1002/pam.21965
7. Steiner, P. M., Cook, T. D., Li, W., & **Clark, M. H.** (2014). Bias reduction in quasi-experiments with little selection theory but many covariates. *Journal of Research on Educational Effectiveness*. doi: 10.1080/19345747.2014.978058
8. **Clark, M. H.**, Middleton, S. C.,\* Nguyen, D.,\* & Zwick, L. K.\* (2014). Mediating relationships between academic motivation, academic integration and academic performance. *Learning and Individual Differences*, *33*, 30-38. doi: 10.1016/j.lindif.2014.04.007
9. Valdes, A. S., Hoffman, J. R., **Clark, M. H.**, & Stout, J. R. (2014). National Collegiate Athletic Association strength and conditioning coaches' knowledge and practices regarding prevention and recognition of exertional heat stroke. *Journal of Strength and Conditioning Research*. doi: 10.1519/JSC.0000000000000365
10. Fragala, M. S., **Clark, M. H.**, Walsh, S. J., Kleppinger, A., Judge, J. O., Kuchel, G. A., & Kenny, A. M. (2012). Gender differences in anthropometric predictors of physical performance in older adults. *Gender Medicine*, *9*, 445-456. doi: 10.1016/j.genm.2012.10.004
11. Dollinger, S. J., & **Clark, M. H.** (2012). Test-taking strategy as a mediator between race and academic performance. *Learning and Individual Differences*, *22*, 511-517. doi:10.1016/j.lindif.2012.03.010
12. **Clark, M.H.**, & Cundiff, N.L.\* (2011). Assessing the effectiveness of a college freshman seminar using propensity score adjustments. *Research in Higher Education*, *52*, 616-639. doi: 10.1007/s11162-010-9208-x.
13. Falconer, M.K., **Clark, M.H.**, & Parris, D. (2011). Validity in an evaluation of Healthy Families Florida: A program to prevent child abuse and neglect. *Children and Youth Services Review*, *33*, 66-77. doi: 10.1016/j.childyouth.2010.08.014.
14. Nadler, J. T.\* , & **Clark, M. H.** (2011). Stereotype threat: A meta-analysis comparing African Americans to Hispanic Americans. *Journal of Applied Social Psychology*, *41*, 872-890. doi: 10.1111/j.1559-1816.2011.00739.x.
15. Nadler, J. T.\* , & **Clark, M. H.** (2010). Pre-class coming attractions: Interest and program awareness in the classroom. *Journal of Instructional Psychology*, *37*, 332-336.
16. Steiner, P.M., Cook, T.D., Shadish, W.R., & **Clark, M.H.** (2010). The differential role of covariate selection and data analytic methods in controlling for selection bias in observational studies: Results of a within-study comparison. *Psychological Methods*, *15*, 250-267.

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\* This author is a student who wrote this paper or gave this presentation under my supervision.

17. **Clark, M.H.**, & Schroth, C.A. \* (2010). Examining relationships between academic motivation and personality among college students. *Learning and Individual Differences*, 20, 19-24.
18. Young, M.E., **Clark, M.H.**, Goffus, A., & Hoane, M. (2009). Mixed effects modeling of Morris Water Maze data: Advantages and cautionary notes. *Learning and Motivation*, 40, 160-177
19. Shadish, W.R., **Clark, M. H.**, & Steiner, P.M. (2008). Rejoinder. *Journal of the American Statistical Association*, 103, 1353-1356.
20. Shadish, W.R., **Clark, M. H.**, & Steiner, P.M. (2008). Can nonrandomized experiments yield accurate answers? A randomized experiment comparing random to nonrandom assignment. *Journal of the American Statistical Association*, 103, 1334-1344.
21. Floyd, R. G., **Clark, M. H.**, & Shadish, W. R. (2008). The exchangeability of intelligent quotients: Implications for professional psychology. *Professional Psychology: Research and Practice*, 39, 414-423.
22. Levitt, H.M., **Clark, M.H.**, Shulman, J., Begg, N., Butler, M., Gilles, J., Sheffield, A., Smart-Schuhmacher, C., & Waits, M. (2006). How I ended up in a happy relationship: Women's process of successful partnering. *Journal of Humanistic Psychology*, 46, 449-473.
23. Luellen, J.K., Shadish, W.R., & **Clark, M.H.** (2005). Propensity scores: An introduction and experimental test. *Evaluation Review*, 29, 530-558.
24. Shadish, W.R., & **Clark, M.H.** (2002). An introduction to propensity scores. *Metodologia de las Ciencias del Comportamiento Journal*, 4(2), 291-298.
25. Murray, D.M., **Clark, M.H.**, & Wagenaar, A.C. (2000). Intraclass correlations from a community-based alcohol prevention study: Estimates, correlates and applications for pretest-posttest designs. *Journal of Studies on Alcohol*, 61, 881-890.

## **BOOK CHAPTERS**

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1. **Clark, M.H.** (2015). Propensity score adjustment methods. In: W. Pan and H. Bai (Eds.), *Propensity score analysis: Fundamentals, developments, and extensions*. New York, NY: Guilford Press.
2. Shadish, W.R., Luellen, J. K., & **Clark, M.H.** (2006). Propensity scores and quasi-experiments: A testimony to the practical side of Lee Sechrest. In: R.R. Bootzin and P. McKnight, Editors, *Strengthening research methodology: Psychological measurement and evaluation*. Washington DC: American Psychological Association.

3. Shadish, W.R., Phillips, G., & **Clark, M.H.** (2003). Content and context: The impact of Campbell and Stanley. In R.J. Sternberg (Ed.), *The anatomy of impact: What has made the great works of psychology great?* Washington, D.C.: American Psychological Association.

## **TECHNICAL REPORTS**

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1. Hahs-Vaughn, D. L., Swan, B. & **Clark, M. H.** (2017). *Florida XCEL-IT Information Technology Careers for Rural Areas: Comparative Impact Study Findings.* (Rep. No. CFTAACCCT2013.Y4IS). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
2. Swan, B., Hahs-Vaughn, D. L., Fidanzi, A., Serpa, A., DeStefano, C., & **Clark, M. H.** (2017). *Florida XCEL-IT: Information Technology Careers for Rural Areas: Final Evaluation Report.* (Rep. No. CFTAACCCT2013.Y4F). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
3. Spalding, L.A.T., & **Clark, M. H.** (2015). *UCF & Book Trust Tablet Project Evaluation Report.* Orlando, FL: University of Central Florida.
4. Swan, B., Gonzalez, J., McNeil, V., **Clark, M. H.**, DeStefano, C., & Katzenmeyer, C. (2015). *I3: The UCF Community Embraces the Knowledge-Based Economy Year5 Summative Evaluation Report (January 2014-December 2014).* (Rep. No. PEER-NSFICubed2010.1-Y4S). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
5. Swan, B., DeStefano, C., **Clark, M. H.**, Marcus, K., Huang, A., Katzenmeyer, C., Charles, C., Knote, E., & Lavery, M. (2014). *Job Embedded Teacher Preparation Program – Resident Teacher Professional Preparation Program (RTP3) Year 3 Summative Evaluation Report.* (Rep. No. PEER-RTP32012.1-S3). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
6. **Clark, M.H.** (2014). *RTP<sup>3</sup> Program Effects on Teacher Mobility and Attrition.* (Rep. No. RTP32012.1-P9). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
7. Swan, B., **Clark, M. H.**, DeStefano, C., Marcus, K., Huang, A., Zhou, Y. & Katzenmeyer, C. (2014). *Job Embedded Teacher Preparation Program – Resident Teacher Professional Preparation Program (RTP3) June 2014 Evaluation Progress Report.* (Rep. No. RTP32012.1-P8). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
8. Swan, B., DeStefano, C., **Clark, M. H.**, Marcus, K., Huang, A., Zhou, Y. & Katzenmeyer, C. (2014). *Job Embedded Teacher Preparation Program – Resident Teacher Professional Preparation Program (RTP3) Spring 2014 Evaluation Progress Report.* (Rep. No. PEER-RTP32012.1-P7). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).

9. Swan, B., Gonzalez, J., **Clark, M. H.**, DeStefano, C., Coulombe-Quach, X., & Katzenmeyer, C. (2014). *I3: The UCF Community Embraces the Knowledge-Based Economy Year 4 Summative Evaluation Report (January 2013-December 2013)*. (Rep. No. NSFICubed2010.1-Y4S). Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).
10. **Clark, M. H.** & Swan, B. (2014). *Geometry Professional Development Series for Teachers (GPS for Teachers) Formative Evaluation Report for Cohort 2: The Effects of GPS for Teachers on Geometry Knowledge at the Midpoint Assessment (PEER-GPS2014.2-Y3F3)*. Orlando, FL: University of Central Florida, Program Evaluation and Educational Research Group (PEER).

## **OTHER PUBLICATIONS**

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1. **Clark, M.H.** (2015). Propensity Scoring. In J. D. Wright (Ed.), *International Encyclopedia of the Social and Behavioral Sciences, 2<sup>nd</sup> Edition*. Oxford, United Kingdom: Elsevier.
2. **Clark, M.H.**, & Middleton, S.C.\* (2010). Internal Validity. In E. Baker, P.P. Peterson, & B. McGaw (Eds.), *International Encyclopedia of Education 3<sup>rd</sup> Edition*. Oxford, United Kingdom: Elsevier.
3. **Clark, M.H.**, & Shadish, W.R. (2008). Solomon Four-Group Design. In P. J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods*. Thousand Oaks, California: Sage Publications.
4. **Clark, M.H.**, & Shadish, W.R. (2007). Quasi-Experiments. In S. Boslaugh (Ed.), *Encyclopedia of Epidemiology*. Thousand Oaks, California: Sage Publications.
5. **Clark, M.H.**, & Shadish, W.R. (2006). Propensity Scores. In N. J. Salkind (Ed.), *Encyclopedia of Measurement and Statistics*. Thousand Oaks, California: Sage Publications.
6. **Clark, M.H.**, & Shadish, W.R. (2006). Quasi-Experimental Method. In N. J. Salkind (Ed.), *Encyclopedia of Measurement and Statistics*. Thousand Oaks, California: Sage Publications.
7. Shadish, W.R., & **Clark, M.H.** (2003). Quasi-experiment. In M. Lewis-Beck, A. Bryman & T. Futing Liao (Eds.), *Encyclopedia of Social Science Research Methods* (Vol. 3, pp. 898 - 902). Newbury Park, California: Sage Publications.
8. Shadish, W.R., & **Clark, M.H.** (2003). Comparison group. In M. Lewis-Beck, A. Bryman & T. Futing Liao (Eds.), *Encyclopedia of Social Science Research Methods* (Vol. 1, pp. 153 - 155). Newbury Park, California: Sage Publications.

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\* This author is a graduate student who wrote this paper or gave this presentation under my supervision.

9. Shadish, W.R., & **Clark, M.H.** (2003). Matching. In M. Lewis-Beck, A. Bryman & T. Futing Liao (Eds.), *Encyclopedia of Social Science Research Methods* (Vol. 2, pp. 614 - 615). Newbury Park, California: Sage Publications.
10. Shadish, W.R., & **Clark, M.H.** (2003). Solomon Four Group Design. In M. Lewis-Beck, A. Bryman & T. Futing Liao (Eds.), *Encyclopedia of Social Science Research Methods* (Vol. 3, pp. 1047 - 1048). Newbury Park, California: Sage Publications.

### **PRESENTATIONS AND POSTERS AT PROFESSIONAL MEETINGS**

1. Hahs-Vaughn, D., Swan, B., & **Clark, M. H.** (2018, April). *Information technology careers for rural areas: Results of a Trade Adjustment Assistance Community College and Career Training program*. Roundtable session presented at the American Educational Research Association Annual Meeting, New York City, NY.
2. Mendendez, J. P., Johnson, J. D., Azizova, Z. T., **Clark, M. H.**, & Krsmanovic, M. (2018, April). *The impact of first-year seminar courses at an emerging hispanic-serving institution*. Paper presented at the American Educational Research Association Annual Meeting, New York City, NY.
3. Swan, B., Hahs-Vaughn, D., Fidanzi, A., Serpa, A., DeStefano, C., & **Clark, M. H.** (2018, March). *Information Technology Careers for Rural Areas: Summative Findings from the Evaluation of a Florida TAACCCT Project*. Paper presented at the Southeast Evaluation Association (SEA) 2018 Annual Workshop, Tallahassee, FL.
4. **Clark, M. H.**, & Bai, H. (2017, November). *Comparing different weighting estimates and methods to reduce over weighting propensity scores*. Paper presented at the American Evaluation Association Conference, Washington, DC.
5. Bai, H., & **Clark, M. H.** (2017, November). *Selecting correct covariates for propensity score methods to improve the validity of program evaluation*. Paper presented at the American Evaluation Association Conference, Washington, DC.
6. Swan, B., **Clark, M. H.**, Taylor, R., & DeStefano, C. (2017, April). *RTTT teacher preparation program and school- and classroom-level effects on mathematics and science teacher turnover*. Paper presented at the American Educational Research Association Conference, San Antonio, TX.
7. Zhou, M. \*, **Clark, M. H.**, & Bai, H. (2016, November). *Effects of candidate status on the relationship between Ph.D. advisees and advisors*. Poster presented at the Florida Educational Researcher's Association Conference, Lakeland, FL.
8. **Clark, M. H.** (2016, October). *A comparison of propensity score adjustment methods*. Paper presented at the American Evaluation Association Conference, Atlanta, GA.

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9. Bai, H., **Clark, M. H.**, & Xu, Y. (2016, October). *Exploring the psychometric properties of a learning style scale*. Paper presented at the American Evaluation Association Conference, Atlanta, GA.
10. Valdes, A. S., Hoffman, J. R., **Clark, M. H.**, & Stout, J. R. (2016, July). *National Collegiate Athletic Association strength and conditioning coaches' knowledge and experience with exertional sickling*. Poster presented at 2016 National Strength and Conditioning Association National Conference, New Orleans, Louisiana.
11. Lauretto, M., Stern, R., Morgan, K., **Clark, M. H.**, & Stern, J. (2016, July). *Haphazard intentional allocation and rerandomization to improve covariate balance in experiments*. Paper presented at MaxEnt 2016, Ghent, Belgium.
12. Swan, B., **Clark, M. H.**, Taylor, R., & DeStefano, C. (2015, November). *RTTT resident teacher preparation program-, school-, and classroom-level effects on beginning mathematics and science teacher turnover*. Paper presented at the Florida Educational Research Association Conference, Altamonte Springs, FL.
13. **Clark, M. H.** (2015, November). *The power of propensity score matching analyses: Within- vs between- groups*. Paper presented at the American Evaluation Association Conference, Chicago, IL.
14. **Clark, M. H.** (2014, October). *A comparison of propensity score stratification methods*. Paper presented at the American Evaluation Association Conference, Denver, CO.
15. **Clark, M. H.**, & Swan, B. (2014, May). *RTP<sup>3</sup> preliminary results for student achievement by course and by district for cohort 1 (2012-2013)*. Virtual presentation for the Department of Education Race to the Top (RTTT) Grant sponsor.
16. **Clark, M. H.**, & Dorabawila, V. (2013, October). *Practical Issues and Step-by-Step Guidelines for using Propensity Score Matching*. Demonstration presented at the American Evaluation Association Conference, Washington, DC.
17. **Clark, M. H.**, & Dorabawila, V. (2011, November). *Practical Issues and Step-by-Step Guidelines for using Propensity Scores*. Master Teacher Series demonstration presented at the American Evaluation Association Conference, Anaheim, CA.
18. **Clark, M. H.** (2011, November). *A Comparison of Bias Reduction Methods on Educational Outcomes*. Paper presented at the American Evaluation Association Conference, Anaheim, CA.
19. **Clark, M. H.** (2011, April). *Is Propensity Score Balance Essential to Effectively Reduce Bias in Quasi-Experiments?* Paper presented at the American Educational Research Association Conference, New Orleans, LA.



20. **Clark, M. H.** (2009, November). *Testing the Robustness of Propensity Scores that Violate Balance Criteria*. Expert Lecture given at the American Evaluation Association Conference, Orlando, FL.
21. **Clark, M. H.**, & Middleton, S.C. \* (2009, November). *Improving Statistical Conclusion Validity in Mediation Analysis using Bootstrap Procedures*. Paper presented at the American Evaluation Association Conference, Orlando, FL.
22. Middleton, S.C. \*, & **Clark, M. H.** (2009, November). *Assessment of Higher Education Variables that Lead to Academic Success*. Paper presented at the American Evaluation Association Conference, Orlando, FL.
23. Young, M.E., **Clark, M. H.**, Goffus, A., & Hoane, M. (2008, November). *Nonlinear mixed effects modeling of Morris Water Maze learning*. Paper presented at the Comparative Cognition and Learning Fall Conference, Chicago, IL.
24. **Clark, M. H.** (2008, November). *Can Propensity Scores reduce regression to the mean?* Paper presented at the American Evaluation Association Conference, Denver, CO.
25. **Clark, M. H.** (2008, November). *Practical applications for using Propensity Scores*. Demonstration given at the American Evaluation Association Conference, Denver, CO.
26. Nadler, J.T. \*, & **Clark, M. H.** (2008, August). *Psychological Coming Attractions: Attendance, attention, and awareness in the classroom*. Poster presented at the American Psychological Association Convention, Boston, MA.
27. **Clark, M. H.** (2008, July). *Introduction to propensity scores*. Paper presented at the Midwestern Applied Psychology Conference, Carbondale, IL.
28. Nadler, J.T. \*, **Clark, M. H.**, Falat, H. \*, & Briggs, C. \* (2007, November). *Freshmen Interest Groups: Effects of academic success and retention*. Paper presented at the American Evaluation Association Conference, Baltimore, MD.
29. Cundiff, N. \*, **Clark, M. H.**, Falat, H. \*, & Briggs, C. \* (2007, November). *Assessing the success and attrition of college students: A University 101 study*. Paper presented at the American Evaluation Association Conference, Baltimore, MD.
30. Shadish, W.R., **Clark, M.H.**, & Steiner, P.M. (2007, October). *Can Nonrandomized Experiments Yield Accurate Answers? A Randomized Experiment Comparing Random to Nonrandom Assignment*. Society for Multivariate Behavioral Research, Chapel Hill, North Carolina.

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\* This author is a graduate student who wrote this paper or gave this presentation under my supervision.

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31. **Clark, M. H.**, & Edwards, J. K. \* (2007, August). *Examining relationships between academic motivation and personality among college students*. Poster presented at the American Psychological Association Convention, San Francisco, CA.
32. Nadler, J.T. \*, & **Clark, M. H.** (2007, August). *Stereotype threat: A meta-analysis comparing African Americans to Hispanic Americans*. Poster presented at the American Psychological Association Convention, San Francisco, CA.
33. Shadish, W.R., & **Clark, M.H.** (2006, December). *A Randomized Experiment Comparing Random to Nonrandom Assignment*. Paper presented at the Society for Research on Educational Effectiveness, Chicago, IL.
34. **Clark, M. H.** (2006, November). *Reducing bias in quasi-experiments using Propensity Score adjustments*. Paper presented at the American Evaluation Association Conference, Portland, OR.
35. Braun, S., Cashel, M. L., & **Clark, M. H.** (October, 2006). *Thin-ideal internalization and eating disorder symptoms: Attachment and coping strategies as moderators* Paper presented at the Kansas Conference on Clinical Child and Adolescent Psychology, Lawrence, KS.
36. Shadish, W.R. & **Clark, M.H.** (2006, July). *A Randomized Experiment Comparing Random to Nonrandom Assignment*. Paper presented at the Symposium on Causality, Jena, Germany.
37. **Clark, M. H.** (2005, October). *Using Propensity Scores to improve matching in quasi-experiments (Part 2)*. Paper presented at the American Evaluation Association Conference, Toronto, Ontario, Canada.
38. **Clark, M. H.** (2005, October). *Practical applications for using Propensity Scores*. Demonstration given at the American Evaluation Association Conference, Toronto, Ontario, Canada.
39. Luellen, J. K., Shadish, W. R., & **Clark, M. H.** (2005, October). *A comparison of two methods of computing estimated Propensity Scores*. Paper presented at the American Evaluation Association Conference, Toronto, Ontario, Canada.
40. **Clark, M. H.** (2005, August). *Reducing bias in quasi-experiments by matching on Propensity Scores*. Poster presented at the American Psychological Association Convention, Washington, DC.
41. **Clark, M.H.** (2004, November). *Using Propensity Scores to improve matching in quasi-experiments*. Paper presented at the American Evaluation Association Conference, Atlanta, GA.
42. Shadish, W.R., Floyd, R.G., & **Clark, M.H.** (2003, September). *The exchangeability of IQ Scores*. Paper presented at the meeting of the Society for Multivariate Experimental Psychology, Keystone, Colorado.

43. Shadish, W.R., Luellen, J. K., & **Clark, M. H.** (2003, April). *Propensity scores and quasi-experiments*. Paper presented at the Festschrift Conference for Lee B. Sechrest, Tucson, AZ.
44. **Clark, M. H.**, Floyd, R. G., & Shadish, W. R. (2002, November). *Assessing consistency of Intelligence Quotients across measurement tests*. Paper presented at the American Evaluation Association Conference, Washington, DC.
45. Shadish, W.R., & **Clark, M.H.** (2002, October). *A randomized experiment comparing randomized to nonrandomized experiments*. Paper presented at the meeting of the Society for Multivariate Experimental Psychology, Charlottesville, Virginia.
46. **Clark, M. H.**, Tang, B., & Shadish, W. R. (2002, August). *Using the Rank Order Method to correlate simulated, mixed-distribution variables*. Poster presented at the American Psychological Association Convention, Chicago, IL.
47. **Clark, M. H.**, Shadish, W. R., & Tang, B. (2001, November). *Simulating data to evaluate biases in non-randomized experiments*. Paper presented at the American Evaluation Association Conference, St. Louis, MO.
48. Shadish, W.R., Phillips, G., & **Clark, M.H.** (2001, November). *What makes great works great? The case of Campbell and Stanley*. Paper presented at the American Evaluation Association Conference, St. Louis, MO.
49. **Clark, M. H.**, & Shadish, W. R. (2001, August). *Reducing quasi-experimental bias using Propensity Scores*. Poster presented at the American Psychological Association Convention, San Francisco, CA.
50. **Clark, M. H.**, & Murray, D. M. (2000, August). *Intraclass correlations for a community-based alcohol prevention study*. Poster presented at the American Psychological Association Convention, Washington, DC.
51. **Clark, M. H.**, & Shadish, W. R. (1999, August). *A laboratory experiment comparing assignment methods and using Propensity Scores*. Paper presented at the American Psychological Association Convention, Boston, MA.
52. **Clark, M. H.**, & Shadish, W. R. (1998, November). *A laboratory experiment comparing assignment methods*. Paper presented at the American Evaluation Association Conference, Chicago, IL.
53. **Clark, M. H.**, & Douglass, W. K. (1995, April). *Social preferences among sibling and non-sibling rats*. Paper presented at the Carolina's Psychology Conference, Raleigh, NC.

### **PROFESSIONAL WORKSHOPS, SEMINARS, and WEBINARS**

1. Bai, H., & **Clark, M. H.** (2017, November). *Practical use of propensity score methods to enhance evaluation practices*. American Evaluation Association, Washington, DC.

2. **Clark, M. H.**, & Bai, H. (2015, November). *Propensity score matching: Theories and applications*. American Evaluation Association, Chicago, IL.
3. **Clark, M.H.**, (2015, June). *An introduction to propensity scores*. Webinar presented to James Bell and Associates.
4. **Clark, M.H.**, (2014, November). *An introduction to propensity scores*. Webinar presented to the Southeastern Evaluation Association.
5. **Clark, M. H.**, & Bai, H. (2014, October). *Propensity score matching: Theories and Applications*. American Evaluation Association, Denver, CO.
6. **Clark, M. H.**, & Bai, H. (2013, October). *Propensity score matching: Theories and Applications*. American Evaluation Association, Washington, DC.
7. **Clark, M. H.** (2012, December). *Analyzing nested designs*. College of Education, University of Central Florida, Orlando, FL.
8. **Clark, M. H.** (2012, November). *Selecting appropriate statistics for data and research questions*. College of Education, University of Central Florida, Orlando, FL.
9. Bai, H., & **Clark, M. H.** (2012, October). *Propensity score matching: Theories and Applications*. American Evaluation Association, Minneapolis, MN.
10. Falconer, M. K., & **Clark, M. H.** (2011, August). *Validity in quasi-experimental designs to determine home visiting program effectiveness*. Child Welfare Research and Evaluation Conference, Washington, DC.
11. Luellen, J. K., & **Clark, M. H.** (2010, November). *Practical propensity score analysis*. American Evaluation Association, San Antonio, TX.
12. **Clark, M. H.**, & Luellen, J. K. (2007, November). *Practical applications for using propensity scores*. American Evaluation Association, Baltimore, MD.
13. **Clark, M. H.** (2006, July). *Quantitative methods and analyses*. Southern Illinois University, Carbondale, IL.

## **CURRENT PROJECTS**

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**Clark, M.H.** (in preparation). Statistical Adjustments for Propensity Score Stratification.

**Clark, M.H.** (in preparation). The Power of Propensity Score Matching: Within- vs Between-Groups Analyses.

Bai, H., & **Clark, M.H.** (in preparation). Propensity Scores Methods.

## GRANT ACTIVITY

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### Funded

- 2015 Statistical Consultant and Co-Principle Investigator, *M-Path: Advanced Manufacturing Project (Valencia State College Third Party TAACCCT Round 4 Evaluation Project)*. U.S. Department of Labor: Trade Adjustment Assistance Community College and Career Training. Amount: \$100,000; PI: Bonnie Swan; Other co-PI: and Debbie Hahs-Vaughn. Months: .2. Support dates: October 1, 2014 – September 30, 2018.
- 2013 Statistical Consultant and Co-Principle Investigator, *College of Central Florida Third Party TAACCCT Evaluation Project*. U.S. Department of Labor: Trade Adjustment Assistance Community College and Career Training. Amount: \$676,438. PI: Bonnie Swan; Other co-PIs: Debbie Hahs-Vaughn, JoAnn Smith, Janan Smither, and Steven Sivo. Support dates: January 1, 2014 – December 31, 2017.
- 2010 Statistical Consultant, *Are Frontal Lobe Size and Executive Dysfunction Contributors to ADHD and Dyslexia?* National Institutes of Health: AREA/R15 RFA. Amount: \$419,408. PI: Michelle Kibby. Effort: .06 months. Support dates: October 1, 2010 – September 30, 2013

### Pending

- 2017 Co-Principle Investigator, *Remembering Literacy: Developing a Transformation System for High Need Adolescent Readers (Third Party Evaluation Project)*. U.S. Department of Education: Early Innovation and Research Program. Amount: \$320,000; PI: Bonnie Swan. Months: .2. Support dates: October 1, 2018 – September 30, 2022.

### Unfunded

- 2016 Co-Principle Investigator, *Improving Pedagogical Content Knowledge of Undergraduate Teachers in Algebraic Thinking*. National Science Foundation. Requested Amount: \$292,719. PI: Mary Little; other co-PIs: Michele Gill and Farshid Safi. Credit: 25%. Effort: 11.7%, Months: .75. Support dates: June 1, 2017 – May 30, 2020
- 2016 Co-Principle Investigator, *Use of Optical Topography (fNIRS) System to Study Mathematical Anxiety and Fluency*. National Science Foundation. Requested Amount: \$499,999. PI: Enrique Ortiz; other co-PI: Lauren Reinerman. Credit: 25%. Effort: 11.7%, Months: 1.4. Support dates: January 1, 2017 – December 31, 2020
- 2015 Co-Principle Investigator, *Use of Optical Topography (fNIRS) System to Study Mathematical Fluency*. National Science Foundation. Requested Amount: \$499,989. PI: Enrique Ortiz; other co-PI: Lauren Reinerman. Credit: 25%. Support dates: September 1, 2015 – June 30, 2018
- 2014 Statistical and Research Design Consultant, *UCF IUSE: Measuring the Impact of Multimedia Videos on Student Learning and Engagement in College Algebra*. National Science Foundation. Requested Amount: \$248,522. PI: Cynthia Young; co-PI: Michele Gill. Effort: .4 months. Support dates: July 1, 2015 – June 30, 2017

- 2014 Co-Principle Investigator, *BioMarkers of Adaptations to Strength Training Exercise in Seniors*. National Institutes of Health: National Institute of Aging. Requested Amount: \$1,681,253. PI: Maren S. Fragala; other co-PIs: Jay R. Hoffman, Jeffrey R. Stout, Leonardo P. Oliveira. Credit: 5%. Support dates: July 1, 2014 – June 30, 2019
- 2014 Co-Principle Investigator, *Propensity Score Estimation with Complex Sample Data*. U.S. Department of Education Institute for Education Sciences. Requested Amount: \$303,875. PI: Debbie Hahs-Vaughn; other co-PI: Haiyan Bai. Credit: 25%. Support dates: July 1, 2014 – June 30, 2017
- 2013 Co-Principle Investigator, *Propensity Score Estimation with Complex Sample Data*. National Science Foundation. Requested Amount: \$300,625. PI: Debbie Hahs-Vaughn; other co-PI: Haiyan Bai. Credit: 30%. Support dates: January 1, 2014 – December 31, 2016
- 2013 Statistical Consultant, *Cherish the Family*. Administration for Children and Families, U.S. Department of Health and Human Services. Requested Amount: \$1,200,000. PI: Family Central, Inc. Effort: .4 months. Support dates: October 1, 2013 – September 30, 2016
- 2011 Co-Principle Investigator, *Reading Assessment Performance of Lower Performing Students Engaged in Five Supplemental Reading Programs in the State of Florida*. Requested Amount: \$1,960,066. PI: Sandra Robinson; other co-PIs: Susan Wegmann, Enrique Puig, Michael Grego, Joyce Nutta, Glenn Lambie, Eleazar Vasquez, and Tom Owens.
- 2005 Principle Investigator, *Using a Doubly-Randomized Preference Trial and Propensity Scores to Assess and Reduce Bias in Quasi-Experiments*. National Science Foundation: Methodology, Measurement and Statistics. Requested Amount: \$42,871. Credit: 100%. Support dates: August 1, 2005 – July 31, 2006
- 2004 Principle Investigator, *Using a Doubly-Randomized Preference Trial and Propensity Scores to Assess and Reduce Bias in Quasi-Experiments*. Southern Illinois University Carbondale: Faculty Seed Grant. Requested Amount: \$23,689. Credit: 100%. Support dates: August 1, 2004 – July 31, 2005

## **HONORS AND AWARDS**

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### External Awards

2002 Society for Multivariate Experimental Psychology Dissertation Award

### Internal Awards

2002 Roland L. Frye Achievement Award in Experimental Psychology; University of Memphis, Memphis, TN

- 2001 1<sup>st</sup> Place for Poster Presentation in Social and Behavioral Sciences Division 13<sup>th</sup> Annual Research Forum; University of Memphis, Memphis, TN
- 2000 2<sup>nd</sup> Place for Oral Presentation in Social and Behavioral Sciences Division 12<sup>th</sup> Annual Research Forum; University of Memphis, Memphis, TN
- 2000 2<sup>nd</sup> Place for Poster Presentation in the First Annual Psi Chi Psychology Conference; University of Memphis, Memphis, TN
- 1999 3<sup>rd</sup> Place for Oral Presentation in Social and Behavioral Sciences Division 11<sup>th</sup> Annual Research Forum; University of Memphis, Memphis, TN
- 1995 Worthington Award: Outstanding Achievement by a Senior Psychology Student; Armstrong State University, Savannah, GA

## **TEACHING INTERESTS**

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Univariate Statistics: Regressions and ANOVAs  
 Multivariate Statistics  
 Categorical Data Analysis  
 Nonparametric Statistics  
 Research Design: Experimental and Quasi-experimental  
 Research Methods: Quantitative and Qualitative  
 Psychometrics  
 Meta-Analysis

## **TEACHING EXPERIENCE**

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### Graduate Courses

- 2010 – present **Fundamentals of Graduate Research in Education** (EDF 6481, 17 semesters)  
 This covers: a variety of experimental and correlational research methods, descriptive statistics, research designs, research and measurement validity and reliability; meta-analysis, single subject designs; qualitative methods and data analysis; and ethics in research.
- 2010 – present **Statistics for Educational Data** (EDF 6401, 5 semesters)  
 This covers: descriptive statistics, *z*-tests, *t*-tests, correlations and Chi Squares.
- 2016 **Advanced Research Methods** (EDF 7476, 1 semester)  
 This covers: advanced research designs; threats to validity; and statistical adjustments used in non-randomized designs, such as traditional covariate adjustments, regression discontinuity, instrumental variable estimation, and propensity score methods.

- 2012 – 2015      **Data-Driven Decision Making for Instruction** (EDF 6472, 8 semesters)  
This covers: an introduction to research methods with a focus on action/applied research; descriptive statistics, t-tests, correlations and regressions; research and measurement validity and reliability; case studies using single subject designs and qualitative inquiry; and test bias.
- 2007 – 2010      **Experimental Design and Analysis** (PSY 522, 4 semesters)  
2011, 2017      **Quantitative Foundations of Educational Research** (EDF 7403, 2 semesters)  
These cover: correlations, linear and multiple regressions, ANOVA, factorial ANOVAs, ANCOVA, and hierarchical mixed-effects models.
- 2007 – 2010      **Multivariate Statistics** (PSY 524, 3 semesters)  
This covers: multiple regression, logistic regression, MANOVA, MANCOVA, discriminant function analysis, canonical correlation, and exploratory factor analysis.
- 2005 – 2010      **Program Evaluation** (PSY 564, 3 semesters)  
This covers: quantitative and qualitative methods used program evaluation and theories of evaluation (i.e. management orientation, experimental, outcome, monitoring, and needs assessment).
- 2003 – 2010      **Research Methods in Psychology** (PSY 523, 7 semesters)  
This covers: experimental and quasi-experimental designs, research validity, generalizability, meta-analysis, single subject designs, and ethics in research.

#### Undergraduate Courses

- 2004 – 2010      **Psychological Testing and Measurement** (PSY 421, 4 semesters)  
This covers: history of testing; testing norms; measurement reliability and validity; educational, ability, personality/clinical, vocational and neuropsychological tests.
- 2003 – 2006      **Field Research Methods** (PSY 311, 8 semesters)  
This covers: quasi-experimental and correlational designs, research and measurement validity and reliability, qualitative methods, factorial ANOVAs, Chi Squares, and ethics in research.
- 2006              **Advanced Applied Research Methods** (PSY 465, 1 semester)  
This covers: survey methods, missing data analysis, qualitative methods and analysis.
- 2002 – 2003      **Research Methods in Psychology** (PSYC 3002, 2 semesters)  
This covers: experimental, quasi-experimental and correlational designs; research and measurement validity and reliability; single subject designs and ethics in research.



- 2000 – 2002      **Psychological Statistics** (PSYC 3001, 2 semesters)  
 This covers: descriptive statistics, t-tests, correlations, regressions and Chi Squares, ANOVAs and factorial ANOVAs.

## **STUDENT THESIS AND DISSERTATION COMMITTEE SERVICE**

### Undergraduate Theses

- |                   |            |                                |
|-------------------|------------|--------------------------------|
| 1. Sophie Howard  | April 2015 | Educational and Human Sciences |
| 2. Nicole Gerardi | March 2013 | Nursing                        |
| 3. David Ackerman | April 2011 | Legal Studies                  |

### Master's Theses

- |                       |                |                                |
|-----------------------|----------------|--------------------------------|
| 1. Matthew Hallett    | October 2011   | Educational and Human Sciences |
| 2. Tatyana Shchupak   | April 2011     | Psychology                     |
| 3. Theresa Castilla   | March 2011     | Psychology                     |
| 4. Joseph Geeseman    | April 2010     | Psychology                     |
| 5. Jessica Roberts    | October 2009   | Psychology                     |
| 6. Cherisse Gill      | September 2009 | Psychology                     |
| 7. Nicholas Hoffman** | August 2009    | Psychology                     |
| 8. Elizabeth Howarth  | June 2008      | Psychology                     |
| 9. Steven Melka       | June 2008      | Psychology                     |
| 10. Steven Lancaster  | April 2008     | Psychology                     |
| 11. Donna LaBarge     | July 2007      | Psychology                     |
| 12. Vinetha Belur**   | October 2006   | Psychology                     |
| 13. Robert Beck       | June 2006      | Psychology                     |
| 14. Stacy Braun       | March 2006     | Psychology                     |
| 15. Jennifer Mrnak    | September 2005 | Psychology                     |

### Doctoral Dissertations

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|-----------------------|------------------------|-----------------------------------|
| 1. Ashley Pierce      | proposed December 2017 | Educational and Human Sciences    |
| 2. Morgan McAfee      | April 2018             | Educational and Human Sciences    |
| 3. Nicole Carrasquel  | June 2017              | Modern Languages & Literatures    |
| 4. Shainna Ali        | March 2016             | Child, Family and Community       |
| 5. Elizabeth Giltner  | March 2016             | Teaching, Learning and Leadership |
| 6. Aimee Schoonmaker  | October 2015           | Teaching, Learning and Leadership |
| 7. Donita Grissom     | July 2014              | Teaching, Learning and Leadership |
| 8. Eric Olson         | June 2014              | Hospitality Management            |
| 9. Laurel Robinson    | March 2014             | Teaching, Learning and Leadership |
| 10. Lee-Anne Spalding | November 2012          | Teaching, Learning and Leadership |
| 11. Ruth E. Haniff    | August 2012            | Child, Family and Community       |
| 12. Jaehwan Byun      | May 2012               | Curriculum and Instruction        |
| 13. Joel Nadler       | June 2010              | Psychology                        |
| 14. Taisha Caldwell   | April 2010             | Psychology                        |

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\*\* I served as a co-chair on these students' theses.

15.	Thomas Parker	April 2010	Business Administration
16.	Abby Johnson	July 2009	Psychology
17.	Jennifer Mrnak	June 2009	Psychology
18.	Robert Beck	May 2009	Psychology
19.	Adu Boateng	October 2008	Psychology
20.	Stacy Braun	August 2008	Psychology
21.	Frances Shen	June 2008	Psychology
22.	Sherrilyn Robertson	June 2008	Psychology
23.	YanJun Zhao	June 2008	Mass Communication
24.	Jennifer Schember	June 2007	Psychology
25.	Heather Brostrand	June 2006	Rehabilitation
26.	Jamie Landry	May 2006	Psychology
27.	Shauna Summers	November 2005	Psychology
28.	Julie Pettapiece	June 2005	Psychology
29.	Kenji Yamazaki	January 2005	Psychology

## **UNIVERSITY SERVICE**

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### College Committees

2016 – 2018	Sabbatical Committee
2013 – 2015	Undergraduate Admissions and Retention Committee

### Department Committees

2013 – 2016	Promotion Committee for Instructors and Lecturers for Educational and Human Sciences
2012 – 2013	Faculty Library Representative for Educational and Human Sciences
2008 – 2009	Faculty Advisor for Association of Black Psychologists
2007 – 2009	Faculty Advisor for Psi Chi and the Psychology Student Association
2007 – 2008	Graduate Student Admissions Committee for Psychology
2003 – 2009	Undergraduate Committee for Psychology
1997 – 2002	Graduate Student Coordinating Committee in Psychology

## **STATISTICAL CONSULTING**

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### College Consulting

2010 – present	Computer and Statistical Technology Laboratory in Education (CASTLE), College of Education, University of Central Florida, Orlando, FL. I work five hours a week as an Instructor and Coordinator for CASTLE, which is a computer lab that provides research and statistical support for faculty and students within the College of Education. I am responsible for identifying, introducing, and demonstrating the application of analytical software and for providing instructional feedback regarding the accuracy of conclusions drawn from the output.
2014 – 2015	Program Evaluation and Educational Research (PEER) Group, College of Education, University of Central Florida, Orlando, FL.

I worked between 10 and 15 hours as a Data Analyst for PEER under Dr. Bonnie Swan. I was responsible for data cleaning, management, analysis, interpretation, and reports for a variety of education program evaluations. Analyses for many of the evaluation outcomes required advanced statistics, such as multi-way frequency analysis, logistic regression and hierarchical modeling.

### Independent Consulting

- 2015 James Bell and Associates, Arlington, VA  
I gave a presentation about propensity scores and answered any questions that their evaluators had about propensity score methods, as it related to evaluations of child welfare programs.
- 2008 Mary Kay Falconer, Ounce of Prevention, Tallahassee, FL  
I made recommendations for applying propensity score adjustments to a quasi-experimental evaluation of a child welfare program.
- 2003 Sharon Manning, University of Memphis, Memphis, TN  
I instructed Dr. Manning on how to run analyses, such as ANOVAs for her dissertation.
- 2002-2003 Teri Mason, Christian Brothers University, Memphis, TN  
I made recommendations for statistical modeling, analyses and interpretation of a manuscript on the relationship between attractiveness and perceived character attributes.

### **PROFESSIONAL AFFILIATIONS**

- 2003 – present American Evaluation Association
- 2009 – present Psi Chi: International Psychological Honor Society
- 2015 – present Florida Educational Research Association
- 2011 – 2012 American Educational Research Association  
2017 – present
- 2004 – 2009 Association for Psychological Science
- 1997 – 2006 American Psychological Association, Division 5
- 1995 – 1997 Southeastern Psychological Association  
2004 - 2006
- 2001 – 2003 Western Tennessee Chapter of the American Statistical Association

1995 – 1997	Phi Alpha Theta (International Historical Honor Society)
1995 – 1996	Southeastern Association for Behavior Analysts

### **EDITORIAL BOARD REVIEWER**

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2011 - 2018	<i>Journal of Experimental Education</i>
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### **AD HOC REVIEWER FOR JOURNALS, BOOKS AND GRANTS**

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2004 - 2016	<i>American Journal of Evaluation</i>
2010 - 2016	<i>Learning and Individual Differences</i>
2010 - 2017	<i>Journal of Experimental Education</i>
2015 – 2016	<i>Journal of Information, Communication, and Society</i>
2011 - 2016	<i>Evaluation Review</i>
2016	<i>Journal of Public Opinion Research</i>
2010 - 2015	<i>Multivariate Behavioral Research</i>
2014 - 2015	<i>Methodology</i>
2015	<i>Journal of Engineering Education</i>
2011	Sage Publications (reviewed a textbook on propensity scores)
2007	National Science Foundation (Early Career Award)
2007	<i>Developmental Psychology</i>
2005	<i>Statistics in Medicine</i>

### **OTHER PROFESSIONAL SERVICE**

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2015 – 2017	Program co-chair for the Quantitative Methods Topical Interest Group in the American Evaluation Association
2005 – 2009 2013 – 2017	Proposal reviewer for the American Evaluation Association Convention

- 2004 – 2009 Judge for the Illinois Junior Academy of Science Regional Science Fair,  
Carbondale, IL
- 1995 – 1996 Crisis-line Counselor for the Rape Crisis Center, Savannah, GA

*Updated: March 2018*