

Curriculum Vitae | Tony Albano

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Education

- Ph.D., University of Minnesota, May, 2012
Program: Educational Psychology
- B.S., Brigham Young University, 2006
Program: Psychology

Professional Experience

- *Associate Professor*, School of Education, University of California, Davis, 2019 - Present
- *Associate Professor*, Educational Psychology, University of Nebraska, Lincoln, 2018 - 2019
- *Assistant Professor*, Educational Psychology, University of Nebraska, Lincoln, 2012 - 2018

Teaching

Current Courses

- UCD: EDU 119: Use and Misuse of Standardized Testing
- UCD: EDU 203: Educational Testing and Evaluation
- UCD: EDU 292: Advanced Measurement
- UCD: EDU 286A: Data-Driven Decision-Making

Previous Courses

- UNL: EDPS 991: Equating
- UNL: EDPS 900D: Survey Methodology in Educational Research
- UNL: EDPS 892: Introduction to Educational Assessment
- UNL: EDPS 870: Introduction to Educational and Psychological Measurement
- UNL: EDPS 859: Statistical Methods
- UNL: EDPS 845: R Programming

Consulting

- *Psychometrician*, Kidaptive, Inc, 2019 - 2020
Developing algorithms for computerized adaptive testing
- *Evaluator*, Buros Center for Testing, 2012 - 2019
Auditing psychometric processes for state testing programs

- *Psychometrician*, FastBridge Learning, LLC, 2014 - 2018
Longitudinal modeling for progress monitoring assessment system
- *Psychometrician*, RTI International, 2012 - 2016
Conducting equating in longitudinal international assessment systems
- *Evaluator*, Michigan Department of Education, 2008, 2012
Psychometric evaluation and reporting for alternate assessment program
- *Psychometrician*, Questar Assessment, Inc, 2011
Item calibration for state alternate assessment program
- *Psychometrician*, Michigan State University, 2008 - 2010
Support in item development, analysis, and scaling in the Teacher Education and Development Study in Mathematics

Publications

Journal Articles

1. **Albano, A. D.**, McConnell, S. R., Lease, E. M., & Cai, L. (2020). Contextual interference effects in early assessment: Evaluating the psychometric benefits of item interleaving. *Frontiers in Education*, 5(133), 1–9.
2. Peteranetz, M. S. & **Albano, A. D.** (2020). Development and evaluation of the Nebraska Assessment of Computing Knowledge. *Frontiers in Computer Science*, 2(11), 1–8.
3. **Albano, A. D.**, & Wiberg, M. (2019). Linking with external covariates: Examining accuracy by anchor type, test length, ability difference, and sample size. *Applied Psychological Measurement*, 43, 597–610.
4. Zhang, J., Wang, L., Deng, X., Fei, G., Jin, L., Pan, X., Cai, L., **Albano, A. D.**, & Zhong, C. (2019). Five-minute cognitive test as a new quick screening of cognitive impairment in the elderly. *Aging and Disease*, 10(6), 1258–1269.
5. **Albano, A. D.**, Cai, L., Lease, E. M., & McConnell, S. R. (2019) Computerized adaptive testing in early education: Exploring the impact of item position effects on ability estimation. *Journal of Educational Measurement*, 56, 437–451.
6. Beck, M. F., **Albano, A. D.**, & Smith, W. (2019). Person-fit as an index of inattentive responding: A comparison of methods using polytomous survey data. *Applied Psychological Measurement*, 43, 374–387.
7. **Albano, A. D.**, Christ, T. J., & Cai, S. (2018). Evaluating equating in progress monitoring measures using multilevel modeling. *Measurement: Interdisciplinary Research and Perspectives*, 16, 168–180.
8. Kutaka, T. S., Smith, W. M., **Albano, A. D.**, Edwards, C. P., Ren, L., Beattie, H. L., & Lewis, J. W. (2017). Connecting teacher professional development and student mathematics achievement: A four-year study of an elementary mathematics specialist program. *Journal of Teacher Education*, 68, 140–154.
9. **Albano, A. D.** (2016). equate: An R package for observed-score linking and equating. *Journal of Statistical Software*, 74(8), 1–36.
10. Wyse, A. E., & **Albano, A. D.** (2015). Considering the use of general and modified assessment items in computer adaptive testing. *Applied Measurement in Education*, 28, 156–167.

11. **Albano, A. D.** (2015). A general linear method for equating with small samples. *Journal of Educational Measurement*, *52*, 55–69.
12. Miller, B. G., Cox, C. J., Hougham, R. J., Walden, V. P., Eitel, K. B., & **Albano, A. D.** (2015). Adventure learning as a curricular approach that transcends geographies and connects people to place. *The Curriculum Journal*, *26*, 290–312.
13. Bradfield, T., Besner, A., Wackerle-Hollman, A., **Albano, A. D.**, Rodriguez, M. C. & McConnell, S. (2014). Redefining Individual Growth and Development Indicators: Oral Language. *Assessment for Effective Intervention*, *39*, 233–244.
14. **Albano, A. D.** (2013). Multilevel modeling of item position effects. *Journal of Educational Measurement*, *50*, 408–426.
15. **Albano, A. D.**, & Rodriguez, M. C. (2013). Examining differential math performance by gender and opportunity to learn. *Educational and Psychological Measurement*, *73*, 836–856.
16. Babcock, B., & **Albano, A. D.** (2012). Rasch scale stability in the presence of item parameter and trait drift. *Applied Psychological Measurement*, *36*, 565–580.
17. Babcock, B., **Albano, A. D.**, & Raymond, M. R. (2012). Nominal weights mean equating: A method for very small samples. *Educational and Psychological Measurement*, *72*, 608–628.
18. **Albano, A. D.**, & Rodriguez, M. C. (2012). Statistical equating with measures of oral reading fluency. *Journal of School Psychology*, *50*, 43–59.
19. Nelson, D. A., Robinson, C. C., Hart, C. H., **Albano, A. D.**, & Marshall, S. J. (2010). Italian preschoolers' peer-status linkages with sociability and subtypes of aggression and victimization. *Social Development*, *19*, 698–720.

Books

1. Rodriguez, M. C., & **Albano, A. D.** (2017). *The college instructor's guide to writing test items: Measuring student learning*. New York, NY: Routledge.
2. **Albano, A. D.** (2017) *Introduction to educational and psychological measurement: Using R*. UNL Digital Commons, Available from <http://digitalcommons.unl.edu/edpsychpapers/251/>

Book Chapters

1. **Albano, A. D.** (in press). Measurement. In S. M. Brookhart (Ed.), Assessment Section, D. Fisher (Ed.), *The Routledge Encyclopedia of Education*. New York, NY: Taylor & Francis.
2. Daly, E. J., III, Holtz, J., Young, N. D., **Albano, A. D.**, & Sommerhalder, M. (2019). Using self-report in psychological assessments of sexually violent predator evaluations. In D. S. Bromberg & W. T. O'Donohue (Eds.), *Sexually violent predators: A clinical science handbook*. New York, NY: Springer.
3. Cai, L., & **Albano, A. D.** (2018). Examining sources of gender DIF using cross-classification multilevel IRT models. In M. T. Tatto, M. C. Rodriguez, W. M. Smith, M. Reckase, & K. Bankov (Eds.), *Exploring the mathematics education of teachers using TEDS-M data*. New York, NY: Springer.
4. Kutaka, T. S., Smith, W. M., & **Albano, A. D.** (2018). Differences in beliefs and knowledge for teaching mathematics: An international study of future teachers. In M. T. Tatto, M. C. Rodriguez, W. M. Smith, M. Reckase, & K. Bankov (Eds.), *Exploring the mathematics education of teachers using TEDS-M data*. New York, NY: Springer.

5. **Albano, A. D.**, & Rodriguez, M. C. (2018). Item development: Research and practice. In S. N. Elliott, R. J. Kettler, P. A. Beddow, & A. Kurz (Eds.) *Handbook of accessible instruction and testing practices: Issues, innovations, and applications*. New York, NY: Springer.
6. **Albano, A. D.**, Chin, T. & Geisinger, K. F. (2016). Item response theory. In D. S. Dunn (Ed.), *Oxford Bibliographies in Psychology*. New York, NY: Oxford University Press.

Software & Research Tools

1. **Albano, A. D.** (2018). equate: Observed-score linking and equating [Computer software, R package version 2.0-7]. Available from <http://CRAN.R-project.org/package=equate>
2. **Albano, A. D.** (2017). Proola: A web application for collaborative assessment development. Available from <http://proola.org/>

Anthony D. Albano, PhD, University of California at Davis Peggy Brickman, PhD, University of Georgia Melissa Csikari, MS, Howard Hughes Medical Institute David Julian, PhD, University of Florida Rebecca B. Orr, PhD, Collin College Michael C. Rodriguez, PhD, University of Minnesota

Reports & Manuals

1. **Albano, A. D.**, Brickman, P., Csikari, M., Julian, D., Orr, R. B., & Rodriguez, M. (2020). *Integrating Testing and Learning*. Washington, DC: HHMI BioInteractive.
2. **Albano, A. D.** (2013). *Ghana NEA Equating Report*. Research Triangle Park, NC: RTI International.
3. Wyse, A. E., & **Albano, A. D.** (2012). *Reading, Mathematics, and Writing: Michigan's Alternate Assessment Program Based on Modified Achievement Standards Technical Report*. Lansing, MI: Office of Educational Assessment and Accountability, Michigan Department of Education.
4. Rodriguez, M. C., **Albano, A. D.**, & Haladyna, T. M. (2011). Item writing for test developers, researchers, and teachers. *Examinations Research (in Chinese)*, 27, 85-94.
5. **Albano, A. D.**, & Rodriguez, M. C. (2008). *MI-Access Functional Independence Science: Michigan's Alternate Assessment Program Technical Manual*. Lansing, MI: Office of Educational Assessment and Accountability, Michigan Department of Education.
6. Rodriguez, M. C., Maeda, Y., **Albano, A. D.**, & Jung, T. (2008). *Investigating out-of-school time experiences: Background, attitudes, values, and beliefs*. Minneapolis, MN: Applied Research Collaborative on Youth Development, Extension Service, University of Minnesota.

Presentations

Conference Papers

1. **Albano, A. D.**, & Verhagen, J. (2020, September). *Recovering From Suboptimal Precalibration in a Low-Stakes, Computerized-Adaptive, Diagnostic Assessment System*. Paper presented at the meeting of the National Council on Measurement in Education, San Francisco, CA.
2. McConnell, S., Lease, E., Will, K., Elmquist, M., **Albano, A. D.**, & Beck, M. (2019, February). *Growing Down: Early Literacy General Outcome Measures for 3-Year-Olds*. Paper presented at the National Association of School Psychologists, Atlanta, GA.

3. **Albano, A. D.**, & Cai, L. (2018, April). *Modeling item position and context effects in formative CAT*. Paper presented at the meeting of the National Council on Measurement in Education, New York, NY.
4. Miller, A. & **Albano, A. D.** (2017, October). *Content Camp: Ohio State's collaborative, open test bank pilot*. Paper presented at OpenEd17: The 14th Annual Open Education Conference, Anaheim, CA.
5. **Albano, A. D.** (2017, April). *The role of assessment literacy in classroom assessment design and implementation*. Paper presented at the meeting of the National Council on Measurement in Education, San Antonio, TX.
6. Cai, L., & **Albano, A. D.** (2017, April). *Comparing non-equivalent groups linking methods with an anchor test and covariates*. Paper presented at the meeting of the National Council on Measurement in Education, San Antonio, TX.
7. Kim, M. S., Kang, C., & **Albano, A. D.** (2017, April). *A method for identifying linear item position effects on 3PL IRT item parameters*. Paper presented at the meeting of the National Council on Measurement in Education, San Antonio, TX.
8. Peteranetz, M. & **Albano, A. D.** (2016, August). *Confronting the challenges of measuring metacognition*. Paper presented in the Proceedings of the 7th Biennial Meeting of the EARLI Special Interest Group 16 Metacognition, Nijmegen, The Netherlands.
9. Cai, L., & **Albano, A. D.** (2016, April). *Examining sources of gender DIF using cross-classified IRT models*. Paper presented at the meeting of the National Council on Measurement in Education, Washington, DC.
10. **Albano, A. D.**, Kutaka, T. S., Smith, W. M., & Kang, C. (2015, April). *Exploring mathematical pedagogical content knowledge: An international study of future teachers*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.
11. Kutaka, T. S., Smith, W. M., **Albano, A. D.**, & Kang, C. (2015, April). *Differences in beliefs and knowledge for teaching mathematics: An international study of future teachers*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.
12. Smith, W., & **Albano, A. D.** (2015, April). *Selection strategies for loglinear smoothing models in a NEAT design*. Paper presented at the meeting of the National Council on Measurement in Education, Chicago, IL.
13. Kang, C., & **Albano, A. D.** (2015, April). *Linear and nonlinear modeling of item position effects*. Paper presented at the meeting of the National Council on Measurement in Education, Chicago, IL.
14. **Albano, A. D.** (2014, April). *Implementing and evaluating equating with small-scale assessments*. Paper presented at the meeting of the National Council on Measurement in Education, Philadelphia, PA.
15. Kutaka, T. S., Ren, L., Fleharty, H. L., Smith, W. M., Edwards, C. P., Green, J. L., & **Albano, A. D.** (2014, April). *Longitudinal change in students' Math achievement scores for an elementary mathematics specialist program*. Paper presented at the meeting of the American Educational Research Association, Philadelphia, PA.
16. Miller, B. G., Cox, C. J., Hougham, R. J., Walden, V. P., Eitel, K. B., & **Albano, A. D.** (2013). *Adventure Learning @ Greenland*. Paper presented at the fall meeting of the American Geophysical Union, San Francisco, CA.

17. **Albano, A. D.**, & Rodriguez, M. C. (2012, April). *Multilevel modeling of item parameter drift*. Paper presented at the annual meeting of the National Council on Measurement in Education, Vancouver, Canada.
18. Palma, J., Rodriguez, M. C., Cabrera, J. C., **Albano, A. D.**, Vue, Y., & Warshawski, A. J. (2012, April). *Effects of positive assets and socio-economic status on academic performance*. Paper presented at the meeting of the American Educational Research Association, Vancouver, Canada.
19. **Albano, A. D.**, Rodriguez, M. C., McConnell, S. R., Bradfield, T. & Wackerle-Hollman, A. (2011, April). *Scaling individual growth and development indicators: Early literacy measurement*. Paper presented at the meeting of the National Council on Measurement in Education, New Orleans, LA.
20. Rodriguez, M. C., **Albano, A. D.**, McConnell, S. R., Wackerle-Hollman, A. & Bradfield, T. (2011, April). *Standard setting with innovative measures of early literacy: Contrasting groups*. Paper presented at the meeting of the National Council on Measurement in Education, New Orleans, LA.
21. Wackerle-Hollman, A., Bradfield, T., McConnell, S., **Albano, A. D.**, & Rodriguez, M. C. (2011, April). *Task development and item analysis in innovative measures of early literacy*. Paper presented at the meeting of the National Council on Measurement in Education, New Orleans, LA.
22. Bradfield, T., Wackerle-Hollman, A., McConnell, S., Rodriguez, M. C. & **Albano, A. D.** (2011, April). *Construct identification to support early literacy measurement*. Paper presented at the meeting of the National Council on Measurement in Education, New Orleans, LA.
23. Babcock, B., & **Albano, A. D.** (2011, April). *Rasch scale drift over time: Examining when to reset the scale*. Paper presented at the meeting of the National Council on Measurement in Education, New Orleans, LA.
24. **Albano, A. D.**, Moses, T. P., & Liu, J. (2010, April). *The impact of smoothing on equating with structured data irregularities*. Paper presented at the meeting of the National Council on Measurement in Education, Denver, CO.
25. **Albano, A. D.** (2009, April). *Efficient common-item equating: Considering spread of item difficulty*. Paper presented at the meeting of the American Educational Research Association, San Diego, CA.

Workshops

1. **Albano, A. D.**, & Rodriguez, M. C. (2018, April). *Effective item writing for valid measurement*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, New York, NY.
2. **Albano, A. D.**, & Weeks, J. P. (2017, April). *An introduction to linking and equating in R*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, San Antonio, TX.
3. **Albano, A. D.**, & Rodriguez, M. C. (2016, April). *Effective item writing for valid measurement*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, Washington, DC.
4. **Albano, A. D.** (2015, April). *An introduction to equating in R*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, Chicago, IL.

5. **Albano, A. D.**, & Rodriguez, M. C. (2014, April). *Effective item writing for valid measurement*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, Philadelphia, PA.
6. Rodriguez, M. C., Haladyna, T. M., & **Albano, A. D.** (2010, April). *Moving from art to science: An item-writing course for test developers, researchers, and teachers*. Professional Development Course, presented at the meeting of the National Council on Measurement in Education, Denver, CO.

Research Support

Active

1. *Principal Investigator*, Testing the Efficacy of the SOAR for Math Professional Learning Program, National Science Foundation, 2018-2022. Award total: \$4,921,262.
2. *Co-Principal Investigator*, Development of a Responsive Computerized-Adaptive Assessment System for PreK Mathematics, Institute of Education Sciences, 2020-2024. Award total: \$1,393,698.
3. *Co-Principal Investigator*, Rebalancing the Equity Gap in Chemistry Education with Individualized Adaptive Learning, California Education Learning Lab, 2020-2023. Award total: \$1,000,000.

Completed

1. *Co-Principal Investigator*, Expanding Individual Growth and Development Indicators of Language and Early Literacy for Universal Screening in Multi-Tiered Systems of Support with Three-Year-Olds, Institute of Education Sciences, 2016-2020. Award total: \$1,399,808.
2. *Evaluator*, Audit of the Florida State Testing Program, Florida Department of Education, 2018-2020. Award total: \$473,363.
3. *Evaluator*, Audit of the Florida State Testing Program, Florida Department of Education, 2016-2018. Award total: \$805,979.
4. *Principal Investigator*, Independent Verification of Nebraska State Accountability Testing Data, Nebraska Department of Education, 2017. Award total: \$22,000.
5. *Principal Investigator*, Scholarship of Teaching and Learning Award, Office of Academic Affairs, University of Nebraska-Lincoln, 2017. Award total: \$8,000.
6. *Co-Principal Investigator*, NeSA Assessment Data Verification, Nebraska Department of Education, 2016. Award total: \$11,242.
7. *Principal Investigator*, Layman Grant, Office of Research and Economic Development, University of Nebraska-Lincoln. Award total: \$10,000.
8. *Principal Investigator*, Technology Innovation Award, College of Education and Human Sciences, University of Nebraska-Lincoln. Award total: \$15,000.

Professional Service

Professional Organizations

- *Treasurer*, Large Scale Assessment Special Interest Group, American Educational Research Association, 2020 - present

- *Member*, American Educational Research Association
- *Member*, National Council on Measurement in Education

Panels and Committees

- *Reviewer*, Peer Review of State Assessment Systems, US Department of Education, 2016 - 2019
- *Reviewer*, Mathematics and Science Education Grant Panel, Institute of Education Sciences, 2018

Editorial Boards

- Applied Measurement in Education
- Journal of School Psychology

Ad Hoc Reviewer

- Applied Psychological Measurement
- Educational Assessment
- Educational and Psychological Measurement
- Frontiers in Education
- Journal of Educational Measurement
- Language Testing
- Measurement: Interdisciplinary Research and Perspectives
- The Counseling Psychologist