

Michael D. Toland

Executive Director, The Herb Innovation Center
Professor, Department of Educational Studies
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EDUCATION

- PhD, Educational Psychology: Psychological Studies in Education with a Specialization in Quantitative, Qualitative, & Psychometric Methods** August, 2008
University of Nebraska-Lincoln
Dissertation: *Determining the Accuracy of Item Parameter Standard Error of Estimates in BILOG-MG 3*, Chair: Professor Ralph J. De Ayala
- MA, Educational Psychology: Quantitative and Qualitative Methods in Education** August, 2002
University of Nebraska-Lincoln
Thesis: *Validation of a Measure of Teaching Effectiveness: Students' Evaluations of Teaching Effectiveness Rating Scale*, Chair: Professor Ralph J. De Ayala
- BS, Mathematics (Statistics Emphasis) and Psychology** May, 1999
University of Wisconsin-Eau Claire

PROFESSIONAL EXPERIENCE

- Executive Director** July, 2020-present
The Herb Innovation Center
The University of Toledo
- Professor of Educational Research and Measurement with tenure** July, 2020-present
Department of Educational Studies
The University of Toledo
- Professor of Educational Psychology with tenure** July, 2019-June, 2020
Department of Educational, School, & Counseling Psychology
University of Kentucky
- Associate Professor of Educational Psychology with tenure** July, 2014-June, 2019
Department of Educational, School, & Counseling Psychology
University of Kentucky
- Director of Graduate Studies** August, 2017-June, 2020
Department of Educational, School, & Counseling Psychology
University of Kentucky

Provost Faculty Fellow Student and Academic Life <i>University of Kentucky</i>	August, 2018-June, 2020
Assessment Consultant Student and Academic Life <i>University of Kentucky</i>	August, 2017-August, 2018
Director of Applied Psychometric Strategies (APS) Lab Department of Educational, School, & Counseling Psychology <i>University of Kentucky</i>	August, 2015-June, 2020
Assistant Professor of Educational Psychology Department of Educational, School, & Counseling Psychology <i>University of Kentucky</i>	August, 2008-June, 2014
Research, Measurement, & Statistical Consultant Kentucky Partnership for Early Childhood Services, Human Development Institute <i>University of Kentucky</i>	August, 2012-June, 2020
Statistical & Measurement Consultant Nebraska Center for Research on Children, Youth, Families, & Schools` <i>University of Nebraska-Lincoln</i>	August, 2006-August, 2008
Project Coordinator Buros Institute for Assessment Consultation and Outreach <i>University of Nebraska-Lincoln</i>	July, 2005-June, 2006
Director Nebraska Evaluation & Research (NEAR) Center <i>University of Nebraska-Lincoln</i>	August, 2002-May, 2004 July, 2006-December 2007
Statistical Consultant NEAR Center <i>University of Nebraska-Lincoln</i>	August, 2000-August, 2004 May, 2005 – August, 2005
Research Technician Department of Academic Affairs <i>University of Wisconsin-Eau Claire</i>	January, 1998 – May, 1999

AWARDS AND HONORS

Alumni Great Teacher Award (Student Nominated), University of Kentucky (2019, \$3,000)
 Independent Applying the Quality Matters Rubric, University of Kentucky (2017)
 Visiting Professor, Department of Social Sciences, University of Cagliari, Italy (2015)
 Teacher Who Made a Difference Award (Student Nominated), University of Kentucky (2014, 2015, 2019)
 eLearning Innovation + Design Lab Faculty Development Award, University of Kentucky (2014-2015, \$4,000)

PUBLICATIONS

* Denotes that co-author was a graduate student at the time of collaboration.
Text in [] represents primary technique applied within a manuscript.

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Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1v9jzpU56tcAH/bibliography/49751610/public/?sort=date&direction=ascending>

PEER REVIEWED JOURNAL ARTICLES

53. *Garcia, M. C., Taylor-Haas, J. A., Rauh, M. J., **Toland, M. D.**, & Bazett-Jones, D. M. (Accepted). Sport specialization and quality of life among middle- and high-school long-distance runners of different injury status. *Journal of Sports Sciences*. <https://doi.org/10.1080/02640414.2021.1954350>
52. Dueber, D. M., **Toland, M. D.**, Lingat, J. E. M., Love, A. M. A., *Qiu, C., *Wu, R., Brown, A. V. (Accepted). To reverse item orientation or not to reverse item orientation, that is the question. *Assessment*. <https://doi.org/10.1177/10731911211017635>
51. Peugh, J. L., Beal, S., McGrady, M. **Toland, M. D.**, & Mara, C. (In press). Analyzing discontinuities in longitudinal count data: A multilevel linear mixed model. *Psychological Methods*. <https://doi.org/10.1037/met0000347> [MLM]
52. **Toland, M. D.**, Grisham, J., Waddell, M. L., Crawford, R., & Dueber, D. M. (2021). Scale evaluation and eligibility determination of a field-test version of the Assessment, Evaluation, and Programming System 3rd Edition. *Topics in Early Childhood Special Education*. <https://doi.org/10.1177/0271121420981712> [Rasch RSM]
49. Garcia, M. C., Taylor-Haas, J. A., Rauh, M. J., **Toland, M. D.**, & Bazett-Jones, D. M. (2021). Sport specialization in middle- and high-school long-distance runners. *Journal of Athletic Training*. <https://doi.org/10.4085/462-20>
48. Grisham-Brown, J., Crawford, R., Waddell, M., & **Toland, M. D.** (2021). Psychometric properties of the Assessment, Evaluation, and Programming System for infants and children, 3rd edition (AEPS-3). *Journal of Early Intervention*, 43(1), 24-37. <https://doi.org/10.1177/1053815120967359> [Correlational]
47. **Toland, M. D.**, Li, R. C., Kodet, J., & Reese, R. J. (2021). Validity of the Outcome Rating Scale: An item response theory analysis. *Measurement and Evaluation in Counseling and Development*, 54(2), 90-105. <https://doi.org/10.1080/07481756.2020.1745647> [IRT]
46. Cornelius, C., Fedewa, A., & **Toland, M. D.** (2020). A classroom-based physical activity intervention for adolescents: Is there an effect on self-efficacy, physical activity, and on-task behavior? *Health Psychology Report*, 8(4), 408-427. <https://doi.org/10.5114/hpr.2020.99002> [Regression]
45. Love, A. M., Usher, E. L., **Toland, M. D.**, Railey, K., Campbell, J., & Spriggs, A. (2020). Measuring police officer's self-efficacy for working with individuals with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-020-04613-1> [Rasch]

44. Peterson, C. M., **Toland, M. D.**, Matthews, A., Mathews, S., *Thompson, F., & Conard, L. A. (2020). Exploring the Eating Disorder Examination Questionnaire in treatment seeking transgender youth. *Psychology of Sexual Orientation and Gender Diversity*. <https://doi.org/10.1037/sgd0000386> [EFA]
43. *Rosenkrantz, D. E., Rostosky, S. S., **Toland, M. D.**, & *Dueber, D. (2020). Cognitive-affective and religious values associated with parental acceptance of an LGBT child. *Psychology of Sexual Orientation and Gender Diversity*, 7(1), 55–65. <https://doi.org/10.1037/sgd0000355> [Tobit]
42. **Toland, M. D.**, *Dueber, D. M., & Bowen, P. (2020). Application of item response theory analysis to the work contact scales. *Journal of Construction Engineering and Management*, 146(7), 04020062. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001845](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001845) [MIRT]
41. Guerin, R. J., & **Toland, M. D.** (2020). An application of a modified theory of planned behavior model to investigate adolescents' job safety knowledge, attitude and intention to enact workplace safety and health skills. *Journal of Safety Research*, 72, 189-198. <https://doi.org/10.1016/j.jsr.2019.12.002> [SEM-IRT]
40. Barbieri, B., Sulis, I., Porcu, M., & **Toland, M. D.** (2019). Italian teachers' well-being within the high school context: Evidence from a large scale survey. *Frontiers in Organizational Psychology*, 10, 1-13. <https://doi.org/10.3389/fpsyg.2019.01926> [MLM]
39. Guerin, R. J., **Toland, M. D.**, Okun, A. H., Roja-Guyler, L., Baker, D. S., & Bernard, A. L. (2019). Using a modified theory of planned behavior to examine teachers' intention to implement a work safety and health curriculum. *Journal of School Health*, 89(7), 549-559. <https://doi.org/10.1111/josh.12781> [CFA]
38. *Love, A. M. A., **Toland, M. D.**, Usher, E., L., Campbell, J. M., & Spriggs, A. D. (2019). Can I teach students with autism spectrum disorder?: Investigating teacher self-efficacy within an emerging population of students. *Research in Developmental Disabilities*, 89, 41-50. <https://doi.org/10.1016/j.ridd.2019.02.005> [EFA]
37. *Priesmeyer, J., Fedewa, A. L., & **Toland, M. D.** (2019). Long-term trends of participation in physical activity during adolescence with educational ambition and attainment. *Journal of School Health*, 89(1), 20-30. <https://doi.org/10.1111/josh.12709> [Generalized Linear Model]
36. *Li, Z., *Gooden, C., & **Toland, M. D.** (2018). Reliability and validity evidence for the Hawaii Early Learning Profile Birth - 3 Years. *Journal of Early Intervention*, 41(1), 62-83. <https://doi.org/10.1177/1053815118810235> [Bivariate]
35. Ruble, L., McGrew, J. H., **Toland, M. D.**, Darymple, N., Adams, M., & Snell-Rood, C. (2018). Randomized control trial of COMPASS for improving attainment of transition IEP goals of students with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 48(10), 3586-3595. <https://doi.org/10.1007/s10803-018-3623-9> [Univariate]
34. Guerin, R. J., **Toland, M. D.**, Okun, A. H., Rojas-Guyler, L., & Bernard, A. L. (2018). Using a Modified Theory of Planned Behavior to examine adolescents' workplace safety and health knowledge, perceptions, and behavioral intention: A structural equation modeling approach. *Journal of Youth and Adolescence*, 47(8), 1595-1610. <https://doi.org/10.1007/s10964-018-0847-0> [SEM]
33. *Dueber, D., *Love, A. M. A., **Toland, M. D.**, & Turner, T. A. (2018). Comparison of single-stimulus format and forced-choice format instruments using Thurstonian item response theory. *Educational and Psychological Measurement*, 79(1), 108-128. <https://doi.org/10.1177/0013164417752782> [Thurstonian IRT]
32. Mark, K. P., **Toland, M. D.**, *Rosenkrantz, D., *Brown, H., & *Hong, S., (2018). Validation of the Sexual Desire Inventory for lesbian, gay, bisexual, and queer adults. *Psychology of Sexual Orientation and Gender Diversity*, 5(1), 122-128. <https://doi.org/10.1037/sgd0000260> [EFA]

31. Kuravackel, G. M., Ruble, L. A., Reese, R. J., Ables, A. P., *Rodgers, A. D., & **Toland, M. D.** (2018). COMPASS for Hope: Evaluating the effectiveness of a parent training and support program for children with ASD. *Journal of Autism and Developmental Disorders*, 48(2), 404-416. <https://doi.org/10.1007/s10803-017-3333-8> [Univariate]
30. Yang, H., Wong, W. H., Bradley, K. D., & **Toland, M. D.** (2017). Partial and semi-partial correlations for categorical variables in educational research: Addressing two common misconceptions. *General Linear Model Journal*, 43(1), 1-15. [Correlational]
29. **Toland, M. D.**, Sulis, I., Giambona, F., Porcu, M., & Campbell, J. M. (2017). Introduction to bifactor polytomous item response theory analysis. *Journal of School Psychology*, 60, 41-63. <https://doi.org/10.1016/j.jsp.2016.11.001> [Bifactor IRT]
28. Sulis, I., & **Toland, M. D.** (2017). Introduction to multilevel item response theory analysis: Descriptive and explanatory models. *The Journal of Early Adolescence*, 37, 85-128. <https://doi.org/10.1177/0272431616642328> [Multilevel IRT]
27. Wilhelm, J., **Toland, M. D.**, & *Cole, M. (2017). Evaluating middle school students' spatial-scientific performance within earth/science astronomy in terms of gender and race/ethnicity. *Journal of Education in Science, Environment and Health*, 3(1), 40-51. <https://doi.org/10.21891/jeseh.275681> [HLM]
26. Hammer, J. H., & **Toland, M. D.** (2017). Internal structure and reliability of the Internalized Stigma of Mental Illness Scale (ISMI-29) and brief versions (ISMI-10, ISMI-9) among Americans with depression. *Stigma and Health*, 2(3), 159-174. <https://doi.org/10.1037/sah0000049> [Bifactor CFA]
25. Fedewa, A. L., **Toland, M. D.**, Usher, E. L., & *Li, C. (2016). Elementary school students' health-related self-beliefs. *International Electronic Journal of Elementary Education*, 9(1), 151-166. [Multivariate]
24. **Toland, M. D.**, & Usher, E. L. (2016). Assessing mathematics self-efficacy: How many categories do we really need? *Journal of Early Adolescence*, 36, 932-960. <https://doi.org/10.1177/0272431615588952> [Rasch]
23. *Hall, A. H., **Toland, M. D.**, & Guo, Y. (2016). The writing attitude scale for teachers (WAST). *International Journal of Quantitative Research in Education*, 3(3), 204-221. <https://doi.org/10.1504/IJQRE.2016.077801> [IRT]
22. Marshall, J. H., Davis, M. C., Lawrence, E. C., Peugh, J. L., & **Toland, M. D.** (2016). Mentors' perceived program support scale: Measure development and initial validation. *Journal of Community Psychology*, 44(3), 342-357. <https://doi.org/10.1002/jcop.21772> [IRT]
21. Jung, L. A., Bradley, K. D., Sampson, S. O., McWilliam, R. A. & **Toland, M. D.** (2015). Evaluating the construct validity and internal consistency of early childhood individualized family service plans. *Journal of Studies in Educational Evaluation*, 45, 10-16. <https://doi.org/10.1016/j.stueduc.2015.03.001> [Rasch]
20. Shukla, S. Y., *Tombari, A. K., **Toland, M. D.**, & Danner, F. W. (2015). At-home parental support for learning and high school students' academic motivation and persistence in mathematics. *Journal of Educational and Developmental Psychology*, 5(1), 44-56. <https://doi.org/10.5539/jedp.v5n1p44> [Structural Equation Modeling]
19. Bottge, B. A., **Toland, M. D.**, Gassaway, L., *Butler, M., *Choo, S., *Griffin, A. K., & Ma, X. (2015). Impact of enhanced anchored instruction in inclusive math classrooms. *Exceptional Children*, 8, 158-175. <https://doi.org/10.1177/0014402914551742> [HLM]
18. Bottge, B. A., Ma, X., Gassaway, L., **Toland, M. D.**, *Butler, M., & Cho, S-J. (2014). Effects of blended instructional models on math performance. *Exceptional Children*, 80, 423-437. <https://doi.org/10.1177/0014402914527240> [HLM]

17. Bottge, B. A., Ma, X., Gassaway, L., *Butler, M., & **Toland, M. D.** (2014). Detecting and correcting fractions computation error patterns. *Exceptional Children*, 80, 237-255. <https://doi.org/10.1177/001440291408000207> [Two-level HLM]
16. **Toland, M. D.** (2014). Practical guide to conducting an item response theory analysis. *The Journal of Early Adolescence*, 34, 120-151. <https://doi.org/10.1177/0272431613511332> [IRT]
15. Hall, A. H., **Toland, M. D.**, Grisham-Brown, J., & Graham, S. (2014). Exploring interactive writing as an effective practice for increasing head start students' alphabet knowledge skills. *Early Childhood Education Journal*, 42, 423-430. <https://doi.org/10.1007/s10643-013-0594-5> [Zero-inflated Poisson regression]
14. Ruble, L. A., McGrew, J., & **Toland, M. D.** (2013). Mechanisms of change in COMPASS consultation for students with Autism. *Journal of Early Intervention*, 35, 378-396. <https://doi.org/10.1177/1053815114546495> [Univariate]
13. **Toland, M. D.**, & Morales, A. (2013). U.S. born vs. immigrant Latino sexual minority women satisfaction with life: An item response theory analysis. *International Journal of Quantitative Research in Education*, 1, 212-227. <https://doi.org/10.1504/IJQRE.2013.056461> [IRT]
12. *Sun, L., Bradley, K. D., & **Toland, M. D.** (2013). School computer use and student academic performance in secondary schools. *Computers in Education Journal*, 4, 84-94. Retrieved from <http://www.asee.org/papers-and-publications/publications/division-publications/computers-in-education-journal> [MANCOVA]
11. Ruble, L., McGrew, J., **Toland, M. D.**, Dalrymple, N. J., & Jung, L. A. (2013). A randomized controlled trial of web-based and face-to-face teacher coaching in autism. *Journal of Consulting and Clinical Psychology*, 81, 566-572. <https://doi.org/10.1037/a0032003> [Univariate]
10. Ruble, L. A., **Toland, M. D.**, *Birdwhistell, J. L., McGrew, J. H., & Usher, E. L. (2013). Preliminary study of the Autism Self-Efficacy Scale for Teachers (ASSET). *Research in Autism Spectrum Disorders*, 7, 1151-1159. <https://doi.org/10.1016/j.rasd.2013.06.006> [EFA]
9. Danner, F. W., & **Toland, M. D.** (2013). The interactive role of socioeconomic status, race/ethnicity, and birth weight on trajectories of body mass index growth in children and adolescents. *The Journal of Early Adolescence*, 33, 293-314. <https://doi.org/10.1177/0272431612439937> [Growth mixture modeling]
8. Nugent, G., **Toland, M. D.**, Levy, R., Kuntz, G., Harwood, D., Green, D., & Kitts, K. (2012). The impact of an inquiry-based geoscience field course on pre-service teachers. *Journal of Science Teacher Education*, 23, 503-529. <https://doi.org/10.1007/s10972-012-9283-2> [MANCOVA]
7. Ruble, L. A., McGrew, J. H., & **Toland, M. D.** (2012). Goal attainment scaling as an outcome measure in randomized controlled trials of psychosocial interventions in autism. *Journal of Autism and Developmental Disorders*, 42, 1974-1983. <https://doi.org/10.1007/s10803-012-1446-7> [Univariate]
6. Ruble, L., *Birdwhistell, J., **Toland, M. D.**, & McGrew, J. H. (2011). Analysis of parent, teacher, and consultant speech exchanges and educational outcomes of students with autism during COMPASS consultation. *Journal of Educational and Psychological Consultation*, 21, 259-283. <https://doi.org/10.1080/10474412.2011.620818> [Univariate]
5. Reese, R. J., **Toland, M. D.**, & Hopkins, N. B. (2011). Replicating and extending the good-enough level model of change: Considering session frequency. *Psychotherapy Research*, 21, 608-619. <https://doi.org/10.1080/10503307.2011.598580> [Multilevel growth model]
4. Reese, R. J., **Toland, M. D.**, *Slone, N. C., & Norsworthy, L. A. (2010). Effect of client feedback on couple psychotherapy outcomes. *Psychotherapy: Theory, Research, Practice, Training*, 47, 616-630. <https://doi.org/10.1037/a0021182> [Multilevel growth model]

3. Buhs, E. S., McGinley, M., & **Toland, M. D.** (2010). Overt and relational victimization in Latinos and European-Americans: Measurement invariance across ethnicity, gender and age in early adolescent groups. *The Journal of Early Adolescence*, 30, 171-197. <https://doi.org/10.1177/0272431609350923> [CFA]
2. **Toland, M. D.**, & De Ayala, R. J. (2005). A multilevel factor analysis of students' evaluations of teaching. *Educational and Psychological Measurement*, 65, 272-296. <https://doi.org/10.1177/0013164404268667> [Multilevel factor analysis]
1. Igo, L. B., **Toland, M. D.**, Flowerday, T., Song, S. Y., & Kiewra, K. A. (2002). The accuracy of self-efficacy: A comparison of high school and college students. *Academic Exchange Quarterly*, 6, 123-128. [Univariate]

BOOK CHAPTERS

- Lingat, J. M., **Toland, M. D.**, & Sampson, S. O. (2021, Accepted). Measuring sense of belonging: Existing tools and future improvements. In E. M. Bentrim & G. W. Henning (Eds.), *The Impact of Sense of Belonging in College: Implications for Student Persistence, Retention, and Success*. Sterling, VA: Stylus.
- Maag, J. W., Swearer, S. M., & **Toland, M. D.** (2009). Cognitive-behavioral interventions for depression in children and adolescents: Meta-analysis, promising programs, and implications for school personnel. In M. J. Mayer, R. Van Acker, J. E. Lochman, & F. M. Gresham (Eds.), *Cognitive behavioral interventions for students with emotional/behavioral disorders*. (pp. 235-265). New York, NY: Guilford. [Meta-analytic techniques]

PEER REVIEW PROCEEDINGS

- Nugent, G., Barker, B., **Toland, M. D.**, Grandgenett, N., & Adamchuk, V. I. (2009). Measuring the impact of robotics and geospatial technologies on youth science, technology, engineering, and mathematics attitudes. In C. Fulford & G. Siemens (Eds.), *Proceedings of the World Conference on Educational Multimedia, Hypermedia, and Telecommunications* (pp. 3331-3340). Chesapeake, VA: Association for the Advancement of Computing in Education. [Factor analysis]

OTHER PUBLICATIONS

- Peugh, J. L., & **Toland, M. D.** (2017). Psychometric and quantitative methods for school psychology. *Journal of School Psychology*, 60, 5-6. <https://doi.org/10.1016/j.jsp.2017.01.001> [Editorial]
- Toland, M. D.**, & Peugh, J. L. (2017). Introduction to the special issue modern data analysis techniques: Part II. *The Journal of Early Adolescence*, 37, 5-6. <https://doi.org/10.1177/0272431613512406> [Editorial]
- Toland, M. D.**, & Peugh, J. L. (2014). Introduction to modern data analysis techniques: Part I. *The Journal of Early Adolescence*, 34, 5-6. <https://doi.org/10.1177/0272431613512406> [Editorial]
- Toland, M. D.** (2008). Determining the accuracy of item parameter standard error of estimates in BILOG-MG 3. *Dissertation Abstracts International*, 69(06). (UMI No. 3317288)

MANUSCRIPTS UNDER REVIEW

- Dueber, D. M., & **Toland, M. D.** (2021, R&R). A bifactor approach to subscore assessment. Resubmitted February 11, 2021 to *Psychological Methods* [Simulation]
- Peugh, J. L., **Toland, M. D.**, & Strong, H. (2021). Handling longitudinal missing not at random (MNAR) data: A procedural demonstration. Submitted August 18, 2021 to *Psychological Methods*. [MLM]

- Brown, A, DuBravac, S., & **Toland, M.D.** (2021). Metalinguistic awareness in partial immersion and English-only students. Submitted August 18, 2021 to *Bilingual Research Journal*. [Univariate]
- Lingat, J. E. M., **Toland, M. D.**, Qiu, C., Chen, X-Y., Han, J., Shen, L., Ford, C. J., Love, A. M. A., Li, C., Blevins, J., Clement-Montgomery, T., White, C., Jeter, K., Kehrwald, N. P., & Williams, C. M. (2021, R&R). Optimizing the measurement of resident advisor's self-efficacy using the Rasch model. Resubmitted August 19, 2021 to *Journal of College and University Student Housing*.
- Ogle, L., Ruble, L., **Toland, M. D.**, & McGrew, J. (2021). Impact of type and dosage of performance feedback following COMPASS consultation on teacher adherence and student goal attainment outcomes. Submitted August 30, 2021 to School Psychology. [Regression]

MANUSCRIPTS IN PREPARATION

- Hanley, C., **Toland, M. D.**, Vanderford, N., & Lederer, N. (2021). Evaluation of a new cancer literacy tool for use among adolescents. [IRT]
- Ruble, L., McGrew, J., Rispoli, K., **Toland, M. D.**, & Pinkman, K. (2021). To be submitted September 2021 to *School Psychology*
- Lingat, J. M., Ryser-Oatman, J. T., Epps, M., Richardson, J. W., Sampson, S. O., **Toland, M. D.**, & Brace, D. (2021, Under review). "We have our own belonging": A qualitative inquiry investigation of postsecondary students' sense of belonging across online and face-to-face course formats. To be submitted to *Student Engagement in Higher Education*.
- Dueber, D. M., & **Toland, M. D.** (In prep). An R package for computing bifactor indices.
- Lingat, J. M., **Toland, M. D.**, Dueber, D. M. (In prep). The Brief Course Belonging Scale: Developing a measure of postsecondary students' course-level sense of belonging across online and face-to-face modalities. To be submitted to Research in Higher Education.
- Lingat, J. M., **Toland, M. D.**, Dueber, D. M., Qui, C., Blevins, J., Clements, T., White, C., Jeter, K., & Kehrwald, N. (In prep). The Simple University Belonging Scale: Working towards a measure of postsecondary students' sense of belonging. To be submitted to Measurement and Evaluation in Counseling and Development.
- *Li, C. R., & **Toland, M. D.** (In prep). Assessing the model fit of multidimensional item response theory models using limited information statistics. [Simulation]
- Li, C. R., **Toland, M.D.**, & Follingstad, D. R. (In prep). Religiosity and intimate partner violence among religious adults: A bifactor analysis. [bifactor]
- Lingat, J. M., Mantooth, R., Dueber, D. M., Li, N., & **Toland, M. D.** (In prep). Detecting gender-based & across campus differential item functioning on a sense of belonging scale in higher education.
- *Berney, E. C., *Dueber, M. D., Blevins, J., Reese, R. J., **Toland, M. D.**, *Qiu, C., *Li, N., Desmennu, O. M., Jones, R. S., White, C., Clement-Montgomery, T., & Kehrwald, N. *Transporting a systematic client feedback approach into a student-life belongingness intervention*.
- *Spiker, D., Dueber, M. D., **Toland, M. D.**, *Li, C., *Shen, L., *Qiu, C., Peugh, J. L., Blevins, J., Clements, T., White, C., & Kehrwald, N. (In prep). *College students' roommate satisfaction: Dyadic growth curve analysis*.
- Guerin, R. J., & **Toland, M. D.** (In prep). Replication and extension of the Theory of Planned Behavior for workplace safety among pre-workforce adolescence. To be submitted to The Journal of Early Adolescence.
- Hanley, C., Dueber, D. M., & **Toland, M. D.** (In prep). Assessing the performance of two procedures for detecting differential item functioning within a multilevel partial credit model.

GRANTS

CURRENT RESEARCH SUPPORT

4. Denyer, J., & **Toland, M. D.** (Co-I). CTE Teacher Preparation and Retention. Sponsor: Ohio Department of Education. July 1, 2021 – June 30, 2022. (0% effort). (\$482,433).
3. **Toland, M. D.** (Statistical and Measurement Consultant). *Psychometric and statistical support for NIOSH research projects in U.S. middle and high schools*. Sponsor: U.S Department of Health and Human Services, CDC&P; National Institute for Occupational Safety and Health. September 1, 2021 – August 31, 2022. (\$26,000) (14.72% Academic year) Intergovernmental Personnel Agreement (IPA).
2. Wilson, K. (PI), & **Toland, M. D.** (Co-I). High Schools That Work. Sponsor: Ohio Department of Education. July 1, 2021 – June 30, 2022. (0% effort). (\$423,425).
1. Wilson, K. S., (PI), & **Toland, M. D.** (Co-I). Northwest Ohio Tech Prep Regional Center. Sponsor: Ohio Department of Education. July 1, 2021 – June 30, 2022. (0% effort). (\$482,433).

INPREPARATION RESEARCH SUPPORT

1. **Toland, M. D.** (PI). COMPASS Across Settings (CAST) for Integrating School, Home, and Community Services and Improving Transition Outcomes for Students with ASD. Sponsor: NIMH. August 1, 2022 – July 31, 2026. (Subaward to UToledo from BSU). To be submitted October 2021 or February 2022.

PENDING RESEARCH SUPPORT

5. Hamer, L. (PI), Mavima, S., & **Toland, M. D.** (Co-I). Greater Toledo Afrocentric Teaching Workshop. Sponsor: Greater Toledo Community Foundation. January 10, 2022 – January 9, 2023. (\$25,000). (0.44% Summer in Year 1). Submitted July 15, 2021.
4. Alaraje, N. (PI), Fox, C., & **Toland, M. D.** (Evaluator). CyberCorps Scholarship for Service: Academic Student Success of Undergraduate and Graduate Education in Cybersecurity (SFS-ASSURE-C). Sponsor: National Science Foundation. January 1, 2022 – December 31, 2026. (\$3,854,012). (3 weeks Summer Years 1-5). Submitted July 18, 2021.
3. **Toland, M. D.** (PI). Comparative Study of COMPASS Adaptations for Improving Public School Outcomes of Children with Autism Spectrum Disorder Using ACT Smart. Sponsor: National Institute of Health, Clinical Trials to Test the Effectiveness of Treatment, Preventive, and Services Interventions (R01 Clinical Trial Required). June 1, 2022 – May 31, 2027. (Subaward to UToledo from BSU - \$139,307). (2% Academic Years 1-4, 10% Academic Year 5 and 10% Summer Year 5). Submitted June 15, 2021.
2. Czajkowski, K., ..., **Toland, M. D.** (Co-I). Societal Challenges within a Spatially Integrated Social Sciences Framework. Sponsor; NSF – NRT. October 1, 2021 – September 30, 2026. (\$2,997,176). Submitted February 25, 2021.
1. Lorch, E. (PI), **Toland, M. D.** (Co-I). *Efficacy of a Narrative Comprehension Intervention for Elementary School Children at risk for Attention-Deficit Hyperactivity Disorder*. Sponsor: Institute of Education Sciences, Cognition and Student Learning - Goal 3, Grant Number: R305A160318. July 1, 2017 – June 30, 2022. (**funded** - \$279,487). (4% AY 1-4; 12.5% AY 5 and 1 Summer Month year 5)

COMPLETED RESEARCH SUPPORT

21. Kumar, R., & Toland. (Co-I). Psychometric Investigation of Teacher Beliefs and Practices Survey. Sponsor: Subaward to UToledo from Harvard - \$20,000. (5% summer).
20. **Toland, M. D.** (PI), & Heileman, G., Council on Postsecondary Education Analytics Platform. Sponsor: KY Council on Postsecondary Education. January 1, 2020 – June 30, 2020. \$120,126 (5% AY, 3.75% summer).
19. Ma, X. (PI), **Toland, M. D.** (Co-I). High-Impact Leadership for School Renewal. Sponsor: Supporting Effective Educator Development (SEED) Grant Program, U.S. Department of Education. 2017 - 2020. (Subaward to UK from Western Michigan University - \$86,593 including cost share). (5% AYs 1-3)
18. Ruble, L. (PI), **Toland, M. D.** (Co-I), Snell-Rood. *Validation of an Implementation strategy of COMPASS for School Trainers of Children*. Sponsor: National Institute of Mental Health. R34. August 1, 2017 – July 31, 2020. (**funded** - \$169,548). (½ Summer months years 2-3)
17. Heileman, G. (PI) [Change PI to **Toland, M. D.** on 8/20/2019]. *University of Kentucky (UK) Analytics Platform*. Sponsor: KY Council on Postsecondary Education. July 1, 2019 – June 30, 2020. \$20,000 (1% AY)
16. Heileman, G. (PI) [Change PI to **Toland, M. D.** on 7/30/2019]. *University of Kentucky (UK) Analytics Platform*. Sponsor: KY Council on Postsecondary Education. May 1, 2018 – September 30, 2019. \$130,050 [remaining balance to monitor - \$20,000] (1% AY)
15. Grisham-Brown, ... **Toland, M. D.** (Statistical and Measurement Consultant). *Field testing of the Assessment, Evaluation, and Programming System for Infants and Children (AEPS)*. Sponsor: Early Intervention Management and Research Group. October 1, 2016 – April, 30, 2017 (\$13,222) (5% Academic Year)
14. **Toland, M. D.** (Statistical and Measurement Consultant). *NIOSH safe-skilled ready workforce (SSRW) program*. Funded by U.S Department of Health and Human Services, CDC&P; National Institute for Occupational Safety and Health. August 16, 2016 – May 15, 2017. (\$13,222) (5% Academic year) Intergovernmental Personnel Agreement (IPA).
13. Rous, B. (PI), **Toland, M. D.** (Co-I), Gooden, C. (Co-PI), & Howard, M. (Co-PI). UK Early Childhood KY Data Systems (KEDS). Sponsor: KY Department of Education. Grant number: 3200000719. July 1, 2016 – September 30, 2017. (Submitted May, 2016 - \$240,000) (1 month summer 2017)
12. Rous, B. (PI), **Toland, M. D.** (Co-I), Howard, M. & Gooden, C. UK KEDS First Steps. Sponsor: KY Department for Public Health. Grant number: 3048113113. July 1, 2016 - June 30, 2017 (Submitted May, 2016 - \$162,126) (5% academic year)
11. **Toland, M. D.** (PI). *Research and Evaluation Services for the Vulnerability Assessment Instrument*. Sponsor: Kentucky Justice and Public Safety Cabinet. Grant number: 3048112357. NA. January 1, 2015 – June 30, 2015. (**funded** \$75,000) (5% academic year; 9% summer 2015, 5% summer 2016)
10. Rous, B. (PI), **Toland, M. D.** (Co-I). UK KEDS First Steps. Sponsor: KY Department for Public Health. Grant number: 3048112668. July 1, 2015 - June 30, 2016 (\$178,160) (5% academic year)
9. Rous, B. (PI), **Toland, M. D.** (Co-I). UK Early Childhood KY Data Systems (KEDS). Sponsor: KY Department of Education. Grant number: 3200000031. July 1, 2015 – September 30, 2016. (\$240,000) (1-month summer 2016)
8. Rous, B. (PI), **Toland, M. D.** (Co-I). *UK Early Childhood KY Data Systems (KEDS)*. Sponsor: KY Department of Education. Grant number: 3048111621. July 1, 2014 – September 30, 2015. (**funded** \$240,000) (0% academic year; 1-month summer 2015)

7. Ruble, L. (PI), **Toland, M. D.** (Co-I). *Improving Transition Outcomes in ASD using COMPASS*. Sponsor: National Institute of Mental Health. Grant number: 3048111703. R34. July 1, 2014 – June 30, 2017 (**funded**: \$692,652). (0% during academic year; 2 weeks of summer in years 2016 & 2017)
6. Rous, B. (PI), **Toland, M. D.** (Co-I). *UK KEDS First Steps*. Sponsor: KY Department for Public Health. Grant number: 3048110601. July 1, 2014 - June 30, 2015) (**funded** \$178,160) (5% academic year)
5. **Toland, M. D.** (PI), & Gooden, C. (Co-Investigator). UK-VORT HELP@ 0-3 Reliability and Validity Study. Sponsor: VORT. Grant Number: 3048111434. May 8, 2014 – June 30, 2015 (**funded** \$29,087). (2.5% academic year, 7.89% summer 2014)
4. Rous, B. (PI). **Toland, M. D.** (Statistical & Measurement Consultant). *UK Early Childhood KY Data Systems (KEDS)*. Sponsor: KY Department of Education. Grant Number: PON2 540 1300003115 1. July 1, 2013 – September 30, 2014 (**funded** \$240,000). (0% academic year; 1 summer 2014)
3. Rous, B. (PI). **Toland, M. D.** (Statistical Consultant). *UK KEDS First Steps*. Sponsor: KY Department for Public Health. Grant Number: PON2 728 1200002270 2. July 1, 2012 – June 30, 2014 (**funded** - \$356,320) (Commitment: 5% academic year)
2. Ruble, L. (PI), **Toland, M. D.** (Co-I), T. R. *Randomized study of training in autism*. Sponsor: National Institute of Mental Health. Grant Number: 1RC1MH089760-01. September 30, 2009 – August 31, 2011 (**funded** - \$999,995)
1. Bottge, B. (PI), **Toland, M. D.** (Co-PI). *Evaluating the efficacy of enhanced anchored instruction for middle school students with learning disabilities in math*. Sponsor: Institute of Education Sciences, Cognition and Student Learning - Goal 3, CFDA Number: 84.324A. July 1, 2009 – June 30, 2013. (**funded** - \$2,330,164)

NOT FUNDED RESEARCH SUPPORT

53. Kumar, R., & **Toland, M. D.** (Co-I) Teachers Implicit and Explicit Bias and Student Outcomes. Sponsor: Spencer – Large Grants. (Subaward to UToledo from University of Auckland, NZ - \$250,000). Submitted February 2, 2021.
52. Hamer, L. (PI), Cox, J., Johnson, N., Aguiton, R., Malakpa, S., & **Toland, M. D.** (Key Personnel) Teach Toledo Scholars. Sponsor: United Way Greater Toledo. July 1, 2021 – June 30, 2024. (\$185,220). Submitted January 8, 2021.
51. Bazett-Jones (PI), D. M., Garcia, M. C., & **Toland, M. D.** (Co-I). The Influence of Training Loads on Running-Related Injuries in High School Cross-Country Runners: A Prospective Study. Sponsor: NATA Research & Education Foundation. July 1, 2021 – June 20, 2024. (\$57,268). Submitted February 15, 2021.
50. Witte, R., ... **Toland, M. D.** (Key Personnel). Fulbright Teaching Excellence and Achievement Program. Sponsor: Fulbright. January 1, 2022 – December 31, 2022. (\$169,758). Submitted April 23, 2021.
49. Stone, G., & **Toland, M. D.** (Co-I). Assessment of Bias in the Student Evaluation of Faculty. Sponsor: Spencer - Racial Equity Special Research Grants. July 1, 2021 – June 30, 2022. (\$74,986). Submitted January 12 (noon), 2021.
48. Hamer, L. (PI), Mavima, S., & **Toland, M. D.** (Key Personnel). Virtual Institute of Afrocentric Teaching. Sponsor: Ohio Humanities. May 1, 2021 – June 30, 2022. (\$19,998). Submitted January 7, 2021
47. **Toland, M. D.** (PI). Comparative Study of COMPASS Adaptations for Improving Public School Outcomes of Children with Autism Spectrum Disorder Using ACT Smart. Sponsor: National Institute of Health, Clinical Trials to Test the Effectiveness of Treatment, Preventive, and Services Interventions (R01 Clinical Trial

- Required). June 1, 2021 – May 31, 2026. (Subaward to UToledo from BSU - \$139,307). (2% Academic Years 1-4, 10% Academic Year 5 and 10% Summer Year 5).
46. **Toland, M. D.** (PI). COMPASS Across Settings (CAST) for Integrating School, Home, and Community Services and Improving Transition Outcomes for Students with ASD. Sponsor: Institute of Education Sciences, Development and Innovation – Goal. August 1, 2021 – July 31, 2025. (Subaward to UToledo from BSU - \$41,579). (5% Academic Years 2-4).
45. **Toland, M. D.** (Key Personnel), & Johnson, N. Y. EKU-NOYCE Science Scholars. Sponsor: National Science Foundation, 17-541, Robert Noyce Teacher Scholarship Program, Track 1. March 1, 2021 – February 28, 2026. (Subaward to UToledo from ECU - \$66,250). (~3.68% Summers 1-5)
44. Hamer, L. (PI), Cox, J., Kumar, R., & **Toland, M. D.** (Co-I). Circles and verses afterschool program with UToledo near-to-peer mentors. Sponsor: PROMEDICA, Education & Training: Afterschool programming. (Subaward to UToledo from Junction Coalition). Submitted October 2020.
43. Samaan, M. A., (PI), ..., Toland, M. D. (Co-I). Morphological Mechanisms of Hip Extensor Dysfunction in Patients with FAIS. Sponsor: NIH R03. January 1, 2021 – December 31, 2022. (\$290,895). (1% during Academic Years 1-2; 1.75% Summers 1-2).
42. Ruble, L. (Co-PI), & **Toland, M. D.** (Co-I). Implementation Strategies of COMPASS to Improve Educational Outcomes of Children ASD. Sponsor: NIMH. September 1, 2020 – August 31, 2025. (\$2,496,472). (3% Academic Year 1; 1% Academic Years 2-4; 10% Academic Year 5; 1-summer month Year 5). Submitted February 13, 2020.
41. Goldsmith, J. (PI), Goldstein, B. L., & **Toland, M. D.** (Co-I). *Institute for Research on Augmented Immersive Learning* (Planning Proposal). Sponsor: National Science Foundation – National Artificial Intelligence (AI) Research Institutes Program AI-Augmented Learning Theme. July 1, 2020 – June 30, 2022. (\$50,000). (2% Academic Years 1-2, 0.1% Summers 1-2). Submitted January 28, 2020.
40. Heileman, G. (PI), ..., **Toland, M. D.** (Co-I). Collaborative Research: Improving STEM Student Success Outcomes through Curricular Analytics. Sponsor: NSF IUSE-HER. July 1, 2020 – June 30, 2025. (\$410,214). (5% Academic Year; 6% summer). Submitted December 4, 2019.
39. Aspiranti, K. (PI) & **Toland, M. D.** (Co-I). *Developing an Evidence-Based Math Fluency App: The Taped Problems Intervention*. Sponsor: America Honda Foundations - Grants Program. August 15, 2020 – August 14, 2021. (\$51,575). (5% Academic Year). Submitted February 3, 2020.
38. Mohr-Schroeder, M. (PI), ... **Toland, M. D.** (Co-I). Collaborative Research: Broadening Participation for STEM Learning: Development and Validation of Integrated STEM Literacy and Socio-Academic Identity Development Instruments. Sponsor: National Science Foundation, DRK-12. August 1, 2020 – July 31, 2024. (\$702,229). (6% Academic Year; 5% summer). Submitted November 18, 2019.
37. Samaan, M. A. (PI), **Toland, M. D.** (Co-Mentor). Hip Joint Bone and Cartilage Mechanics and Health in Patients with Femoroacetabular. Sponsor: National Institute of Health - K01. July 1, 2020 - June 30, 2025. (\$20,000). (0% effort).
36. **Toland, M. D.** (PI), Goldsmith, J., Goldstein, B., Burton, E., & Sampson, S. *Development of the Targeted Assessment for Ethical Reasoning and Descriptive Insight Skills*. Sponsor: National Science Foundation; IUSE:EHR - Engaged Student Learning Track, Exploration and Design Tier. January 1, 2020 – December 31, 2021. (\$261,018). (6.5% Academic Year; 1 Summer month years 1-2).

35. *Lingat, J. M., **Toland, M. D.**, *Davis, C. D., *Thompson, F., Folberg, A. M., & *Jones, R. S. Increasing the visibility of scholars from marginalized and minority groups who focus on measurement, assessment, and psychometrics in STEM+H. Sponsor: University of Kentucky Office for Institutional Diversity, December 9, 2019 – June 30, 2020. \$15,000.
34. Blevins, J., **Toland, M. D.**, Clement-Montgomery, T., Berney, E. C., & Kehrwald, N. Extended sub-analysis of belonging and well-being in Black students in residence halls at a PWI. Sponsor: ACPA–College Student Educators International. August 1, 2019- March 1, 2020. (\$3,000). Submitted June 29, 2019.
33. Grabau, L., Ma, X., Vazsonyi, A., & **Toland, M. D.** (Co-I). Importance of parental support for science learning: A cross-national comparison. Sponsor: University of Kentucky – Igniting Research Collaborations (IRC) Program. July 1, 2019- March 1, 2020. (\$41,250). (1/2 Summer month Year 1).
32. Harrison, B., **Toland, M. D.** (Co-I), & Jone, M. Machine Learning-Supported evaluation of Artifacts Derived from Authentic Learning Activities. Sponsor: University of Kentucky – Igniting Research Collaborations (IRC) Program. July 1, 2019- March 1, 2020. (\$35,154). (5% Summer month Year 1).
31. Rudolph, M. J. (PI), Price, S. A., **Toland, M. D.**, & Lingat, J. M. *Linking Evidence to Practice: Investigating and Supporting Transfer Student Success at UK*. Sponsor: Kentucky Council on Postsecondary Education. July 1, 2019 – June 30, 2020. (\$49,980). Submitted May 1, 2019.
30. Sampson, S. (PI), Grisham-Brown, J., Hawkins, S., & **Toland, M. D.** (Co-PI). *Commonwealth of Kentucky Preschool Development Grant Evaluation*. Sponsor: Compass Evaluation and Research. June 1, 2019 – December 31, 2019. (5.55% Summer, 5% AY). (\$119,368).
29. Niu, C. (PI), **Toland, M. D.**, Lingat, J. M., Shen, L., & Wu, R. *Measuring International Students' Sense of Belonging Pilot*. Sponsor: University of Kentucky Center for Equality and Social Justice. May 1, 2019 – August 31, 2019. (\$5,000).
28. Jackson, C. (PI), ... **Toland, M. D.** (Co-I). Instruments for Quantification of Understanding, Identity, and Reasoning in Engineering focused STEM (InQUIRES). Sponsor: Institute for Education Sciences. August 1, 2019 – July 31, 2023. (\$1,400,000).
27. Ruble, L. (PI), ... **Toland, M. D.** (Co-I). COMPASS for Integrating School, Home, and Community Services and Improving Transition Outcomes for Students with ASD. Sponsor: Institute for Education Sciences. August 1, 2019 – July 31, 2023. (\$1,397,024).
26. Mohr-Schroeder, M. (PI), ... **Toland, M. D.** (Co-I). *Collaborative Research: SPrEaD: Broadening Participation Research: Increasing Opportunity and Access for Underrepresented Learners in STEM*. Sponsor: National Science Foundation. May 1, 2019 – April 30, 2024. (\$2,000,000).
25. Fedewa, A. (PI), **Toland, M. D.** (Co-I). *Developing An Inclusion Implementation Model for Health-Enhancing Physical Activity for Disabled Elementary Children in Inclusive Classrooms*. Sponsor: Administration for Community Living National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). August, 15, 2018 – August, 15, 2023. (\$2,700,000).
24. Mohr-Schroeder, M. (PI), ... **Toland, M. D.** (Co-PI). Broadening Participation Research: Increasing Opportunity and Access for Underrepresented Learners in STEM. Sponsor: National Science Foundation, Collaborative Research. June 1, 2018-May 30, 2023. (Submitted, August, 2017 - \$3,000,000).
23. Ruble, L. (PI), **Toland, M. D.** (Co-I). *Efficacy and Effectiveness of C-HOPE: A Behavior Management and Support Intervention for Parents of Children with ASD*. Department of Defense – Autism Clinical Trial Award. August 1, 2017 – July 31, 2021. (Submitted, September, 2016 - \$1,428,032).

22. Fedewa, A. (PI), **Toland, M. D.** (Co-PI). *An Inclusion Implementation Model to Increase Daily Physical Activity for 5th Graders with and without Disabilities*. Sponsor: National Institute of Health, R21-R33. July 1, 2016 – June 30, 2021. (Submitted March, 2016 - \$755,000).
21. Ruble, L. (PI), **Toland, M. D.** (Co-I). *Validation of an Implementation Strategy of COMPASS Training for School Trainers of Children with Autism*. Sponsor: National Institute of Mental Health, R034. August 1, 2016 – June 30, 2019. (Submitted February, 2016 - \$883,786)
20. Flanagan, S. (PI), & **Toland, M. D.** (Co-PI). *The 'Write' Technology: Supporting Written Expression with Graphic Organizers*. Sponsor: Spencer Foundation. August 1, 2016 - June 30, 2017 (Submitted May, 2016 - \$50,000)
19. Mazur, J., Fedewa, A., Ault, M., Bausch, M., Erwin, H., & **Toland, M. D.** (Co-Principal Investigator). *An Inclusion Implementation Model to Increase Daily Physical Activity for 5th Graders With and Without Disabilities*. Sponsor: National Institute of Health, R21-R33. July 1, 2015 – June 30, 2020. (Submitted November, 2014 - \$755,000).
18. Hanley, C. D. (PI), Zook, M. A., Wilson, M. W., Usher, E. L., & **Toland, M. D.** (Co-Principal Investigator). *GeoSTEM Explorers*. Sponsor: National Science Foundation. July 1, 2015 – June 30, 2020. (Submitted November, 2014 - \$2,980,000).
17. Warshawsky, N. (PI), **Toland, M. D.**, (Measurement and Statistical Advisor and Collaborator). Nurse managers' perceptions of work, health, and promising practices. Sponsor: NIOSH K-award, July 1, 2015 – June, 20, 2018). (Submitted November, 2014).
16. Wilhelm, J. (PI), **Toland, M. D.** (Co-Principal Investigator), Jackson, C., & Wilhelm, R. J. Evaluating Middle School Students' Spatial-Scientific Performance in Earth-Space Science: A Realistic Explorations in Astronomical Learning (REAL) Project. Sponsor: National Science Foundation, DRK-12, July 1, 2014 – June 30, 2017. (Submitted December, 2013 - \$450,000).
15. Warshawsky, N. (PI), **Toland, M. D.**, (Measurement and Statistical Advisor and Collaborator). Nurse managers' perceptions of work, health, and promising practices. Sponsor: NIOSH K-award, July 1, 2014 – June, 20, 2017). (Submitted February, 2014).
14. Ruble, L. (PI), McGrew, J., Lechuga, J., & **Toland, M. D.** (Co-Investigator). *Validation of an Implementation Strategy of COMPASS Training for School Trainers of Children with Autism*. Sponsor: National Institute of Mental Health. R034. July 1, 2016 – June 30, 2019. (Resubmitted November, 2015 - \$705,295)
13. Ruble, L. (PI), McGrew, J., Stevenson, E., Lechuga, J., & **Toland, M. D.** (Co-Investigator). *Validation of an Implementation Strategy of COMPASS Training for School Trainers of Children with Autism*. Sponsor: National Institute of Mental Health. R034. July 1, 2014 – June 30, 2017. (Submitted November, 2013 - \$705,295)
12. Bottge, B. (PI), **Toland, M. D.** (Co-Principal Investigator), MA, X., Cohen, A., Bradshaw, L., & Choi, H-J. *Developing Mathematics Understanding of Students with Disabilities Using Anchored Instructional Measures (AIMs)*. Sponsor: National Science Foundation, DRK-12, July 1, 2014 – June 30, 2018. (submitted December, 2013 - \$2,214,791)
11. Usher, E. L. (PI), Butz, A. R. **Toland, M. D.** (Collaborator), & Perry, B. L. *Motivation and Achievement in Rural Appalachia*. Sponsor: William T. Grant Foundation: Social Settings Grant. (**letter of inquiry** stating interests submitted July, 2013 – \$300,000)
10. Usher, E. L. (PI), & **Toland, M. D.** (Co-Investigator). *Academic and self-regulatory efficacy beliefs in the International Baccalaureate primary years programme*. Sponsor: International Baccalaureate Organization. April 1, 2013 - June 30, 2014. (submitted February 2013 - \$45,000)

9. Grisham-Brown, J. (PI), **Toland, M. D.** (Co-Principal Investigator), & Pretti-Frontczak, K. *Refining and validating the Assessment, Evaluation, and Programming System (AEPS)*. Sponsor: Institute of Education Sciences. July 1, 2013 – June 30, 2017 (submitted June, 2012 – \$1,598,471)
8. Ruble, L. (PI), McGrew, J. H., Grisham-Brown, J., **Toland, M. D.** (Co-Investigator), Ballew, M., Dalrymple, N., Hammond, R., & Blumberg, S. *Implementation study of COMPASS for students with Autism*. Sponsor: National Institute of Health. July 1, 2013 – June 30, 2018 (submitted June, 2012 - \$3,526,650)
7. Ruble, L., McGrew, J., Murray, D., & **Toland, M. D.** (Co-Investigator). *Decision making and outcomes for caregivers of children with autism*. Sponsor: Patient-Centered Outcomes Research Institute. Grant Number: not assigned. MIS Number (Internal reference Number): 201111301514, Response to PCORI funding announcement (Number: PI-21-001; PCORI Pilot Projects). (submitted November, 2011 - \$677,056)
6. Ruble, L., McGrew, J., **Toland, M. D.**, (Co-Investigator), Grisham-Brown, J., Dalrymple, N., Jung, L., Swan, G., Lewis, W., & Kryscio, R. *RCT of implementation of system-wide compass consultation training, dosage, and spillover*. Sponsor: National Institute of Mental Health. (submitted June, 2011 - \$3,647,342)
5. Ruble, L., McGrew, J., Jung, L., **Toland, M. D.** (Co-Investigator), Grisham-Brown, J., & Dalrymple, N. *Randomized study of teacher training in autism*. Sponsor: Autism Speaks. (submitted March, 2009 - \$448,501)
4. Ruble, L., McGrew, J., & **Toland, M. D.** (Co-Investigator). *Teacher consultation outcomes in autism*. Sponsor: National Institute of Mental Health. (submitted June, 2009 - \$2,057,199)
3. Roher, L., Eakin, P., Ma, X., Pilcher, A., & **Toland, M. D.** (Statistical Consultant). Math science partnership: Algebra professional learning community. Sponsor: Kentucky Department of Education. (submitted June, 2009)
2. Ruble, L., McGrew, J., & **Toland, M. D.** (Co-Investigator). *Teacher consultation outcomes in autism*. Sponsor: National Institutes of Mental Health - R01. (submitted September 2008)
1. Ma, X., Beighle, A., & **Toland, M. D.** (Co-Investigator). *Improving physical education in secondary schools: Instrument development or measuring program and classroom quality*. Sponsor: William T. Grant Foundation. (submitted November, 2008)

PRESENTATIONS

86. Lingat, J. M., & Toland, M. D. (2020, September 29-October 2). *Navigating the measurement of belonging: Current instruments and future opportunities* [Paper Presentation]. Southern Association for Institutional Research Annual Conference, Point Clear, AL.
85. Lingat, J. M. & **Toland, M. D.** (2020, Apr 17 - 21) *Measuring Belonging in Higher Education: The Simple University Belonging Scale* [Roundtable Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/sbduq9y> (Conference Canceled)
84. Niu, C., **Toland, M. D.**, Li, N., & Dueber, D. (2020, April). *A Simulation Study: Comparing FDR Correction Methods in Using Rasch Trees Modeling for DIF Detection*. Poster accepted at the 2020 International Objective Measurement Workshop (IOMW), San Francisco, CA.
83. **Toland, M. D.** (2020, February). *Graduate Student Community Engagement*. Invited Keynote presentation at the University of Kentucky Annual DGS Appreciation Luncheon, Lexington, KY.

82. Lingat, J. M., Mantooth, R., Dueber, D. M., Li, N., & **Toland, M. D.** (2020, August 6-9). *Detecting gender-based & across campus differential item functioning on a sense of belonging scale in higher education* [Poster presentation]. American Psychological Association 2020 Convention, Washington, DC.
81. Blevins, J., Brann, T., Clement, T., Gayheart, T., Kehrwald, N., & **Toland, M. D.** (2020, March). *It takes a village: Using analytics: Strategic communications, and personal support to increase retention and belonging*. Paper to be presented at the NASPA Annual Conference. Austin, TX.
80. Goldsmith, J., Burton, E., *Dueber, D., Goldstein, B. Sampson, S., & **Toland, M. D.** (2020, February). *Improving Assessment of CS Students' Ethical Reasoning Skills*. Paper accepted for presentation at SIGCSE 2020 Birds of Feather Track. New York, NY.
79. Goldsmith, J., Burton, E., *Dueber, D., Goldstein, B. Sampson, S., & **Toland, M. D.** (2020, February). *Assessing Ethical Thinking about AI*. Paper accepted for presentation to AAAI-20 Senior Member Presentation Track. New York, NY.
78. *Lingat, J. M., **Toland, M. D.**, *Dueber, D. M. (2019, April). *Measuring belonging in higher education: The Simple University Belonging Scale*. Paper accepted for presentation at the annual meeting of the American Educational Research Association, San Francisco, CA.
77. *Berney, E. C., Young, M., McMahan, A., Ballard, S., Thuringer, C., *Qiu, C., & **Toland, M. D.** (2019, October). *The development of a university-wide assessment of academic advising practices*. Paper presented at the National Academic Advising Association (NACADA) Annual Conference, Louisville, KY.
76. *Qiu, C., *Dueber, D. M., **Toland, M. D.**, *Berney, E. C., *Zhou, H., Blevins, J., Kehrwald, N., & Clement, T. (2019, August). *RA and resident belongingness: Multilevel longitudinal analysis*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
75. *Hanley, C., **Toland, M. D.**, *Qiu, C., *Wu, R., *Thompson, F, *Li, C., & Niu, C. (2019, August). *Resident Advisor (RA) Belongingness to a residence hall and to other RAs: Differential item functioning study*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
74. **Toland, M. D.**, *Lingat, J. M., *Qiu, C., *Li, C., *Ford, C., *Chen, X., *Han, J., Clement, T., Blevins, J., & *Shen, L. (2019, August). *Measuring resident advisor self-efficacy: A differential item functioning study*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
73. *Berney, E. C., Reese, R. J., **Toland, M. D.**, *Dueber, D. M., *Qiu, C., Clement, T., Blevins, J., & Kehrwald, N. (2019, August). *Transporting a systematic client feedback approach into a student-life belongingness intervention*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
72. **Toland, M. D.**, *Spiker, D., *Li, C., *Shen, L., *Dueber, D. M., & *Qiu, C. (2019, August). *College students' roommate satisfaction: Multilevel longitudinal dyadic analysis*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
71. *Dueber, D. M., *Hanley, C., & **Toland, M. D.** (2019, August). *Measurement error meta-analysis*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
70. *Dueber, D. M., & **Toland, M. D.** (2019, August). *The people are weird fit index*. Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
69. *Lingat, J. M., **Toland, M. D.**, *Dueber, D. M., *Love, A. M. A, *Qiu, C., *Wu, R., & Brown, A. V. (2019, August). *Demystifying positive and negative phrasing effects*. Paper presented at the 127th American Psychological Association Conference, Chicago, IL.

68. *Qiu, C., *Zhou, H., *Dueber, D. M., & **Toland, M. D.** (2019, August). *When does measurement error break path analysis, and what should we do about it?* Poster presented at the 127th American Psychological Association Conference, Chicago, IL.
67. *Mantooth, R., Usher, E. L., *Love, A. M. A., Radtke, R. I., & **Toland, M. D.** (2018, August). *The physical space, self-beliefs, and academic performance: An investigation of learning environments in undergraduate statistics.* Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.
66. *Clements-Hickman, A., *Dueber, D., *Ryser-Oatman, T., & **Toland, M. D.** (2018, August). *Dimensionality of the patient version of the Working Alliance Inventory-Short Form Revised.* Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.
65. *Rosenkrantz, D. E., Rostosky, S., **Toland, M. D.**, & Riggle, E. D. B. (2018, August). *Religious and cognitive-emotional factors predicting parental acceptance of LGBT child.* Paper presented at the annual meeting of American Psychological Association, San Francisco, CA.
64. Ruble, L., Adams, M. W., **Toland, M. D.**, McGrew, J. H., & Snell-Rood, C. N. (2018, May). *Randomized control trial of COMPASS for improving transition outcomes of students with Autism Spectrum Disorder.* Poster presented at the annual convention of the International Society for Autism Research, Rotterdam, Netherlands.
63. *Li, C.R., *Zhou, H., & **Toland, M. D.** (2018, April). *Assessing M_2 and $RMSEA_2$ of multidimensional Item Response Theory models.* Paper presented at the annual convention of the National Council on Measurement in Education, New York, NY.
62. Kuravackel, G. M., Ruble, L. A., Reese, R. J., Ables, A. P., Rodgers, A. D., & **Toland, M. D.** (2017, May). *Compass for Hope: Evaluating the effectiveness of a parent training and support program for children with ASD as a Telehealth Tool.* Paper presented at the annual convention of the International Meeting for Autism Research, San Francisco, CA.
61. Peterson, C., **Toland, M. D.**, Matthews, A., Mathews, S., & Conard, L. A. (2017, June). *Eating Disorder Examination Questionnaire: Norms for Transgender youth.* Paper presented at the International Conference on Eating Disorders, Prague, Czech Republic.
60. Hayden, A., Lorch, E. P., Almasi, J., Milich, R., Hilton, S., Rosado, R., French, A., Thompson, K. & **Toland, M. D.** (2017, April). *Results of a Narrative Comprehension Intervention for Third Graders At-Risk for ADHD.* Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.
59. *Li, Z., *Gooden, C., & **Toland, M. D.** (2017, April). *Longitudinal Measurement Invariance of the Preschool Child Observation Record.* Paper presented at the meeting of the American Educational Research Association, San Antonio, TX.
58. *Gooden, C., *Li, Z., & **Toland, M. D.** (2017, April). *Measurement of preschool teacher self-efficacy in relation to child literacy outcomes.* Paper presented at the meeting of the American Educational Research Association, San Antonio, TX.
57. *Dueber, D., *Love, A. M. A., **Toland, M. D.**, & *Douin, T. A. (2017, April). *Comparison of single-stimulus format and forced-choice format instruments using Thurstonian item response theory.* Paper presented at the meeting of the American Educational Research Association, San Antonio, TX.
56. *Love, A. M. A., **Toland, M. D.**, & Usher, E. L. (2017, April). *Can I teach kids with Autism Spectrum Disorder?: Investigating teacher self-efficacy within an emerging population of students.* Poster presented at the meeting of the American Educational Research Association, San Antonio, TX.
55. *Gooden, C., *Li, Z., & **Toland, M. D.** (2016, October). *HELP® strands 0-3 reliability and validity study.* Session presented at the meeting of the Division of Early Childhood, Louisville, KY.

54. *Love, A. M. A., **Toland, M. D.**, *McCrea, B. L., *Chen, X., *Findley, J. A., & Usher, E. L. (2016, August). *Preliminary scale development of a teacher self-efficacy scale for students with autism*. Poster presented at the meeting of the American Psychological Association, Denver, CO.
53. **Toland, M. D.** (2015, October). *Intensive workshop on Item Response Theory*. Invited workshop presented for the Quantitative Initiative for Policy and Social Research (QIPSR), University of Kentucky, Lexington, KY.
52. *Rojas, J. P., **Toland, M. D.**, & *Li, C. R. (2015, August). *Multidimensional item response analysis of the Grit-O scale*. Poster presented at American Psychological Association Annual Conference, Toronto, Canada.
51. *Gooden, C., *Li, Z., & **Toland, M. D.** (2015, August). *Item response theory examination of Teachers' Sense of Efficacy Scale*. Poster presented at American Psychological Association Annual Conference, Toronto, Canada.
50. **Toland, M. D.**, *Love, A. M. A., & *Tombari, A. K. (2015, August). *Clarification on Gelman's approach for dividing by two standard deviations*. Poster presented at American Psychological Association Annual Conference, Toronto, Canada.
49. *Davis, M. C., **Toland, M. D.**, Campbell, J. M., Murphy, L., & Gardner, L. (2015, May). *An item response theory analysis of the Childhood Autism Rating Scale, second edition (CARS-2)*. Poster presented at the annual convention of the International Meeting for Autism Research, Salt Lake City, UT.
48. **Toland, M. D.** (2015, May). *Introduction to Item Response Theory (IRT) with Hands-on Practice using IRTPRO*. Invited workshop presented for the Department of Social Sciences, University of Cagliari, Cagliari, Italy.
47. Li, C. R., **Toland, M. D.**, Usher, E. L., & Mamaril, N. A. (2015, April). *The short grit scale: Dimensionality analyses*. Poster presented at the meeting of the American Educational Research Association, Chicago, IL.
46. **Toland, M. D.** (2014, November). *From alpha to omega and beyond*. Invited workshop presented for the Quantitative Initiative for Policy and Social Research (QIPSR), University of Kentucky, Lexington, KY.
45. *Hu, S., **Toland, M. D.**, & Ma, X. (2014, August). *Measurement invariance of metacognitive strategies instrument across ethnic, gender, and SES groups*. Poster presented at the annual convention of the American Psychological Association, Washington, DC.
44. *Li, Z., & **Toland, M. D.** (2014, August). *Evaluating estimation methods with ordinal data in confirmatory factor analysis*. Poster presented at the annual convention of the American Psychological Association, Washington, DC.
43. *Stanek, M. L., **Toland M. D.**, & Mark, K. P. (2014, August). *Bifactor exploratory factor analysis of the Monogamy Attitudes Scale*. Poster presented at the annual convention of the American Psychological Association, Washington, DC.
42. *Little II, D. L., **Toland, M. D.**, & Morales, A. (2014, April). *First item response theory analysis: A new measure of perceived discrimination for sexual minority Latinas*. Paper presented at the meeting of the American Educational Research Association, Philadelphia, PA.
41. *Butz, A. R., **Toland, M. D.**, Zumbrunn, S. K., Danner, F. W., & Usher, E. L. (2014, April). *What is the "magic number?": A review of response categories in measuring writing self-efficacy*. Paper presented at the meeting of the American Educational Research Association, Philadelphia, PA.
40. Bottge, B. A., **Toland, M. D.**, Gassaway, L., *Butler, M., *Choo, S., *Griffin, A. K., & Ma, X. (2014, April). *Multilevel analysis of Enhanced Anchored Instruction in co-teaching inclusive math classrooms*. Paper presented at the meeting of the American Educational Research Association, Philadelphia, PA.

39. Wilhelm, J., **Toland, M. D.**, Jackson, C., *Cole, M., & Wilhelm, R. (2014, April). *How Instruction, Gender, and Race Affect Students' Spatial-Scientific Learning*. Paper presented at the meeting of the National Association for Research in Science Teaching, Pittsburgh, PA.
38. Wilhelm, J., Jackson, C., **Toland, M. D.**, *Cole, M., & Wilhelm, R. (2013, June). *Evaluating middle school students' spatial-scientific performance in Earth-space science*. Poster presented at the 222nd meeting of the American Astronomical Society, Indianapolis, IN.
37. *Hall, A., & Toland, M. D. (2012, August). *Development and initial psychometric evaluation of the writing attitude scale for teachers (WAST)*. Poster presented at the annual convention of the American Psychological Association, Orlando, FL.
36. *Li, Z., Toland, M. D., & Usher, E. (2012, August). *Psychometric examination of the mathematics skills self-efficacy scale*. Poster presented at the annual convention of the American Psychological Association, Orlando, FL.
35. Ruble, L., McGrew, J., & **Toland, M. D.** (2012, August). *A randomized controlled trial of web-based and face-to-face teacher coaching in autism*. Paper presented at the annual convention of the American Psychological Association, Orlando, FL.
34. **Toland, M. D.**, & Morales, A. (2012, August). *U.S. born vs. immigrant Latina women who love other women satisfaction with life: An IRT analysis*. Poster presented at the annual convention of the American Psychological Association, Orlando, FL.
33. Toland, M. D., & Reese, R. J. (2012, August). *Validity of a psychotherapy outcome measure: The outcome rating scale*. Poster presented at the annual convention of the American Psychological Association, Orlando, FL.
32. *Birdwhistell, J. L., Ruble, L. A., Toland, M. D., & Usher, E. L. (2012, May). *Psychometric properties of a newly developed teacher self-efficacy scale for teachers of students with ASD*. Poster presented at the annual convention of the International Meeting for Autism Research, Toronto, Canada.
31. *Rojas, J. P., Usher, E. L., & Toland, M.D. (2012, May). *Creativity and grit as predictors of mathematics achievement*. Poster presented at the annual convention of the Association of Psychological Science, Chicago, IL.
30. Bottge, B. A., Gassaway, L., *Butler, M., Ma, X., & **Toland, M. D.** (2012, April). *Effects of enhanced anchored instruction on middle school students with disabilities in math*. Paper presented at the annual convention of the American Educational Research Association, Vancouver, Canada.
29. *Li, Z., **Toland, M. D.**, & *Yuchen, Y. (2012, April). *A comparison of Bayesian, MLM, and WLSMV in CFA under a range of non-ideal situations: How small of a sample size can we work with to get accurate results in a CFA model?* Paper presented at the annual convention of the American Educational Research Association, Vancouver, Canada.
28. *Birdwhistell, J. L., Ruble, L. A., **Toland, M. D.**, & Usher, E. L. (2012, March). *Preliminary study on the development of the Autism Self-Efficacy Scale for Teachers (ASSET)*. Poster presented at the second annual Interdisciplinary Graduate Student Conference for Research on Children at Risk, Lexington, KY.
27. *Rojas, J. P., *Reser, J. A., **Toland, M. D.**, & Usher, E. L. (2012, March). *Psychometrics of the Grit scale*. Poster presented at the Spring Research Conference, Louisville, KY.
26. Danner, F., *Tombari, A., & **Toland, M. D.** (2011, October). *Associations between the onset of regular smoking and trajectories of depressive symptoms from adolescence through young adulthood*. Paper presented at the 5th conference on Emerging Adulthood, Providence, RI.

25. **Toland, M. D.**, & Usher, E. (2011, August). *Math self-efficacy: How many categories do we really need?* Poster presented at the annual convention of the American Psychological Association, Washington, DC.
24. Ruble, L., McGrew, J., & **Toland, M. D.** (2011, August). *Randomized study of teacher training in Autism.* Paper presented at the annual convention of the American Psychological Association, Washington, DC.
23. Bottge, B., Cohen, A., *Cho, S. J., **Toland, M. D.**, Ma, X. (2011, April). *Evaluating the efficacy of Enhanced Anchored Instruction for middle school students with learning disabilities in math.* Poster presented at the annual convention of the American Psychological Association, New Orleans, LA.
22. *Tombari, A., **Toland, M. D.**, & Sparks, E. H. (2011, April). *Parallel analysis with ordinal data under complex structure.* Paper presented at the annual conference of the National Council on Measurement in Education, New Orleans, LA.
21. *Li, Z., **Toland, M. D.**, & *Tombari, A. (2011, April). *Comparison of the CES-D Factor Structure using Three Estimation Methods: Bayesian, MLM, and WLSMV.* Paper presented at the annual Spring Research Conference, Cincinnati, OH.
20. *Henchy, A., **Toland, M. D.**, Tombari, A. K., & Piercey, R. R. (2010, August). *A review and assessment of reliability generalization research.* Poster presented at the annual convention of the American Psychological Association, San Diego, CA.
19. **Toland, M. D.**, & Danner, F. (2010, August). *A National Longitudinal Study of Children's BMI Growth Trajectories.* Poster presented at the annual convention of the American Psychological Association, San Diego, CA.
18. **Toland, M. D.**, Reese, R. J., & Hopkins, N. B. (2010, August). *The Psychotherapy Dose-Response Relationship: Does Session Frequency Matter?* Poster presented at the annual convention of the American Psychological Association, San Diego, CA.
17. Ruble, L., McGrew, J., & **Toland, M. D.** (2010, May). *Teacher, caregiver, and child predictors of educational outcomes of children with autism.* Poster presented at the international meeting for Autism research, Philadelphia, PA.
16. Calderhead, W., & **Toland, M. D.** (2010, April). *Growth and value-added models.* Invited presentation for Institute for Educational Research Brown Bag Seminar, University of Kentucky, Lexington, KY.
15. Smith, A. A., Kirk, A., *Birdwhistell, J. L., Ruble, L., & **Toland, M. D.** (2009, May). *The influence of caregiver verbal interactions during conjoint consultation on child outcomes.* Poster presented at the International Meeting for Autism Research, Chicago, IL.
14. Givens, J. E., **Toland, M. D.**, Swearer, S., & Bovaird, J. A. (2009, April). *Evaluating the children's version of the reading the mind in the eyes test using Item Response Theory.* Paper presented at the Biennial Meeting of the Society for Research in Child Development, Denver, CO.
13. **Toland, M. D.**, & De Ayala, R. J. (2009, April). *The accuracy of BILOG item parameter standard error of estimates.* Paper presented at the annual conference of the National Council on Measurement in Education, San Diego, CA.
12. Bovaird, J. A., Sheridan, S. M., Glover, T., Garbacz, S. A., & **Toland, M. D.** (2008, June). *Synthesizing single-case research: Comparing meta-analysis approaches for repeated behavioral observations on students clustered within classroom.* Paper presented at the Institute for Education Science Research Conference, Washington, DC.

11. **Toland, M. D.**, Bovaird, J., & Kupzyk, K. (2008, April). *On the impact of longitudinal measurement noninvariance on growth curve modeling*. Paper presented at the annual conference of the American Educational Research Association, New York, NY.
10. **Toland, M. D.** (2008, March). *Response scales and item writing guidelines for attitudinal measures*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
9. **Toland, M. D.**, & Kupzyk, K. (2007, December). *Exploratory factor analysis vs. principal components analysis vs. confirmatory factor analysis*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
8. Glover, T., & **Toland, M. D.** (2007, April). *Single-case/small-n research design and data analysis*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
7. **Toland, M. D.**, & Kupzyk, K. (2007, February). *Approaches for evaluating measurement invariance*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
6. Bovaird, J., Kupzyk, K., & **Toland, M. D.** (2006, December). *Missing data: What it is and what you can do about it*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
5. **Toland, M. D.** (2006, September). *Item response theory: Designing psychometrically sound instruments*. Presentation for the Nebraska Center for Research on Children, Youth, Families, and Schools Research Methodology Series, Lincoln, NE.
4. **Toland, M. D.**, Bruning, R., & Bodvarsson, M. (2004, June). *Promoting learner engagement, confidence, and critical thinking within the context of a web-based unit on norm-referenced testing*. Poster presented at the Nebraska symposium of information technology in education, Lincoln, NE.
3. **Toland, M. D.** (2004, April). *Promoting learner engagement, confidence, and critical thinking within the context of a web-based unit on norm-referenced testing*. Paper presented at the College of Education and Human Sciences: Student Presentation, Lincoln, NE.
2. Igo, B., Kiewara, K., **Toland, M. D.**, & Flowerday, T. (2002, April). *The appropriateness of efficacy judgments (EA): Norm-referenced and criterion referenced comparisons of high school students and college students*. Paper presented at the annual conference of the American Educational Research Association, New Orleans, LA.
1. Igo, B., McCrudden, M., **Toland, M. D.**, & Kiewara, K. (2001, April). *The impact of spatial organization on working memory and cognitive load: Linear versus matrix presentation*. Paper presented at the annual conference of the American Educational Research Association, Seattle, WA.

Technical Reports

20. *Love, A. M. A., **Toland, M. D.** & Hearn, J. E. (2016, September). Development and Implementation of a Revised Vulnerability Tool. Lexington, KY: University of Kentucky.

19. *Li, Z., **Toland, M. D.**, & *Gooden, C. (2016, April). Content validity study for Hawaii Early Learning Profile Birth-3 Years – Final report. Lexington, KY: University of Kentucky.
18. *Gooden, C., **Toland, M. D.**, & *Li, Z. (2016). Validity evidence for Hawaii Early Learning Profile Birth-3 Years: Correlations with Battelle Developmental Inventory, 2nd Edition - Final report. Lexington, KY: University of Kentucky.
17. *Love, A. M. A., Hearn, J. E., & **Toland, M. D.** (2015, December). Evaluation of the Vulnerability Assessment Instrument (VAI). Lexington, KY: University of Kentucky.
16. **Toland, M. D.**, *Gooden, C., & *Li, Z. (2015, September). Reliability evidence for the Hawaii Early Learning Profile Birth-3 Years: Interrater agreement with child assessment crediting - final report. Lexington, KY: University of Kentucky.
15. **Toland, M. D.**, Buckendahl, C. W., Davis, S. L., Badgett, B. A., Romhild, A., Foley, B. P., & Norman, B. (2006, June). Setting Performance Standards for South Dakota’s Mathematics Assessments: Final Report. South Dakota Department of Education.
14. **Toland, M. D.**, Buckendahl, C. W., Davis, S. L., Badgett, B. A., Romhild, A., Foley, B. P., Norman, B., & Rodeck, E. M. (2006, June,). Standard Setting Study for South Dakota’s English Language Proficiency Assessments for Students Identified as Limited English Proficient: Final Report. South Dakota Department of Education.
13. **Toland, M. D.**, Davis, S. L., Buckendahl, C. W., Romhild, A., & Badgett, B. A. (2006, May) Standard Setting Study for South Dakota’s Alternate Assessment System for Students with Significant Cognitive Disabilities: Rating Portion of the Dakota STEP-A Assessment: Final Report. South Dakota Department of Education.
12. **Toland, M. D.**, Foley, B. P., & Norman, B. L. (2006, June). Evaluating the Alignment of Items Added to the Harcourt Assessment in Mathematics with the South Dakota’s Academic Content Standards in Mathematics at Grades 3 and 11 Final Report. South Dakota Department of Education.
11. Buckendahl, C., **Toland, M. D.**, & Schenk, A. (2006, May). Millard Public Schools Grade 7 Reading Assessment Standard Setting Study: Final Report. Millard Public Schools.
10. Buckendahl, C., **Toland, M. D.**, & Foley, B. (2006, May,). Millard Public Schools Grade 4 Reading Assessment Standard Setting Study: Final Report. Millard Public Schools.
9. **Toland, M. D.**, Buckendahl, C. W., & Schenk, A. (2006, April). Millard public schools grade 10 analytical writing assessment standard setting study: Final Report. Millard Public Schools.
8. **Toland, M. D.**, Plake, B. S., & Badgett, B. A. (2006, April). Reconciliation of Buros and Harcourt Educational Measurement’s alignment of the Dakota STEP-A tests to South Dakota’s alternate content standards for reading at grades 4 and 5: Final Report. South Dakota Department of Education.
7. **Toland, M. D.**, Plake, B. S., & Badgett, B. A. (2006, April). Reevaluating the Buros and Harcourt Educational Measurement’s Alignment of the Dakota STEP Tests to South Dakota Core Content Standards for Reading: Final Report. South Dakota Department of Education.
6. **Toland, M. D.**, Buckendahl, C. W., & Römhild, A. (2005, December). Millard public schools grade 8 social studies assessment standard setting study: Final Report: Millard Public Schools
5. **Toland, M. D.**, Buckendahl, C. W., Impara, J. C., Schenk, A. M., Römhild, A., & Foley, B. P. (2005, December). Evaluating the alignment of select achievement tests with Nebraska’s academic content standards in reading at grade 1 and grade level expectation at grade 3: Final Report. Nebraska Department of Education.

4. **Toland, M. D.**, Buckendahl, C. W., Impara, J. C., Schenk, A. M., Römheld, A., & Foley, B. P. (2005, December). Evaluating the alignment of select achievement tests with Nebraska's academic content standards in reading at grade 4 and grade level expectation at grades 5 and 6: Final Report. Nebraska Department of Education.
3. **Toland, M. D.**, Buckendahl, C. W., Impara, J. C., Schenk, A. M., Römheld, A., & Foley, B. P. (2005, December). Evaluating the alignment of select achievement tests with Nebraska's grade level expectation at grade 7 and academic content standards in reading at grades 8 and 12: Final Report. Nebraska Department of Education.
2. **Toland, M. D.**, Plake, B. S., & Römheld, A. (2005, October). Evaluating the alignment of the Dakota STEP-A alternate assessments with South Dakota's alternate academic content standards in reading and mathematics at grades K – 12: Final Report. Nebraska Department of Education.
1. Carlson, D., **Toland, M. D.**, & Simpson, M. (2002, October). The LNE transition project: Building a better bridge to high school success 2001-2002: Final Report. Lincoln North East High School.

UNIVERSITY TEACHING

+ Denotes that course was taught Asynchronous.

GRADUATE TEACHING

Course	Institution	Semester
Professional Doctoral Seminar in Educational Psychology	University of Kentucky	Fall, 2018, 2019
Structural Equation Modeling	University of Kentucky	Spring, 2017; Summer, 2017+, Summer, 2020+ ; Spring, 2019
Item Response Theory	University of Kentucky	Spring, 2012, 2014, 2016, 2020
Introduction to Measurement Theory & Techniques	University of Kentucky	Fall, 2009, 2010, 2013-2019, Spring, 2012
Psychological & Educational Tests & Measurement	University of Kentucky	Summer, 2013+, 2014+, 2015+, 2016+
Multivariate Analysis in Educational Research	University of Kentucky	Spring, 2010, 2011, 2016, Fall, 2010, Fall, 2012
Research Design and Analysis in Education	University of Kentucky	Spring, 2009, Fall, 2012, 2014, 2015+
Gathering, Analyzing, and Using Educational Data II	University of Kentucky	Fall, 2011, 2013, Spring, 2013, 2018
Gathering, Analyzing, and Using Educational Data I	University of Kentucky	Summer, 2009
Methodology of Educational Research	University of Kentucky	Fall, 2008, 2009, Spring, 2009, 2014, 2016+, Summer, 2012
Intermediate Statistics	University of Nebraska-Lincoln	Spring, 2004, 2005, Summer, 2005,

Statistical Methods	University of Nebraska-Lincoln	Summer, 2002-2004, 2007, Fall, 2004
Introduction to Educational Measurement	University of Nebraska-Lincoln	Summer, 2005-2007

UNDERGRADUATE TEACHING

Course	Institution	Semester
Measurement & Evaluation for Fitness & Nutrition	University of Nebraska-Lincoln	Fall, 2004
Statistical Methods	University of Nebraska-Lincoln	Fall, 1999, Spring, 2000, Summer, 2000-2002

STUDENT ADVISING**DOCTORAL DISSERTATION CHAIR/CO-CHAIR**

Student, Degree if Conferred, Program, University of Kentucky	Role, Term of Service
17. Nan Li, Quantitative and Psychometric Methods	Chair, 2019-2020
16. Hirotaka Kato, Quantitative and Psychometric Methods	Chair, 2019-2020
15. Cara Worrick, Educational Psychology	Co-chair, 2019-2020
14. Lijun Shen, Quantitative and Psychometric Methods	Chair, 2018-2020
13. Chunling Niu, Quantitative and Psychometric Methods	Chair, 2018-2020
12. Chen Qiu, Quantitative and Psychometric Methods	Chair, 2017-2020
11. John Eric Novosel-Lingat, PhD, 2020, Educational Psychology	Chair, 2018-2020
10. David Dueber, PhD, 2020, Quantitative and Psychometric Methods	Chair, 2017-2020
9. Carol Hanley, PhD, 2020 Quantitative and Psychometric Methods	Chair, 2016-2020
7. Caihong Li, PhD, 2018, Quantitative and Psychometric Methods	Chair, 2015-2018
6. Joanna Aalboe, Educational Policy Studies and Evaluation	Co-Chair, 2014-2020
5. Anthony Setari, PhD, 2016, Educational Sciences	Co-chair, 2014-2016
4. Carrie Morris, PhD, 2017, Educational Leadership	Co-chair, 2013-2017
3. Carolyn Gooden, PhD, 2016, Educational Psychology	Chair, 2013-2016
2. Zijia Li, PhD, 2016, Educational Psychology	Chair, 2010-2016
1. Angela Tombari, PhD, 2016, Educational Psychology	Chair, 2008-2016

SERVICE ON DOCTORAL COMMITTEES

Student, Degree if Conferred, Program, University of Toledo	Role, Term of Service
3. Chris Wojciechowski, Research and Educational Statistics	Member, 2020-
2. Sultan Mutahhiri, Educational Studies	Member, 2020-
1. Chris Harris, PhD, Teacher Education	Member, 2020-
Student, Degree if Conferred, Program, University of Kentucky	Role, Term of Service
47. Jaeyun Han, Educational Psychology	Member, 2019-2020
46. Chance McCullough, Marketing	Member, 2020
45. Danielle Rosenkrantz, PhD, 2019, Counseling Psychology	Member, 2017-2019
45. Kateri Miller, PhD, 2020, Music Education	Member, 2018-2020
44. Garrick Grace, PhD, 2020, Educational Leadership	Member, 2017-2020
43. Rongxiu Wu, PhD, 2020, Quantitative and Psychometric Methods	Member, 2017-2020
42. Jennifer Burris, Educational Psychology	Member, 2017-2020
41. Calah Ford, Educational Psychology	Member, 2017-2020
40. Hao Zhou, PhD, 2019, Quantitative and Psychometric Methods	Member, 2016-2019
39. Albert Ksinan, Family Sciences, PhD, 2018, Family Sciences	Member, 2016-2016
38. Xian Wu, Quantitative and Psychometric Methods	Member, 2016-2020
37. Abbey Love, PhD, 2019, Educational Psychology	Member, 2016-2020
36. Suzanne Anandappa, Educational Policy Studies and Evaluation	Member, 2016-2020
35. Timothy Tanner, PhD, 2018, Educational Leadership	Member, 2016-2018
34. Colleen Cornelius, PhD, 2018, School Psychology	Member, 2016-2018
33. Paul Barrett, EdD, 2020, Interdisciplinary Education Studies	Member, 2015-2020
32. Alex Lengerich, PhD, 2019, Counseling Psychology	Member, 2015-2019
31. Jakub Makuska, PhD, 2019, Family Sciences	Member, 2013-2019
30. Michael Osborne, PhD, 2019, Curriculum & Instruction	Member, 2013-2019
29. Jing Yuan, PhD, 2018, Educational Psychology	Member, 2011-2018
28. Jennifer Ballard-King, Social Work, University of Louisville	Member, 2017-2018
27. Wyatt Taylor, Marketing	Member, 2017-2018
26. Jennifer Salamone, PhD, 2017, School of Music	Member, 2017
25. Rebecca Crawford, PhD, 2018, Special Education	Member, 2015-2018
24. Maureen Cavalcanti, PhD, 2017, STEM Education	Member, 2015-2017

23. Megan Carter, PhD, 2015, Psychology	Outside Examiner, 2015
22. Kristi Lunceford, Early Childhood Education	Member, 2014-2017
21. Josh Heinrich, Educational Psychology	Member, 2014-2015
20. Shannon Phelps, Kinesiology and Health Promotion	Member, 2014
19. Bharath Kumar, PhD, STEM Education	Member, 2014-2016
18. Richard Mensah, PhD, 2016, Educational Policy Studies & Evaluation	Member, 2013-2016
17. David Weisenhorn, Counseling Psychology	Member, 2013-2014
16. Merryn Cole, PhD, 2017, STEM education	Member, 2013-2017
15. Nick Simpson, Counseling Psychology	Member, 2013-2015
14. Kate Johnson, PhD, 2015 STEM Education	Member, 2014-2015
13. Amanda Butz, PhD, 2015, Educational Psychology	Member, 2012-2015
12. Janice Carter-Smith, Communication Sciences & Disorders	Member, 2012-2014
11. Shanshan Hu, PhD, 2018, Educational Psychology	Member, 2012-2018
10. David Little, PhD, 2014, STEM education	Member, 2012-2014
9. Jill Priesmeyer, PhD, 2014, School Psychology	Member, 2012-2014
8. Paul Stephens, PhD, 2014, Educational Policy Studies & Evaluation	Member, 2010-2014
7. Anyisia Ensslen, PhD, 2013, Educational Leadership	Outside Examiner, 2013
6. Raven Piercey, PhD, 2013, Educational Psychology	Member, 2010-2013
5. Alex Henchy, PhD, 2013, Educational Psychology	Member, 2009-2013
4. Anna Hall, PhD, 2012, Special Education	Member, 2010-2012
3. Sarita Shukla, PhD, 2012, Educational Psychology	Member, 2008-2012
2. Benjamin Freer, PhD, 2011, Psychology	Outside Examiner, 2011
1. Traci Wilde-Dundas, PhD, 2009, Curriculum & Instruction	Member, 2009

SERVICE ON MASTER'S AND SPECIALIST COMMITTEES

Student, Degree if Conferred, Program, University of Kentucky	Role, Term of Service
8. William Thompson, MS, 2019, Electrical and Computer Engineering	Member, 2019
7. John Witry, MS, 2020, Educational Psychology	Member, 2018-2020
6. Morgan Dow, STEM education	Member, 2017-2018
5. Renae Mantooth, MS, 2017, Educational Psychology	Member, 2016-2017
4. Abbey Love, MS, 2016, Educational Psychology	Chair, 2014-2016
3. Caihong Li, MS, 2015, Educational Psychology	Chair, 2013-2015

2. Meng Fan, MS, 2013, Educational Psychology Member, 2012-2013
1. Shanice Armstrong, EdS, 2013, Counseling Psychology Member, 2013

PROFESSIONAL DEVELOPMENT

Scholar in the Getting SMART About Adaptive Interventions in Education workshop, Institute for Social Research, University of Michigan (2019)

Online Course Design Boot Camp, College of Education, University of Kentucky (2017)

Using R for Everyday Research & Managing Simulation Studies with R, NCME Training Course (2011)

Categorical Data Analysis for Social Science: Quantitative Methods Series, Portland State University (2010)

PROFESSIONAL SERVICE

GRANT PROPOSAL REVIEWER

NSF Panelist 2021

EDITORIAL BOARDS

Quantitative Psychology and Measurement (specialty section of Frontiers in Psychology and Frontiers in Applied Mathematics and Statistics) 2020-present

Frontiers in Psychology – Educational Psychology 2020- present

Frontiers in Psychology – Educational Psychology 2018-present

The Journal of Early Adolescence 2018-present

The Journal of School Psychology, Statistical and Methodological Advisor 2016-present

Studies in Educational Evaluation 2011-present

EDITORIAL SERVICE

The Journal of School Psychology 2015-2016

Co-Guest Editor, Special Issue on Quantitative Methods

The Journal of Early Adolescence

Co-Guest Editor, Special Issue on Modern Data Analysis Techniques: Part II 2014-2016

Co-Guest Editor, Special Issue on Modern Data Analysis Techniques: Part I 2012-2013

AD HOC REVIEWER

Educational Measurement: Issues and Practice 2021-present

Structural Equation Modeling 2020-present

Journal of Early Intervention 2021-present

AERA Open 2019

<i>Statistical Methods & Applications</i>	2019-present
<i>Educational Psychology: An International Journal of Experimental Educational Psychology</i>	2019
<i>The Counseling Psychologist</i>	2019-present
<i>Journal of Substance Abuse Treatment</i>	2019
<i>PLOS ONE</i>	2019
<i>International Journal of Psychological Research</i>	2018
<i>Athens Journal of Education</i>	2018
<i>Frontiers in Psychology – Quantitative Psychology and Measurement</i>	2018-present
<i>Frontiers in Psychology – Educational Psychology</i>	2018-present
<i>Psychological Assessment</i>	2018-present
<i>Educational & Psychological Measurement</i>	2017-present
<i>Journal of Clinical Psychology</i>	2017-present
<i>Contemporary Educational Psychology</i>	2016
<i>International Journal of Collaborative Engineering</i>	2015
<i>International Journal of Psychology of Religion</i>	2015
<i>Journal of Early Adolescence</i>	2012-2018
<i>Youth and Society</i>	2012-present
<i>Studies in Educational Evaluation</i>	2010-present
<i>Early Education and Development</i>	2008-present
<i>Journal of School Psychology</i>	2012-present
<i>American Journal of Evaluation</i>	2010
<i>Journal of Early Intervention</i>	2008-2010
<i>British Journal of Mathematical and Statistical Psychology</i>	2009

CONFERENCE PROPOSAL REVIEWER, JUDGE (*), OR DISCUSSANT (+)

Midwest Graduate Research Symposium (MGRS)*	2021
National Council on Measurement in Education (NCME)+	2019
Society for Research in Child Development (SRCD), Methods, History, Theory	2018
American Educational Research Association (AERA), Division D, In-progress research Gala	2009-2011, 2014-2016, 2021
AERA Division D, Measurement and Research Methodologies, Section 1 (Psychometrics, Measurement, and Assessment)	2013-2018, 2021-2022
NCME	2008, 2011, 2013

NCME, Graduate Student Poster Session+	2011-2012, 2014
APA, Division 15, Educational Psychology	2014, 2018
National Conference on Undergraduate Research (NCUR), Education	2014

SERVICE TO JUDITH HERB COLLEGE OF EDUCATION AT THE UNIVERSITY OF TOLEDO

Member, Community Advisory Board	Fall, 2021-Present
Member (Dean's designee, non-voting), Student Engagement and Technology Committee	Fall, 2021-Present
Guest speaker, Introduction to IRT using IRTPRO	Spring, 2021
Guest speaker, The Importance of Measurement Invariance in Cross cultural Research	Spring, 2021
Guest speaker, Aligning Research Questions with Design and Analysis	Spring, 2021
Member, Dean's advisory board	Fall, 2020-Present
Member, Search committee for marketing and recruitment position	Fall, 2020

SERVICE TO THE UNIVERSITY OF TOLEDO

Member, Advisory Committee of Undergraduate Research (ACUR)	Fall, 2021-Present
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SERVICE TO UNIVERSITY OF KENTUCKY (2008-2020)

Member, Institutional Effectiveness System Steering Committee	Summer, 2019-Spring, 2020
Affiliate, Center for Equality and Social Justice	Spring, 2019- Summer, 2020
Provost Faculty Fellow, Student and Academic Life (SAL)	Fall, 2018- Summer, 2020
Member, Search committee for Associate Director of Residential Education for Office of Residence Life	Fall, 2018
Assessment Advisor to Associate Provost, Student and Academic Life (SAL)	Fall, 2017-Summer, 2018
Member, Quantitative Initiative for Policy and Social Research (QIPSR)	Fall, 2016- Summer, 2020
Invited presenter, Presentation for Social Psychology program, Scale Development and Evaluation Overview	Fall, 2018
Invited presenter, Workshop presentation for Quantitative Initiative for Policy and Social Research (QIPSR), Intensive IRT workshop	Fall, 2015
Invited presenter, Workshop presentation for Quantitative Initiative for Policy and Social Research (QIPSR), From alpha to omega and beyond	Fall, 2015
Advisor, Club Tennis at University of Kentucky	Fall, 2014- Spring, 2020
Nominated Member, Senate Council Adhoc Committee on Teacher Course Evaluation	Spring, 2014
Guest speaker, Introduction to IRT using IRTPRO, Department of	Spring, 2013, 2015, 2019

Family Sciences, (Alex Vazsonyi)

Guest speaker, Standardized test construction with IRT, Department of
Hispanic Studies (Alan Brown)

Fall, 2015

SERVICE TO COLLEGE OF EDUCATION AT THE UNIVERSITY OF KENTUCKY

Member, Faculty and Student Recognition Committee Spring, 2020

At Large Member, College of Education Faculty Council Fall, 2019-Spring, 2020

Member, Recruitment Task Force Fall, 2019- Spring, 2020

Co-leader, College of Education New Faculty and Postdoc Mentoring
Committee Fall, 2019- Spring, 2020

Director of Graduate Studies, Department of Educational, School, and
Counseling Psychology Fall, 2017- Spring, 2020

Chair, Educational Psychology Program Fall, 2017-Summer, 2018

Co-chair, Research Advisory Committee Fall, 2017- Spring, 2020

Coordinator, Quantitative and Psychometric Methods Program Spring, 2017- Spring, 2020

Member, Search committee for Two School Psychology Faculty
Positions Fall, 2018-Spring, 2019

Chair, External Review Committee for Department of Early
Childhood, Special Education, and Rehabilitation Counseling in
College of Education Spring, 2017

Member, Introductory statistics teaching assistantship search
committee Spring, 2010-Spring, 2019

Member, Intermediate statistics and evaluation center teaching
assistantship search committee Spring, 2014-Spring, 2017

Member, Merit Task Force Spring, 2016

Member, Evaluation Center's Advisory Board Fall, 2013-Spring, 2017

Member, Search committee for 3rd (Interim) Director of Evaluation
Center Summer, Fall, 2016

Member, Staff search committee for Department Spring-2014

Member, College of Education Strategic Planning Committee Fall, 2014

Member, College of Education Work group on Data Management,
Forecasting, Research, and Assessment Fall, 2014

Member, College of Education Work Group on Student recruitment,
retention, graduation, & post-grad success: Impact on value-based
budgeting Fall, 2013-Spring, 2014

Member, Search committees for 2nd Director and Assistant Director Spring, 2014

of Evaluation Center	
Member, Search committee for Department Chair	Spring, 2014
Member, Department Brochure Committee	Spring, 2014
Chair, Library advisory committee	Fall, 2010-Fall, 2014
Member, College of Education Work Group on Achieving top national & international rankings	Fall, 2012-Spring, 2013
Member, Research advisory committee	Fall, 2008-Spring, 2013
Member, Search committee for 1st Director of Evaluation Center	Spring, 2013
Organizer, Department Research Colloquium	Fall, 2009-Spring, 2011
Member, Library advisory committee	Fall, 2009-Spring, 2010
Member, P-12 Professional Development Task Force Steering Committee	Spring, 2009

SERVICE TO COMMUNITY

Advised The Learning Center at Linlee on an Employability project	Fall, 2014
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PROFESSIONAL AFFILIATIONS

American Psychological Association (APA)

Division 5 (Quantitative and Qualitative Methods – formally Evaluation, Measurement, and Statistics)

Division 15 (Educational Psychology)

American Educational Research Association (AERA)

Division D (Measurement & Research Methodology)

National Council on Measurement in Education (NCME)