

Michael A. Seaman

Contact Information

Office Address: 201 Wardlaw Hall / 820 Main Street
College of Education
University of South Carolina
Columbia, SC 29208

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Educational History

Ph.D. Educational Psychology, University of Wisconsin-Madison, 1990

Major area of study: Quantitative Methods in Educational Psychology

Cognate: Statistics

Minor area of study: Cognitive Psychology

Dissertation title: *A Monte Carlo Investigation of Multiple Comparison Procedures for Nonparametric Pairwise Comparisons of Location*

M.A. Educational Research and Statistical Methods, Andrews University, 1986

Thesis title: *The A Priori Use of Power and Effect Size in the Development of a Modified Approach to Hypothesis Testing*

B.A. Southern Missionary College, 1982

Major: Physics

Minor: Mathematics

Administrative Experience

**2002 – Present Associate Dean for Administration and Research
College of Education
University of South Carolina**

**2000 – 2002 Chair, Department of Educational Psychology
University of South Carolina**

**2001 – 2002 Director, Office of Program Evaluation
College of Education
University of South Carolina**

Teaching Experience

**1996 - Present Associate Professor, Department of Educational Psychology,
University of South Carolina**

Courses taught: Educational Statistics I, Educational Statistics II, Nonparametric Statistics, Experimental Design, Correlational and Multivariate Methods, Internship in Research, Research and the Computer, Introduction to Research in Education, Constructing Cognitive Instruments, Dissertation Seminar, Seminar in Research Techniques, The Student in the University

**1990 - 1996 Assistant Professor, Department of Educational Psychology,
University of South Carolina**

**1986 - 1990 Graduate Teaching Assistant and Statistical Consultant,
Quantitative Methods, University of Wisconsin**

Courses taught: discussion sections for quantitative methods courses in the College of Education, one-on-one consulting for dissertators and faculty in the College of Education

**1985 - 1986 Graduate Teaching Assistant, Educational Research,
Andrews University**

Courses taught: tutoring for educational research and statistics courses

1983 - 1985 Mathematics and Physics Instructor, Adelphian Academy

Courses taught: physics and secondary-level mathematics courses

Professional Memberships

American Educational Research Association
American Statistical Association
American Psychological Association
Educational Statisticians Special Interest Group

Service to Professional Organizations

President: Educational Statisticians Special Interest Group of the American Educational Research Association, April 2001 – April 2002

Program Chair: Educational Statisticians Special Interest Group, 2001 Convention of the American Educational Research Association

Program Chair: Quantitative Methods Section of Division D (Statistics and Measurement), 1993 Convention of the American Educational Research Association

Program Reviewer: Division D of the American Educational Research Association, Educational Statisticians Special Interest Group, Structural Equation Modeling Special Interest Group

Editorial Consultation

Editorial Board: *Structural Equation Modeling: A Multidisciplinary Journal* (1994-1996)

Editorial Reviewer:

Selected chapters of Wolfe, D., & Hartlaub, B. (2001). *Intuitive Introductory Statistics*. Reading, MA: Addison Wesley Longman.

Chapter 5 of Fraenkel, J., & Wallen, N. (2000). *How to Design and Evaluate Research in Education* (4th ed.). New York: McGraw-Hill.

Educational Researcher

Journal of Educational and Behavioral Statistics

Computational Statistics and Data Analysis

Psychological Methods

The American Statistician

Psychological Bulletin

Psychometrika

American Educational Research Journal

Structural Equation Modeling: A Multidisciplinary Journal

Educational and Psychological Measurement

Research Consultation

Roundtable presenter for the Geosciences Evaluation Workshop, National Sciences Foundation, 8 May 2006.

Consultant for *Arts Education Reform Study*, Ching Ching Yap (PI), South Carolina Arts Commission, Fall 2003 – Summer 2004.

Consultant for *Special Education State Improvement Evaluation*, Peggy Gredler (PI), U.S. Department of Education, Fall 2002 – Present

Consultant for *Development of the South Carolina Arts Assessment*, Robert Johnson (PI), South Carolina Department of Education, Fall 2001 – Summer 2002.

Consultant for *Project Music in Mind*, Wendy Valerio (PI), Texaco Foundation, Summer 1999 – Spring 2001.

Consultant for *Developing assessments for fourth-grade music*, Lexington School District Two Target 2000 Arts Grant, South Carolina Department of Education, Spring 1998.

Consultant for *South Carolina Parent Education Program evaluation*, Kevin Swick (PI), South Carolina Department of Education, Spring 1993.

Grants

Yell, M. L., Drasgow, E., Marshall, K. J., & Seaman, M. A. *Project ReSpecT: Retaining Special Education Teachers*. U. S. Department of Education, \$597,331, Fall 2000 – Summer 2003.

Yell, M. L., Shriner, J. G., & Seaman, M. A. *Addressing the needs and supports for educational reform for students with disabilities*. U. S. Department of Education, \$513,000, Fall 1998 - Summer 2003

Seaman, M. A. *Assisting the South Carolina school report card development project*. South Carolina Educational Oversight Committee, \$11,684, Fall 1999 – Summer 2000.

Seaman, M. A. *An examination of approximations to the Kruskal-Wallis H Statistic*. University of South Carolina Research Grant, \$1,155, Fall 1990 - Fall 1991.

Evaluation Contracts

National Science Foundation / National Oceanic & Atmospheric Administration (evaluation subcontract with the National Center for Ocean Sciences Education

Excellence). *National evaluation of the Centers for Ocean Sciences Education Excellence*. \$200,418, Fall 2004 – Fall 2007.

National Science Foundation (evaluation subcontract with the National Center for Ocean Sciences Education Excellence). *Training and evaluation of the Centers for Ocean Sciences Education Excellence*. \$63,967, Fall 2002 – Fall 2004.

National Science Foundation (evaluation subcontract with the Southeast Center for Ocean Sciences Education Excellence). *Evaluation of the Southeast Center for Ocean Sciences Education Excellence*. \$66,800, Fall 2002 – Fall 2004.

Reader's Digest-Wallace Foundation (evaluation subcontract with the South Carolina Arts Commission). *Evaluation of an initiative to increase participation in the arts*. \$40,000, Fall 2002 – Summer 2004.

United States Department of Education (evaluation subcontract with the South Carolina Department of Education). *Evaluation of the teacher quality enhancement project*. \$51,765, Fall 2002 – Summer 2003.

South Carolina Arts Commission and South Carolina Department of Education. *A study of the effects of arts education reform*. \$76,834, Fall 1999 – Summer 2003.

National Science Foundation (evaluation subcontract with Columbia College). *A new approach to developmental algebra*. \$50,049, Fall 1999 – Summer 2002.

South Carolina Arts Commission. *South Carolina Arts in Basic Curriculum Project evaluation*. \$19,600, Fall 1997 - Spring 1999.

Publications in Refereed Journals

- Valerio, W.H., Seaman, M.A., Yap, C.C., Santucci, P.M., & Tu, M. (2006). Vocal evidence of toddler music syntax acquisition: A case study. *Bulletin of the Council for Research in Music Education, 170*, 33-46.
- Meyer, J. P., Huynh, H., & Seaman, M. A. (2004). Exact small-sample differential item functioning methods for polytomous items with illustration based on an attitude survey. *Journal of Educational Measurement, 41*, 331-344.
- Way, D. P., Joiner, E. G., & Seaman, M. A. (2000). Writing in the secondary foreign language classroom: the effects of prompts and tasks on novice learners of French. *Modern Language Journal, 84*, 171-184.
- Seaman, M. A., & Serlin, R. C. (1998). Equivalence confidence intervals for two-group comparisons of means. *Psychological Methods, 3*, 403-411.
- Seaman, M. A. (1998). Developing visual displays for lecture-based courses. *Teaching of Psychology, 25*, 141-145.
- Seaman, M. A. (1997). Tables for pairwise multiple comparisons using Shaffer's modified sequentially-rejective procedure. *Communications in Statistics: Simulation and Computation, 26*, 687-705.
- Seaman, M. A., & Hill, C. C. (1996). Pairwise comparisons for proportions: A note on Cox and Key. *Educational and Psychological Measurement, 56*, 452-459.
- Onwuegbuzie, A. J., & Seaman, M. A. (1995). The effect of time constraints and statistics test anxiety on test performance in a statistics course. *Journal of Experimental Education, 63*, 115-124.
- Gallini, J., Seaman, M. A., & Terry, S. (1995). Metaphors and learning new text. *Journal of Reading Behavior, 27*, 187-199.
- Levin, J. R., Serlin, R. C., & Seaman, M. A. (1994). A controlled, powerful multiple-comparison strategy for several situations. *Psychological Bulletin, 115*, 153-159.
- Bynum, L. L., & Seaman, M. A. (1993). Motivations of third-age students in learning-in-retirement institutes. *Continuing Higher Education Review, 57*, 12-22.
- Seaman, M. A., Levin, J. R., & Serlin, R. C. (1991). New developments in pairwise multiple comparisons: Some powerful and practicable procedures. *Psychological Bulletin, 110*, 577-586.

Other Publications

Seaman, M. A. & Hoffman, D. S. (in press). Mapping a data-informed path to change: Select research findings and their implications for arts education. In B. B. Rushlow (Ed.), *The changing roles of arts leadership*. Reston, VA: National Art Education Association. [invited book chapter]

Contributions in Deasy, R. J. (Ed.) (2002). *Critical links: Learning in the arts and student academic and social development*. Arts Education Partnership, Washington, D.C.

Seaman, M. A. (2000). *Student study guide for Fraenkel and Wallen's "How to Design and Evaluate Research in Education"* [CD]. Boston: McGraw-Hill.

Schuster, T. J., Rozalski, M. E., Angle, S. M., Yell, M. L., & Seaman, M. A. (2000). Perceptions of reform in South Carolina's public schools: Why South Carolina's perceptions matter. *Palmetto Administrator*, 15, 16-17 & 22-23.

Seaman, M. A. (1999). *Student study guide and web support pages for Fraenkel and Wallen's "How to Design and Evaluate Research in Education"* [On-line]. Boston: McGraw-Hill. Available:
<http://www.mhhe.com/socscience/education/fw/sg/olc/intro.htm>

Seaman, M. A. (1999). *The Arts in Basic Curriculum Project: A ten year evaluation*. Columbia, SC: South Carolina Arts Commission.

Papers Presented at Professional Meetings

Seaman, M. A., Serlin, R. C., Weinberg, S., Busk, P., & Belli, G. (2005, April). Teaching Educational Statistics: A Guided Discussion of Ten Propositions. Mini-Course accepted for presentation at the annual meeting of the National Council on Measurement in Education, Montreal.

Schumaker, R. E., Seaman, M. A., & Roberts, J. K. (2003, April). An introduction to S-Plus 6 statistical software. Mini-Course presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Sternberg, L., Van Scoy, I. J., Seaman, M. A., & Connolly, R. (2003, January). Authentic unit-wide and program assessment at comprehensive institutions: How do we do it? Paper presented at the annual conference of the American Association of Colleges for Teacher Education, New Orleans.

Kim, D. H., Kjerfve, T., & Seaman, M. A. (2003, February). An evaluation of South Carolina arts education reform efforts. Paper presented at the annual meeting of the South Carolina Educators for the Practical Use of Research, Columbia, SC.

Yell, M. L., Karvonen, M., Marshall, K. M., Drasgow, E., & Seaman, M. A. (2002, April). *Project ReSpecT: Retaining Special education Teachers*. Paper presented at the annual convention of the Council for Exceptional Children, New York, NY.

Yell, M. L., Shriner, J. G., Seaman, M. A., Rozalski, M. E., Schuster, T., Angle, M., & Basham, J. (2002, April). *Addressing the needs and supports for educational reform for students with Disabilities: Project ANSER*. Poster presentation at the annual convention of the Council for Exceptional Children, New York, NY.

Seaman, M. A. (2000, April). *A call for teaching more hypothesis testing in educational statistics classes*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Seaman, M. A., & Hoffman, D. S. (2000, April). *Evaluating arts education as a catalyst for educational reform*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Seaman, M. A., Rozalski, M. E., Schuster, T. J., Yell, M. E., & Louis, T. (2000, April). *Evaluating the needs and supports for educational reform: Part I*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Hoffman, D. S., & Seaman, M. A. (2000, March). *Mozart makes you smarter (Picasso makes you richer)*. Paper presented at the bi-annual meeting of the Music Educational National Conference, Washington, DC.

Rozalski, M. E., Schuster, T. J., Angle, M., Yell, M., & Seaman, M. A. (2000, February). *Addressing the needs and supports for educational reform for students with disabilities*. Paper presented at South Carolina Council for Exceptional Children, Myrtle Beach, SC.

Seaman, M. A., & Hoffman, D. S. (1999, February). *Mozart makes you smarter, Picasso makes you richer*. Paper presented at the annual meeting of the South Carolina Music Educators Association, Greenville, SC.

Seaman, M. A., Hoffman, D. S., & Schuster, T. J. (1999, January). *The Arts in Basic Curriculum Project evaluation: Research motivating practice*. Paper presented at the annual meeting of the South Carolina Educators for the Practical Use of Research, Columbia, SC.

Seaman, M. A. (1998, November). *The Arts in Basic Curriculum Project evaluation: Looking at the past and preparing for the future*. Paper presented at the annual meeting of the South Carolina Arts Educators Association, Charleston, SC.

Seaman, M. A., & Hoffman, D. S. (1998, November). *Mozart makes you smarter, Picasso makes you richer*. Paper presented at the annual meeting of the South Carolina Arts Educators Association, Charleston, SC.

Hoffman, D. S., & Seaman, M. A. (1998, April). *Relationships between academic achievement and participation in a keyboard-based public school music education program*. Paper presented at the annual meeting of the American Educational Research Association, San Diego.

Hoffman, D. S., & Seaman, M. A. (1998, April). *A comparison of the cognitive transfer effects of keyboard-based and vocal instruction*. Paper presented at the biannual convention of the Music Educators National Conference, Phoenix.

Seaman, M. A., & Serlin, R. C. (1997, March). *Confidence intervals for specific effects in categorical data analysis*. Paper presented at the annual convention of the American Educational Research Association, Chicago.

Hoffman, D. S., & Seaman, M. A. (1997, March). *The effect of keyboard-based music instruction on spatial learning*. Paper presented at the annual convention of the American Educational Research Association, Chicago.

Seaman, M. A., & Serlin, R. C. (1996, April). *Equivalency intervals for two-group comparisons*. Paper presented at the annual convention of the American Educational Research Association, New York.

Seaman, M. A., Hill, C. C., & McLeod, J. R. (1996, April). *Implementing electronic societies in research and statistics courses*. Paper presented at the annual convention of the American Educational Research Association, New York.

Go, I. C., & Seaman, M. A. (1996, April). *A fuzzy set theoretic approach to the analysis of performance assessment data*. Paper presented at the annual convention of the American Educational Research Association, New York.

Davis, S. C., McCormick, C., & Seaman, M. A. (1994, April). *Scripting peer review processes in graduate students' writing*. Paper presented at the annual convention of the American Educational Research Association, New Orleans, LA.

Davis, S. C., McCormick, C., & Seaman, M. A. (1993, October). *Building bridges between writing processes and evaluation: Enhancing peer review of writing with interrogative scripts*. Paper presented at the Canadian National Writing/Literacy Conference, Winnipeg, Manitoba.

Serlin, R. C., & Seaman, M. A. (1993, April). *Two-sample good-enough tests of mean differences*. Paper presented at the annual convention of the American Educational Research Association, Atlanta, GA.

Seaman, M. A. (1992, April). *Power curves and sample sizes for a two-sample test of non-null effect sizes*. Paper presented at the annual convention of the American Educational Research Association, San Francisco, CA.

Seaman, M. A., Levin, J. R., & Serlin, R. C. (1992, April). *Alternate-ranks ANCOVA and alternative adaptations*. Paper presented at the annual convention of the American Educational Research Association, San Francisco, CA.

Levin, J. R., Serlin, R. C., & Seaman, M. A. (1992, April). *Controlled multiple comparisons for several special cases: An extended Fisher expedition*. Paper presented at the annual convention of the American Educational Research Association, San Francisco, CA.

Seaman, M. A., & Serlin, R. C. (1991, April). *A Monte Carlo examination of nonparametric multiple-comparison procedures for pairwise tests of location*. Paper presented at the annual convention of the American Educational Research Association, Chicago, IL.

Seaman, M. A., Levin, J. R., Serlin, R. C., & Franke, T. M. (1990, April). *A modified algorithm and an examination of power for Peritz's pairwise multiple-comparison procedure*. Paper presented at the annual convention of the American Educational Research Association, Boston, MA.

Franke, T. M., Serlin, R. C., & Seaman, M. A. (1990, April). *Goodman's Y^2 : A consistent approach to teaching*. Paper presented at the annual convention of the American Educational Research Association, Boston, MA.

Seaman, M. A., Levin, J. R., Serlin, R. C., & Franke, T. M. (1989, April). *New and improved multiple comparison procedures: More pep with each step*. Paper presented at the annual convention of the American Educational Research Association, San Francisco, CA.

Other Presentations

Seaman, M. A. (2007, January). *Faculty salary decisions*. Presentation made to the College of Nursing Faculty at the University of South Carolina.

Seaman, M. A. (2006, December). *Faculty salary decisions*. Presentation made to the Executive Committee of the College of Social Work at the University of South Carolina.

Seaman, M. A. (2006, February). *Moving beyond normal: An alternative approach to group comparisons*. Presentation made to the Graduate Student Organization of the Programs in Educational Psychology, Research and Foundations at the University of South Carolina.

Hoffman, D. S., & Seaman, M. A. (1998, December). *The Arts in Basic Curriculum Project*. Presentation made to the Board of the South Carolina Arts Alliance.

Seaman, M. A. (1998, November). *The Arts in Basic Curriculum Project evaluation: Looking at the past and preparing for the future*. Presentation made to the Board of the South Carolina Arts Commission.

Seaman, M. A. (1998, October). *Preliminary results from the Arts in Basic Curriculum evaluation*. Presentation made to the Steering Committee of the Arts in Basic Curriculum Project.

Seaman, M. A. (1991). Rank-based multiple comparison procedures for pairwise comparisons of location. Presentation at the Department of Statistics Colloquium Series, University of South Carolina.

Seaman, M. A. (1991). Choosing your errors wisely: A taxonomy of multiple-comparison procedures. Presentation at the Educational Psychology Seminar Series, University of South Carolina.

University and Community Service

Associate Dean, College of Education, 2002 – present

Member, University Standing Committee for Small Grants Program, 2006 - present

Chair, University Director of Institutional Planning Search Committee, 2003

Chair, College Assessment Committee, 2001 – 2003

Chair, Department of Educational Psychology, 2000 – 2002

Director, Office of Program Evaluation, 2001 – 2002

University Fulbright Selection Sub-Committee, 2000

Arts in Basic Curriculum Steering Committee, 1999 – 2003

Advisor, Program Graduate Student Organization, 1999 - 2000

Chair, Educational Research Search Committee, 1999 - 2000

College Student Affairs Committee, 1999 - 2000

Department Student Affairs Committee, 1999 – 2000

Ad Hoc Arts Report Card Development Committee, 1999 - 2000

College Technology Advisory Committee, 1994 - present

Higher Education Arts Forum Planning Committee, 1998 - 1999

Secretary, College Faculty, 1998 - 1999

College Advanced Programs Governance Committee, 1997 - 1999

Chair, Department Academic Affairs Committee, 1998 - 1999

Department Academic Affairs Committee, 1997 - 1998

Dean's Search Committee, 1997 - 1998

Edited *Program Notes* Newsletter for Program, 1996 - 1998

University of South Carolina Senate, 1994 - 1997

Department Faculty Affairs Committee, 1994 - 1996

College Advanced Programs Governance Committee, 1992 - 1994

Chair, Department Academic Affairs Committee, 1992 - 1993

Supervisor, Educational Statistics Laboratory, 1992 - 1993
Department Academic Affairs Committee, 1991 – 1992

Doctoral Committee Service

Angle, S. M., 2007
Dickenson, T., 2005 (Committee Co-Chair)
Meyer, J. P., 2004
McTeer, D., 2004
Fisher, S., 2003
Haas, R., 2003
Geddings, D., 2003
Bartholomew, J., 2003
Goins, K. B., 2001
DuBay, T. L., 2001
Swann, J. M., 2001
Barton, K. E., 2001
Day, E. A., 1999
Komisar, K. C., 1999
Hill, C. C., 1998 (Committee Chair)
Quilter, S., 1998
Go, I. C., 1995 (Committee Chair)
Hoffman, D. S., 1995
Macciomei, N. R., 1995
Onwuegbuzie, A. J., 1993 (Committee Chair)
Davis, S. C., 1993
Bynum, L. L., 1992

Master's Theses Committees Chaired

Watts, J. W., 2000