

Resume & Curriculum Vitae

John T. Behrens

January 2024

Academic History

Ph.D. Educational Psychology, Arizona State University

- Measurement, Statistics and Methodological Studies (Data Science)
- Instruction and Cognition (Learning Science)

M.A. Special Education, Arizona State University

B.A. Psychology and Philosophy (with Honors), University of Notre Dame

Research Interests

- Social / Cultural / Business / Educational Issues regarding AI
- Impacts of intelligent (AI/ML/Statistical) systems design, development, deployment & evaluation
- Measurement & assessment of human attributes using statistical, machine learning, and AI methods
- Philosophical, historical, and social aspects of data science
- Intersections of the liberal arts and computational & information sciences

Professional History

2023-Present University of Notre Dame

Professor of the Practice of Technology & Digital Studies, College of Arts & Letters

Concurrent Professor of the Practice of Computer Science & Engineering, College of Engineering

Concurrent Professor of the Practice, Applied Computing & Mathematical Statistics, College of Science
(Summer term)

Director, Office of Digital Strategy, College of Arts and Letters

Director, Technology & Digital Studies Program

2022-2023 University of Notre Dame

Professor of the Practice of Digital Learning, Notre Dame Learning

Concurrent Professor of the Practice, Applied Computing & Mathematical Statistics, College of Science
(Summer term)

Director, College Technology Initiatives, College of Arts and Letters

Director, Idzik Minor in Computing & Digital Technologies

2004-2022 Adjunct Assistant Research Professor (by courtesy), Department of Psychology, University of Notre Dame, Notre Dame, IN.

2018-2021 Vice President, AI Product Development: AI Products & Solutions, Pearson

2015-2018 Founder & Vice President, Advanced Computing and Data Science Lab, Pearson

2014-2015 Vice President, Learning Analytics for School Product Technology, Pearson

2012-2015 Founder & Vice President, Center for Digital Data, Analytics, & Adaptive Learning, Pearson

2006-2011	Director, Networking Academy Learning Systems Development, Cisco.
2000- 2006	Sr. Manager, Assessment Development & Innovation, Cisco.
1997-2000	Associate Professor of Psychology in Education (with tenure); Measurement, Statistics, and Methodological Studies Concentration, Arizona State University
1998-2000	Founder and Director of EDCARE (Educational Data Communication, Analysis, Research, and Evaluation) Laboratory based on external funding.
1995- 2000	Program Coordinator, Measurement, Statistics, and Methodological Studies in Educational Psychology, Arizona State University
1994 - 1997	Assistant Professor, Division of Psychology in Education, Measurement, Statistics, and Methodological Studies Concentration Arizona State University
1990-1994	Assistant Professor, Department of Educational Psychology, Instructional Psychology and Technology Program, University of Oklahoma
1983-1985	Counselor and Social Worker, City of El Mirage, El Mirage, AZ.

Recent Courses Taught

- Technology as a profession F22, SP23, F23
- Data Science Ethics (MA students in Applied Computing & Mathematical Statistics) SU22, SU23
- Generative AI in the Wild F23, SP24 - Ways of Knowing integration course

Publications

1. Łodzikowski, K., Foltz, P. W., Behrens, J. T. (in press). Generative AI and Its Educational Implications. (in press). In D. Kourkoulou, O. Tzirides, M. Kalantzis, B. Cope (Eds), *Artificial Intelligence and Education: Where Human Learning Meets Learning Machines*. Springer.
2. Mislevy, R., Levy, R., & Behrens, J. T. (2023). An Extended Taxonomy of Variants of Computerized Adaptive Testing. *Journal of Computerized Adaptive Testing*, 10(1).
<https://jcatpub.net/index.php/jcat/article/view/112>
3. Behrens, J. T. (2020). At the birth of the future: Commentary on Part III. *Handbook of Automated Scoring*. (pp 469-474). Boca Raton: Taylor & Francis.
4. Behrens, J. T., DiCerbo, K. E., & Foltz, P. W. (2019). Assessment of Complex Performances in Digital Environments. *The ANNALS of the American Academy of Political and Social Science*, 683(1), 217–232. <https://doi.org/10.1177/0002716219846850>. Commissioned by the National Academy of Education Committee on the Future of Assessment.
5. Behrens, J. T., Piety, P., DiCerbo, K. E., & Mislevy, R. J. (2018). Inferential foundations for learning analytics in the digital ocean. In D. Niemi, R. D. Pea, B. Saxberg, & R. E. Clark (Eds.), *Learning analytics in education* (pp. 1–48). Charlotte, NC: Information Age. Original work commissioned by the Bill and Melinda Gates Foundation.
6. Cheng, A., Diao, Q, Behrens, J. T. (2017) A simplified version of the maximum information per time unit method in computerized adaptive testing. *Behavioral Research Methods*, 49(2), 502-512.

7. DiCerbo, K. E., Mislevy, R. J., & Behrens, J. T. (2016). Inference in game-based assessment. In O'Neil, H. F., Baker, E., Perez, R. (Eds.), *Using games and simulations for teaching and assessment: Key issues*, (pp. 253–79). London: Routledge.
8. González-Brenes, J., Behrens, J. T., Mislevy, R. M., Levy, R., DiCerbo, K. E. (2016). Bayesian Networks. In A. Rupp & J. Leighton (Eds.) *The Wiley Handbook of Cognition and Assessment: Frameworks, Methodologies and Applications*. (pp. 328-353). New York: Wiley.
9. Cheng, Y., Liu, C., & Behrens, J. T. (2015). Standard Error of Ability Estimates and the Classification Accuracy and Consistency of Binary Decisions, *Psychometrika*. 80(3), pp 645-664.
10. Behrens, J. T. & DiCerbo, K. E. (2014). Technological implications for assessment ecosystems: Opportunities for digital technology to advance assessment. *Teachers College Record*, 116(11), 1-22. Original paper commissioned by the Gordon Commission on the Future of Assessment.
11. Behrens, J. T. & DiCerbo, K. E. (2014) *Harnessing the Currents of the Digital Ocean*. In J. Larusson & B. White (Eds.) *Learning Analytics: From Research to Practice*. (pp. 39-60). New York: Springer
12. DiCerbo, K. E. & Behrens, J. T. (2014). *The impact of the digital ocean on education*. London: Pearson.
13. Frezzo, D. C., DiCerbo, K. E., Behrens, J. T., & Chen, M. (2014). An extensible micro-world for learning in the data networking professions. *Information Sciences*, 264, 91-103.
14. Behrens, J. T., DiCerbo, K. E., Yel, N. & Levy, R. (2012). Exploratory data analysis. In I. B. Weiner, J. A. Schinka, & W. F. Velicer (Eds.) *Handbook of Psychology: Volume 2, Research Methods in Psychology* (2nd Edition). (pp. 34-70). New York: Wiley.
15. Behrens, J. T., Mislevy, R. J., DiCerbo, K. E., & Levy, R. (2012). Evidence centered design for learning and assessment in the digital world. In M. Mayrath, J. Clarke-Midura, D. H. Robinson, & G. Schraw (Eds.). *Technology-based assessments for 21st Century skills: Theoretical and practical implications from modern research* (pp. 13-54). Charlotte, NC: Information Age Publishing.
16. DiCerbo, K. E. & Behrens, J. T. (2012). Implications of the digital ocean on current and future assessment. In R. Lissitz & H. Jiao (Eds.) *Computers and their impact on state assessment: Recent history and predictions for the future* (pp. 273-306). Charlotte, North Carolina: Information Age Publishing.
17. Mislevy, R. J., Behrens, J. T., DiCerbo, K. E., Frezzo, D. C., & West, P. (2012). Three things game designers need to know about assessment: Evidence-centered design for game-based assessment. In D. Ifenthaler, D. Eseryel, & X. Ge (eds.), *Assessment in game-based learning: Foundations, innovations, and perspectives* (pp. 59-84). New York: Springer.
18. Mislevy, R. J., Behrens, J. T., DiCerbo, K. E., & Levy, R. (2012). Design and Discovery in Educational Assessment: Evidence-Centered Design, Psychometrics, and Educational Data Mining. *Journal of Educational Data Mining*, 4, 11-48. Available: http://educationaldatamining.org/JEDM/images/articles/vol4/issue1/MislevyEtAlVol4Issue1P11_48.pdf
19. Rupp, A. A., Levy, R., DiCerbo, K. E., Sweet, S., Crawford, A. V., Caliço, T., Benson, M., Fay, D., Kunze, K. L., Mislevy, R. J., & Behrens, J. T. (2012). Putting ECD into practice: The interplay of theory and data in evidence models within a digital learning environment. *Journal of Educational Data Mining*, 4, 49-110. Available: http://educationaldatamining.org/JEDM/images/articles/vol4/issue1/RuppEtAlVol4Issue1P49_110.pdf
20. West P., Rutstein, D. W., Mislevy, R. J., Liu, J., Levy, R., DiCerbo, K. E., Crawford, A., Choi, Y., Chapple, K., Behrens, J. T. (2012) A Bayesian Network Approach To Modeling Learning Progressions. In: Alonzo A.C., Gotwals A.W. (eds) *Learning Progressions in Science*. Sense Publishers, Rotterdam. https://doi.org/10.1007/978-94-6091-824-7_12

21. Mislevy, R.J., Behrens, J.T., Bennett, R.E., Demark, S.F., Frezzo, D.C., Levy, R., Robinson, D.H., Rutstein, D.W., Shute, V.J., Stanley, K., & Winters, F.I. (2010). On the roles of external knowledge representations in assessment design. *Journal of Technology, Learning, and Assessment*, 8(2).
<http://escholarship.bc.edu/jtla/vol8/2>
22. Frezzo, D. C., DiCerbo, K. E., Behrens, J. T., & Chen, M. (2014). An extensible micro-world for learning in the data networking professions. *Information Sciences*, 264, 91-103. doi:10.1016/j.ins.2013.10.024
23. Levy, R., Mislevy, R. J., Behrens, J. T. (2011). Markov Chain Monte Carlo Methods in Educational Research. In S Brooks, A. Gelman, G. Jones, X. L. Meng (Eds.). *Handbook of Markov Chain Monte Carlo Methods*.(pp. 531-542). Chapman: Boca Raton, FL.
24. Frezzo, D.C., Behrens, J.T., & Mislevy, R.J. (2010). Design patterns for learning and assessment: facilitating the introduction of a complex simulation-based learning environment into a community of instructors. *The Journal of Science Education and Technology*. Springer Open Access
<http://www.springerlink.com/content/566p6g4307405346/>
25. Frezzo, D.C., Behrens, J.T., & Mislevy, R.J. (2009). Activity theory and assessment theory in the design and understanding of the Packet Tracer ecosystem. *The International Journal of Learning and Media*, 2.
<http://ijlm.net/knowinganddoing/10.1162/ijlm.2009.0015>
26. Behrens, J. T., Frezzo, D. C., Mislevy, R. J., Kroopnick, M., & Wise, D. (2008). Structural, Functional and Semiotic Symmetries in Simulation-Based Games and Assessments. In E. L. Baker, J. Dickieson, W. Wulfbeck, & H. F. O'Neil (Eds.) *Assessment of Problem Solving Using Simulations* (pp. 59-80). New York: Erlbaum.
27. Behrens, J. T., Collison, T. A., & Demark, S. F. (2005) The Seven Cs of comprehensive assessment: Lessons learned from 40 million classroom exams in the Cisco Networking Academy Program. In S. Howell and M. Hricko (Eds.), *Online Assessment and Measurement: Case Studies in Higher Education, K-12 and Corporate*. (pp 229-245). Hershey, PA: Information Science Publishing.
28. Levy, R., Behrens, J. T., & Mislevy, R. J. (2005). Variations in Adaptive Testing and Their On-line Leverage Points. in D. Williams (Ed.) *Online Assessment and Measurement: Emerging Practices, Volume III*. Hershey, PA: IDEA Group
29. Behrens, J. T., & Robinson, D. H. (2005). The micro and the macro in the analysis and conceptualization of experimental data. In G. D. Phye, D. H. Robinson, & J. Levin (Eds.), *Empirical Methods for evaluating educational interventions*.(pp. 147-173) Burlington, MA: Elsevier.
30. Behrens, J. T, Mislevy, R. J., Bauer, M., Williamson, D. W., & Levy, R. (2004). Introduction to Evidence Centered Design and lessons learned from its application in a global e-learning program. *International Journal of Testing*. 4, 295-301.
31. DeMark, S., & Behrens, J. T. (2004). Using statistical natural language processing for understanding complex responses to free-response tasks. *International Journal of Testing*, 4, 371-390.
32. Williamson, D. M., Bauer, M., Steinberg, L. S., Mislevy, R. J., & Behrens, J. T, & DeMark, S. F.. (2004). Design rationale for a complex performance assessment. *International Journal of Testing*. 4, 303-332.
33. Behrens, J. T. & Yu, C. H. (2003). Exploratory Data Analysis. In J. A. Schinka, & W. F. Velicer, (Eds.). *Handbook of Psychology. Volume II: Research Methods in Psychology*. (pp. 33-64). New York: Wiley & Sons.
34. Leach, M. M., Behrens, J. T., & LaFleur, N. K. (2002). White racial identity and white racial consciousness: Similarities, differences, and recommendations. *Journal of Multicultural Counseling and Development*. 30(2), 66-80.

35. Behrens, J. T. (2000). Exploratory Data Analysis. In A. E. Kazdin (Ed.), *Encyclopedia of Psychology* (Vol 3, Pp. 303-305). New York: Oxford University Press.
36. Lewandowsky, S., & Behrens, J. T. (1999). Statistical graphs and maps. In F. T. Durso, R. S. Nickerson, R. W. Schvaneveldt, S. T. Dumais, D. S. Lindsay, & M. T. H. Chi (Eds.) *The Handbook of Applied Cognition*, (pp. 514-549). New York: Wiley.
37. Dugan, J. T., & Behrens, J. T. (1998). A hypermedia exploration of the classification problem in special education. *Current Issues in Education*, 1.
38. Blanchard, J., & Behrens, J. T., and Anderson (1998). Effects of concurrent classroom and home instructional video-game use on student achievement: A preliminary study. *Computers in the Schools*, 14:3-4, 65-78, DOI: 10.1300/J025v14n03_07
39. Behrens, J. T. (1997). Principles and procedures of Exploratory Data Analysis. *Psychological Methods*, 2, 131-160.
40. Behrens, J. T. (1997). Does the White Racial Identity Attitude Scale measure racial identity? *The Journal of Counseling Psychology*, 44, 1-12.
41. Strom, R., Strom, S, Fournet, L., Wang, C., Behrens, J. T., & Griwold, D. (1997). Learning Needs of African-American, Caucasian, and Hispanic Grandparents. *Journal of Instructional Psychology*, 24, 119-134
42. Behrens, J. T., & Rowe, W. (1997). Measuring White Racial Identity: A reply to Helms (1997). *Journal of Counseling Psychology*, 44, 17-19.
43. Behrens, J. T., & Smith, M. L. (1996). Data and data analysis. In D. C. Berliner, & R. C. Calfee (Eds.), *Handbook of Educational Psychology*, pp 945-989. New York: MacMillan.
44. Choney, S. A., Behrens, J. T (1996). Development of the Oklahoma Racial Attitude Scale. In G. Sodowski, & J. C. Impara (Eds.) *Multicultural Assessment in Counseling and Clinical Psychology*, (pp. 225-240). Lincoln, NE: Buros Mental Measurement Institute.
45. Leach, M. M., Behrens, J. T., & Rowe, W. (1996). The Journal of Multicultural Counseling and Development: Then, now, and the 21st Century. *The Journal of Multicultural Counseling*.
46. Rowe, W., Behrens, J. T., & Leach, M. M. (1995). Racial/Ethnic identity and racial consciousness: Looking back and looking forward. In J. G. Ponterotto, J. M. Casas, L. A., Suzuki, & C. M. Alexander, (Eds.), *Handbook of Multicultural Counseling*, (2nd edition; pp. 218-235). New York: Sage.
47. Yu, C. H., Behrens, J. T. (1995). Applications of multivariate visualization to behavioral sciences. *Behavioral Research Methods Instruments and Computers*, 27(2), 264-271.
48. Lewandowsky, S., Herrmann, D., Behrens, J. T., Li, S., Pickle, L., and Jobe, J. B. (1993). Perception of clusters in statistical maps. *Applied Cognitive Psychology*, 7, 533-551.
49. Miller, R. B., Behrens, J. T., & Greene, B., Newman, D. (1993). Goals and perceived ability: Impact on student valuing, self-regulation and persistence. *Contemporary Educational Psychology*, 18, 2-14 .
50. Maag, J. W., & Behrens, J. T., & DiGangi, S. A. (1992). Dysfunctional cognitions associated with adolescent depression: Findings across special populations. *Exceptionality*, 3, 31-47.
51. Behrens, J. T., & Maag, J. W. (1992). Reflections on 'Dysfunctional cognitions associated with adolescent depression. *Exceptionality*, 3, 59-63.
52. Stock, W. A., & Behrens, J. T. (1991). Box, Line, and Mid-gap Plots: Effects of display characteristics on the accuracy and bias of estimates of whisker length. *Journal of Educational Statistics*, 16, 1-20.

53. Behrens, J. T., Stock, W. A., & Sedgwick, C. E. (1990). Judgment errors in elementary box-plot displays. *Communications in Statistics B: Simulation and Computation*, 19, 245-262.
54. Kulhavy, R. W., Stock, W. A., Thornton, N. E., Winston, K. S., & Behrens, J. T. (1990). Response feedback, certitude and learning from text. *British Journal of Educational Psychology*, 60, 161-170.
55. DiGangi, S. A., Behrens, J. T., & Maag, J. W. (1989). Dimensions of depression: Factors associated with hopelessness and suicidal intent among special populations. In R. B. Rutherford and S.A. DiGangi (Eds.), *Monograph in Severe Behavioral Disorders*, 12, 47-53.
56. Maag, J. W., & Behrens, J. T. (1989a). Prevalence and severity of depression and related dysfunctional cognition in learning disabled and seriously emotionally disturbed adolescents. *Journal of Special Education*, 23, 17-27.
57. Maag, J. W., & Behrens, J. T. (1989b). Epidemiologic data on seriously emotionally disturbed and learning disabled adolescents reporting extreme depressive symptomatology. *Behavioral Disorders*, 15, 21-27.
58. Rutherford, R. B., Behrens, J. T., & Fejes, K. E. (1987). Preventive programs for adjudicated youth. *Teaching Exceptional Children*, 19(4), 58-61.

Published Conference Papers

1. M. Ventura, M. Chang, P. Foltz, N. Mukhi, J. Yarbrow, A. Salverda, J. Behrens, J. Ahn, T. Ma, T.I. Dhamecha, S. Marvaniya, P. Watson, C. D'Helon, R. Tejwani, and S. Afzal, "Preliminary Evaluations of a Dialogue-based Tutor," in *Proceedings of Artificial Intelligence in Education 19th International Conference, Part II*, pp. 480-483, AIED 2018.
2. Bauer, M., Williamson, D., Mislevy, R., & Behrens, J. (2003). Using Evidence-Centered Design to Develop Advanced Simulation-Based Assessment and Training. *World Conference on E-Learning in Corp., Govt., Health., & Higher Ed.* 2003(1), 1495-1502. [Online]. Available: <http://dl.ace.org/13955>. Conference recipient of outstanding paper award.
3. Yu, C. H., Behrens, J. T. (1995). Identification of misconceptions concerning statistical power with dynamic graphics as a remedial tool. *American Statistical Association 1994 Proceedings of the Section on Statistical Education*.

Software & Learning Industry Experience

Focus: Maximizing Learning and Workforce Improvement through Advanced Technologies and Digital Transformation

- Technology-savvy executive innovator, transforming products and organizations by combining data science (AI / ML / statistics) with strategic vision, learning science, and organizational leadership.
- Bridge business goals and technical opportunities in rapidly changing environments by leveraging comprehensive product life cycle expertise from ideation and R&D to product discontinuation.
- Digital opportunity expert, author, and public speaker, transforming learning, assessment, personalization, and product impact while mentoring entry-level managers to VP-level leaders for continuous and sustainable results.

Key Skills: Strategic Business Planning | Cross-Team Collaboration | Team Building and Leadership | AI and Data Science | R&D | Learning and Assessment Strategy | Technology Development and Delivery | Product Management | Product Personalization

Selected Achievements

- **Multi-Faceted Leader:** Created globally deployed intelligent platforms and products that impacted 10s of millions of customers, driving hundreds of millions of dollars in revenue and cost savings.
- **Transformer:** Led complex initiatives across divisions and internal startups with globally distributed remote teams of 1 to 100+ with budgets to \$20M. Experienced in turning around large-scale, must-win programs.
- **Innovator:** Developed and globally deployed AI-enabled mobile apps, AI-based / performance-based assessment systems, curriculum delivery platforms, and analytics reporting systems. Founded enterprise R&D labs with C-suite and board support. Never held a previously existing business role.
- **Scholar and Visionary:** Authored 50+ academic publications in data science, learning science, and technology in academic and policy outlets with 4K+ citations (bit.ly/BehrensScholar). Presented and served as member across diverse academic and policy setting groups. Awarded 4 patents.

Positions Held in Industry

PEARSON, Remote / New York, San Francisco, Boston

Vice President, AI Product Development - Global Product

2019 - 2021

Transformed product management requirements and R&D outputs into new AI-enabled mobile applications and related support systems as senior leader. Managed product data instrumentation and analytics across Global Product organization and software personalization for tertiary schools.

- Spearheaded AI-enabled, globally distributed mobile apps and technology ecosystem development, overseeing and contributing across product life cycle from ideation to global deployment and continuous improvement.
 - Created Pearson's first AI-powered mobile platforms with global deployment of 2 platforms in 24 months, including automated content generation and scoring automation, content management, user modeling, and business analytics for direct-to-consumer business.
 - Reduced time to market 50% with integrating engineering (front end, back end, AI / ML, DevOps), data science (NLP, machine-learning, statistical modeling), learning science (cognition, instruction, assessment), and business intelligence / platform management teams.
- Led platform management for product-data, learning-analytics, and personalization systems.
 - Decreased new development cost 40% and increased speed to market by unifying data collection, analytic / BI, and engineering methods to work across globally dispersed verticals.
 - Cut intelligent platform feature cost 30% and time to market 50% through organizational re-alignment and operational innovation.

Vice President, Advanced Computing and Data Science Lab - Global Product

2015 - 2019

Founded globally impacting R&D lab with emphasis on movement of innovation into products. Focused on higher education, global schools, and English teaching products.

- Achieved 5x ROI in key program areas and set new product line groundwork by building product innovation pipeline of extensive personalization capabilities, automating content generation and management with advanced analytics and machine-learning, and aligning with client requirements.
- Led Pearson / IBM-Watson partnership as executive and technical lead with collaboration with C-suite executives, meeting time-to-market and cost-reduction goals by organizing cross-divisional teams.

Vice President, Center for Digital Data, Analytics, and Adaptive Learning - K-12 and Assessment 2012 - 2015

Established globally impacting R&D lab with emphasis on innovation into products movement. Focused on assessment and K-12 digital transformation.

- Developed adaptive learning, analytic, and assessment technology services, including first in-house adaptive system for Pearson Higher Education Division, achieving time-to-market, cost, and product feature requirements.
- Opened new markets and gained customers by designing company-wide adaptive learning / personalization and performance assessment design and implementation frameworks.

CISCO, Remote / San Jose, CA.

Director, Networking Academy Learning and Technology 2006 - 2012

Created globally deployed, award-winning hybrid instruction e-learning curriculum and assessment instructional ecosystem for secondary and tertiary students across 10K schools in 160 countries.

- Developed internationally recognized innovations in technology, assessment, and learning integration, using statistical / machine-learning methods to drive simulation-based learning and assessment and promote active learning and continuous large educational systems improvement.
- Presented innovative advancements achieved to National Research Council and National Academies of Education.

Senior Manager, Assessment Development, and Innovation

Designed, developed, and implemented a comprehensive, simulation-based assessment strategy to enable Cisco certification award winning program dominance throughout the decade and reset IT industry standards toward hands-on assessment.

Editorial Activities

Editorial Boards:

Associate Editor Educational Psychology Review, 2006-Present

Associate Editor: IEEE Transactions on Learning Technologies 2020-2022

American Educational Research Journal - Human Learning & Instruction, 2014-2016

Psychological Bulletin - 1993-1995, 1997-2002

Educational Technology (Research Section) - 1992-1995

Manuscript Reviewer:

Psychological Methods, Journal of Counseling Psychology, Journal of Statistics Education. Educational Researcher, Psychological Bulletin, Educational Technology, Research & Development, Contemporary Educational Psychology, Review of Educational Research, American Educational Research Journal.

Other National Professional Service

- National Assessment of Educational Progress Technology & Engineering Literacy Standing Committee, 2010-2014
- Program Co-Chair. Learning Analytics Summer Institute, Stanford, CA, 2013.
- Gordon Commission on the Future of K-12 Assessment (www.gordoncommission.org) 2012-2013.
- Working Group on the Future of Learning Analytics in Education. Organized by Roy Pea and funded by Gates and McArthur Foundations (2012-2103).
- Planning Committee: Project to Explore Uses of Data Captured from Adaptive Educational Technologies. National Academy of Education, 2011.
- Panelist: Future of NAEP Summit, August 2011. Sponsored by the National Center for Educational Statistics.
- Presenter: Intrusive and Unobtrusive Assessment of Entrepreneurial and Technical Skills through Simulation and Gaming. The National Academies, Board on Testing and Assessment and The National Academy of Education Workshop of Assessment of 21st Century Skills. January 2011.
- Attendee: NSF workshop on Cyber-learning Infrastructure. Washington, DC. October 2010
- Gates Foundation Assessment Advisory Board for College Ready Students - June 2010.
- Presenter: Response to Assessment of Student Learning in Science Simulations and Games. Commissioned by the Board on Science Education for the Workshop: Learning Science: Computer Games, Simulations, and Education, National Academy of Science, November, 2009.
- Panel Leader for ARI/Humrro Assessment Summit, July 2009.
- Presenter, How can we design assessments that effectively measure high school students' competencies with ICT? Board On Science Education Workshop on ICT Fluency and High School graduation outcomes National Academy of Science, October, 2005

Select Invited Presentations

Behrens, J. T. (August, 2017, 2018, 2019, 2020, 2021, 2022, 2023). Introduction to Data Science as a Profession. Invited presentation at the University of Notre Dame Master's in Data Science annual immersion program.

Behrens, J. T. (March, 2018). Beyond Analytics: 5 pillars of data innovation and strategy. Argyle CIO Forum.

Behrens, J. T. (February, 2015) Harnessing the Currents of the Digital Ocean. Invited presentation at the ASU Learning Sciences Institute.

Behrens, J. T. (2014, September). Educational Data Science in the Digital Era. Invited presentation at the meeting of the Gordon Commission Fellows at ETS.

Behrens, J. T. & DiCerbo, K. E. (July, 2013). Assessment for Learning Analytics. Presentation at Learning Analytics Summer Institute. Stanford University, CA

Panel member on "Educational Data Scientists" at the Learning Analytics and Knowledge conference (2013)

- Behrens, J. T., DiCerbo, K. E., Dolan, R. (2012, June). Five Aspirations for Educational Data Mining. Keynote Presentation at the International Society of Educational Data Mining, Chania, Crete.
- Behrens, J. T. (May, 2012). Data Therapy for Big Data. Presentation at the New Schools Venture Fund Summit, San Francisco, CA.
- Behrens, J. T. (2012, April). Evidence Centered Design of Complex Assessment Systems. Invited Symposium at the Annual Meeting of the National Council for Measurement in Education.
- DiCerbo, K. E., & Behrens, J. T. (2012, April). Technology Enhanced Assessments in the Cisco Networking Academy. Invited Symposium at the Annual Meeting of the National Council for Measurement in Education.

Presented Conference Papers

- Piety, P., Behrens, J. T., Pea, R. (May, 2013). The Educational Data Scientist. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Behrens, J. T., (May, 2013). Harnessing the Digital Ocean. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Behrens, J. T., DiCerbo, K. E., Murphy, D. (May, 2013). A Communication Framework for Assessment Reporting. Paper presented at the Annual Meeting of the National Council for Measurement in Education, San Francisco, CA.
- Behrens, J. T., DiCerbo, K. E., & Ferrara, S. (May, 2012). Intended and Unintended Deceptions in the Use of Simulations. Invitational Research Symposium on Technology Enhanced Assessments, Educational Testing Service, Washington, DC.
- Frezza, D. C., Behrens, J. T., DiCerbo, K. E., & Chen, M. (2012). An Extensible Micro-World for Assessment of Activities in the Data Networking Professions. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC.
- Dicerbo, K. E., Liu, J., Wise-Rutstein, D., Choi, Y., & Behrens, J. T. (2011, April). Visual and Algebraic Analysis of Sequential Log Data From Complex Performance Assessments. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- DiCerbo, K. E., West, P. A., Frezza, D. C., & Behrens, J. T. (2010, May). Experimental Exploration of a Complex Simulated Environment. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
- Chapple, K., Johnson, A., Rosson, J., West, P. A., Stanley, K., Termaat, B., & Behrens, J. T. (2009, April) Applying Cross-Disciplinary Threads to a Global Assessment System with an Emphasis on Simulation and Gaming. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
- Dicerbo, K. E., & Behrens, J. T. (2008, March). Identifying Keystone Concepts: Big Ideas in Computer Networking. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY.
- DeMark, S. F., West, P., Behrens, J. T. (2005, April). Explorations in Domain Analysis and Task Model Specification Sensitive to Underlying Knowledge Representations. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada.
- Behrens, J. T., & Robinson, D., (2004, April). The micro and the macro in the analysis of experimental data. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
- Behrens, J. T., Bauer, M., & Mislevy, R. (2001, April). Future prospects for assessment in the on-line world. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA.

- Behrens, J. T., & Huston, D. (2000, August). Cognition, Computation, Communication, and Context in Statistics Education. Invited paper presented at the Annual Meeting of the American Statistical Association, Indianapolis, IN.
- Jennings, T. A., Kovalski, T. M., & Behrens, J. T. (2000, April) Predicting Academic Achievement Using Archival Mobility Measures. Paper Presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- Osborn-Popp, S., Behrens, J. T., Ryan, J. M., & Hess, R. (2000, April). Applying the Rasch Model for Ordered Categories to Assess the Relationship Between Response Choice Content and Category Threshold Disorder. Paper Presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- Behrens, J. T., Leach, M., Franz, S. (1999, August). Revising the Oklahoma Racial Attitude Scale: Work in progress. Paper presented at the Annual Meeting of the American Psychological Society, Boston, MA.
- Huston, D. R., Behrens, J. T. (1999, April). Limitations of the Discriminant Validity of the White Racial Identity Attitude Scale. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal Canada.
- Powers, C., Corrigan, J., & Behrens, J. T. (1999, April). Advances in the Interactive Visualization of Multivariate Data in J. Behrens (Chair) Applications of Data Visualization Techniques in Educational Practice. Symposium at the Annual Meeting of the American Educational Research Association, Montreal Canada.
- Jennings, T., Santos de Barona, M., Behrens, J. T., & McWhirter, J (1999, April). Measuring Classroom Environment for African American Students: Internal Reliability of the Classroom Environment Scale. . Paper presented at the Annual Meeting of the American Educational Research Association, Montreal Canada.
- Behrens, J. T. (1998, August). Theory and Methods of Research for Studying White Racial Identity and Attitude In D. Pope-Davis (Chair). White Racial Identity Development: Issues, Concerns, and Points of View. Symposium at the Annual Convention of the American Psychological Association, San Francisco, CA.
- Behrens, J. T. (1997, April). Logical and historical foundations of confidence (and other) intervals. Paper presented at the annual meeting of the American Educational Research Association Annual Meeting, Chicago, IL.
- Behrens, J. T., Dugan, J., & Franz, S. (1997, August). . Improving the reporting of research results using the World Wide Web Paper presented at the Annual Convention of the American Psychological Association, Chicago, IL.
- Behrens, J. T., & Dugan, J. (1997, August). Teaching statistical concepts with Virtual Reality Modeling Language. Paper presented at the Annual meeting of the American Statistical Association, Anaheim, CA.
- Behrens, J. T., Huston, D. R., Dugan, J. (1996, August). The Statistical Instruction Internet Palette (SIIP) Paper presented at the Annual meeting of the American Statistical Association, Chicago, IL.
- Behrens, J. T., Huston, D. R. (1996, August). Measuring White Racial Identity: Assessing the adequacy of the White Racial Identity Attitude Scale. In J. M. Casas (Chair) White Racial Identity and White Racial Consciousness: Meeting the Challenge. Symposium at the Annual Meeting of the American Psychological Association. Toronto, Canada, August 1996.
- Yu, C. H., Huston, D., Dugan, J., & Behrens, J. T. (1996, June). Multivariate graphics are useful (When used appropriately). Paper presented at the Annual Meeting of American Psychological Society, San Francisco, CA.

- Yu, C. H., Huston, D. R., Dugan, J., & Behrens, J. T. (1996, April). Bringing the world into the classroom (and the classroom into the world) with internet resources. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Yu, C. H., & Behrens, J. T. (1995, November). The alignment framework for data visualization: Relationships among research goals, data type, and multivariate visualization techniques. Paper presented at the Annual meeting of Society for Computer in Psychology, Los Angeles, CA.
- Yu, C. H., Behrens, J. T. (1995, August). One-stop internet location for statistical education. Paper presented at the Annual Meeting of the American Statistical Association.
- Behrens, J. T., Yu, C. H. (1995, August). Meta-analytic review of the White Racial Identity Attitude Scale (RIAS-W). Poster presented at the Annual Meeting of the American Psychological Association.
- Yu, C. H., Anthony, S., & Behrens, J. T. (1995, April). Identification of misconceptions in learning central limit theorem and evaluation of computer-based instruction as a remedial tool. Paper presented at the Annual Meeting of American Educational Research Association, San Francisco, CA.
- Behrens, J. T. & Yu, C. H. (1994, June). The visualization of multi-way interactions and high-order terms in multiple regression. Paper presented at the Annual Meeting of the Psychometric Society, Urbana-Champaign, Illinois.
- Behrens, J. T. (1994, April). What's quantitative and what's qualitative about Exploratory Data Analysis? Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- Behrens, J. T. (1994, April). Organizer for Symposium entitled "Tukey's Exploratory Data Analysis: An intersection of qualitative and quantitative themes". Symposium held at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- Behrens, J. T., & Lewandowsky, S. L. (1993, November). The (Mis)Use of color in statistical graphics. Paper presented at the Annual Meeting of the Society for Computers in Psychology, Washington, DC.
- Bennett, S., Behrens, J. T., & Rowe, W. (1993, August). Evaluation of the White Racial Identity Attitude Scale. Paper presented at the Annual Meeting of the American Psychological Association, Toronto, Canada.
- Mulvenon, S. W., Betz, A., & Behrens, J.T. (1993). Analytic formulae for power analysis in repeated measures. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA.
- Pensabene, T., Yu, C., H., & Behrens, J. T.(1993, April). Conceptual errors in learning power analysis. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA.
- Williamson, K., Lackey, J. & Behrens, J. T. (1993, April) Novice errors in solving elementary probability tasks. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA.
- Behrens, J. T., Miller, R. B., & Vaughn, J. E. (1992, April). Novice problem solving of elementary probability tasks. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Flegal, J., & Behrens, J. T. (1992, April). The relationship of measurement concept knowledge and teachers' beliefs about reporting standardized test results. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Lackey, J. R., Vice, L., & Behrens, J. T. (1992, April). Adapting LISP-STAT: A dynamic computing environment for data analysis and instruction. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Miller, R. B., Newman, D., & Behrens, J. T. (1992, April). Motivation to learn statistics. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

- Foreman, B. A., Brown, W. E., & Behrens, J. T. (1992, April). Trends in the organization of introductory statistics textbooks. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Behrens, J. T. (1991, March). Exploratory Data Analysis: A qualitative approach to quantitative data. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Behrens, J. T., & Maag, J. W. (1991, March). Patterns of depressive cognitions across special populations. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Mulvenon, S. W., Stock, W. A., Behrens, J. T., & Robinson, D. H. (1991, March). Decisions based on box-plots and related displays. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Mulvenon, S. W., & Behrens, J. T. (1991, January). Improved estimation of data values in published graphs. Paper presented at the Annual Winter Meeting of the American Statistical Association, New Orleans, LA.
- Behrens, J. T., & Maag, J. W. (1990, November). Automatic depressive cognitions in special populations. Paper presented at the 14th Annual Teacher Educators of Children with Behavioral Disorders National Conference, Tempe, AZ.
- Robinson, D. H., Mulvenon, S. W., Behrens, J. T., Stock, W. A., and St. Clair, J. L. (1990, August). Elementary perceptual tasks in box-plots and related displays. Paper presented at the Annual Meeting of the American Psychological Association, Boston, MA.
- Behrens, J. T., Mulvenon, S. M., Robinson, D. H., White, M. A., & Stock, W. A. (1990, June). Quantitative text and graphic information affect recall across representations. Paper presented at the Annual meeting of the American Psychological Society.
- Behrens, J. T. (1990, April). A critical review of previous investigations of the psychology of graphs. Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.
- Behrens, J. T., Metos, M., Sedgwick, C., Stock, W. A., St. Clair, J. L. (1989, August). Perceptual distortion in box-and-whisker plots. Paper presented at the annual meeting of the American Psychological Association, New Orleans, LA
- Behrens, J. T., Winston, K. S., Thornton, N. E., Stock, W. A., & Kulhavy, R. W. (1989, August). Response feedback and expectation. Paper presented at the annual meeting of the American Psychological Association, New Orleans, LA.
- Behrens, J. T., & Maag, J. (1989, March). Epidemiologic correlates of severe depression in Learning Disabled and Emotionally Handicapped populations. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Behrens, J. T., Winston, K. S., Stock, W. A., Harper-Marinick, M. (1989, March). Performance expectation, question difficulty, and text study. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Behrens, J. T. & Stock, W. A. (1989, January). Perceptual distortion in box plots: Judgments in length. Paper presented at the Annual Winter Conference of the American Statistical Association, San Diego, CA.
- DiGangi, S. A., Behrens, J. T., Maag, J. (1988, November). Psychometric properties of the Automatic Thoughts Questionnaire in special populations. Paper presented at the 12th Annual Teacher Educators of Children with Behavioral Disorders National Conference, Tempe, AZ.
- Behrens, J. T. (1988, April). Subskill fluency and the prerequisite relations to superordinate mathematics tasks. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Winston, K. S., Behrens, J. T., Harper-Marinick, M., Stock, W. A., & St. Clair, J. L. (August, 1988). Performance expectation effects on text study time and response confidence. Paper presented at the annual meeting of the American Psychological Association, Atlanta, GA.

Behrens, J. T., & Morrow, L. (1986, November). Behavioral Disorders in the People's Republic of China. Paper presented at the 10th Annual Teacher Educators of Children with Behavioral Disorders National Conference, Tempe, AZ.

Behrens, J. T. (1986, July). Teaching Children Self-Control. Paper presented at the Behavioral and Emotional Disorders Medical Exchange, Nanjing, People's Republic of China.

Professional Associations

American Statistical Association, Association for Computing Machinery, IEEE, American Educational Research Association, National Council for Measurement in Education