**RICHARD J. SHAVELSON**

Shavelson is the Emeritus Margaret Jacks Professor of Education and Professor of Psychology, and former I. James Quillen Dean of the Graduate School of Education at Stanford University and Senior Fellow in the Woods Institute for the Environment. He served as president of the American Educational Research Association; is a fellow of the American Association for the Advancement of Science, the American Educational Research Association, the American Psychological Association, and the American Psychological Society; and the Humboldt Society (Germany); and a member of the National Academy of Education and the International Academy of Education. His current work includes assessment of undergraduates’ learning including the Collegiate Learning Assessment, accountability in higher education, assessment of science achievement, validity of learning progressions, enhancement of women’s and minorities’ performance in organic chemistry, and the role of mental models of climate change on sustainability decisions and behavior. Other work includes studies of computer cognitive training on working memory, fluid intelligence and science achievement, the scientific basis of education research, and new standards for measuring students’ science achievement in the National Assessment of Educational Progress (the nation’s “report card”). His publications include *Statistical Reasoning for the Behavioral Sciences,* *Generalizability Theory: A Primer* (with Noreen Webb), and *Scientific Research in Education* (edited with Lisa Towne); and *Assessing College Learning Responsibly: Accountability in a New Era* (2010, Stanford University Press)*.*

**EDUCATION**

Ph.D. Educational Psychology 1971 Stanford University

M.A. Psychology 1967 San Jose State College

A.B. Psychology 1964 University of Oregon

**PROFESSIONAL EXPERIENCE**

2010- Margaret Jacks Professor of Education, Stanford University (Emeritus)

 I. James Quillen Dean, Graduate School of Education (Emeritus)

2010-2016 Partner and Chief Scientist, SK Partners, LLC

2005-2010 Margaret Jacks Professor of Education, Stanford University

2005-2007 Senior Fellow, Stanford Institute for the Environment

2003-2006 Sigma Xi (Science Honorary) Distinguished Lecturer

1995-2010 Professor, Graduate School of Education and Professor, Department of Psychology (by courtesy), Stanford University (Emeritus)

1995-2000 I. James Quillen Dean, Graduate School of Education

2001- National Associate, National Academy of Sciences

2000-2001 Fellow, Center for Advanced Study in the Behavioral Sciences

1995-2000 Dean, Graduate School of Education, Stanford University

1993-1998 Vice-Chair and Chair, Board on Testing and Assessment. National Research Council, National Academy of Science.

1987-1996 Professor, Department of Education; affiliated appointment, Department of Statistics and Applied Probability (1993), University of California, Santa Barbara.

1994 Humboldt Foundation Fellow, University of Göttingen, Göttingen, Germany

1994-May Visiting Professor, Faculty of Education, University of Fribourg, Fribourg, Switzerland

1994-March Visiting Professor, Faculty of Education, Monash University, Melbourne, Australia

1992-May Visiting Professor, Faculty of Education, University of Helsinki, Helsinki, Finland

1987-1993 Dean, Graduate School of Education, University of California, Santa Barbara

1986-1989 President-elect, President, Immediate Past President, American Educational Research Association

1980-1985 Director, Education and Human Resources Program, The RAND Corporation, Santa Monica, California

1979-1988 Professor of Education, University of California, Los Angeles

1985-Summer-Visiting Professor, Faculty of Education, Monash University, Melbourne, Australia

1982-Summer-Visiting Professor, Department of Psychology, University of Fribourg, Fribourg, Switzerland

1975-1979 Associate Professor of Education, University of California, Los Angeles

1973-1975 Assistant Professor of Education, University of California, Los Angeles

1971-1973 Assistant Professor of Education (Acting), Stanford University, and Research and Development Associate, Stanford Center for R&D in Teaching

1970-1971 Lecturer in Education, Stanford University

1969-1970 Research Traineeship Program, Research Fellowship--Stanford; Instructor in Statistics, School of Education

1968-1969 Research Assistant, Stanford Center for R&D in Teaching

1966-1968 Human Factors Engineer, Lockheed Missiles & Space Co.

**PROFESSIONAL ORGANIZATIONS**

American Association for the Advancement of Science (Fellow)

American Educational Research Association (Fellow)

American Psychological Association (Fellow)

American Psychological Society (Fellow)

Humboldt (Fellow)

International Academy of Education

National Academy of Education

National Council on Measurement in Education

**AWARDS**

1. E.L. Thorndike Award in 2010:

American Psychological Association given to living recipients for substantial career achievements in educational psychology. The award's winners are recognized for research in the best tradition of educational psychology, meaning that the award is conferred for original, scientific, empirically-based research that contributes significantly to knowledge, theory, or practice in educational psychology.[1] It was named for the noted psychologist, Edward Thorndike.

2. R.L. Linn Award in 2016:

American Educational Research Association. This award recognizes the important contributions of Robert L. Linn to educational measurement and assessment policy. This annual award honors a scholar whose work bridges educational measurement and some other significant area of research (e.g., assessment policy, learning theory, curriculum and instruction) and has resulted in a widespread positive impact on the field of educational measurement. These contributions may include theoretical or technical developments, conceptualizations of educational measurement issues that have enhanced public understanding of these issues, or innovative ideas that improve the validity and effectiveness of educational assessments.

3. E.F. Lindquist Award in 2011

American Educational Research Association .Named in honor of E.F. Lindquist, a pioneering scholar and researcher who co-founded The American College Testing Program (ACT), this award is co-sponsored by AERA and ACT and given annually for outstanding applied or theoretical research in the field of testing and measurement. It acknowledges a body of research, as opposed to a single work, of an empirical, theoretical, or integrative nature that, ideally, advances the twin goals of greater understanding and improved use of testing and measurement techniques.

4. AERA Review of Research Award in 1978 and 2008

This award is given in recognition of an outstanding review of research article appearing in the Review of Research in Education and the Review of Educational Research.

**PUBLICATIONS**

***Books and Monographs***

Fu, A., Kannan, A., & Shavelson, R.J. (Eds.) (2019). Evaluation in informal science, technology, engineering and mathematics education. *New Directions for Evaluation, 161,* pp. 1-131.

Steedle, J. & Shavelson, R. (2010). *Models of understanding in Newtonian mechanics: Latent class analysis of diagnostic science assessment data using Bayesian networks.* Saarbrücken, Germany: Lambert Academic Publishing.

Shavelson, R.J. (2010). *Measuring college learning responsibly: Accountability in a new era.* Stanford, CA: Stanford University Press.

Yuan, K., Shavelson, R., Alonzo, A., & Steedle, J. (2008). *Strengthening mental muscles*. Saarbrücken, Germany: VDM Verlag.

Shavelson, R.J. (2007). *A brief history of student learning: How we got where we are and a proposal for where to go next.* Washington, DC: Association of American Colleges and Universities’ *The Academy in Transition*.

Schneider, B., Carnoy, M., Kilpartick, J., Schmidt, W.H., & Shavelson, R.J. (2007). *Estimating causal effects: Using experimental and observational designs.* Washington, DC: American Educational Research Association.

Shavelson, R.J., & Towne, L. (Eds.) (2002). Scientific research in education. Washington, DC: National Academy Press.

Brown, J. & Shavelson, R.J. (1996). Assessing hands-on science: A teacher’s guide to performance assessment. Thousand Oaks, CA: Corwin Press, Inc.

Shavelson, R.J. (1996). Statistical reasoning for the behavioral sciences, 3rd ed. Boston: Allyn & Bacon.

Shavelson, R.J., & Webb, N.M. (1991). Generalizability theory: A primer. Newbury Park, CA: SAGE.

Shavelson, R.J. (1988). Statistical reasoning for the behavioral sciences, 2nd ed. Boston: Allyn & Bacon.

Shavelson, R.J. & Li, W. (1988). Instructor's manual to accompany statistical reasoning for the behavioral sciences, 2nd ed., Allyn & Bacon.

Shavelson, R.J., with Short, L., Muthen, B., Li, W., & Muthen, L. (1988). Relationship between applicant characteristics, MBA program attributes, and student performance. Year 1 Report. Clustering of Graduate Schools of Business Management, Graduate Management Admission Council, Los Angeles.

Shavelson, R.J., with Brophy, M., Jiyono, & Obemeata, J.O. (1985). Evaluation of nonformal education programs: The applicability and utility of the criterion-sampling approach. UIE Monographs 11. Hamburg: Unesco Institute for Education.

Shavelson, R.J. (1981). Statistical reasoning for the behavioral sciences. Boston: Allyn & Bacon.

Shavelson, R.J. (1981). Instructor's manual to accompany statistical reasoning for the behavioral sciences. Boston: Allyn & Bacon.

***RAND Reports***

The RAND Corporation (1991, July). After high school, then what? A look at the postsecondary sorting-out process for American youth (R-4008-FMP). Santa Monica, CA: Co-author.

The RAND Corporation (1987, August). Indicator systems for monitoring science and mathematics education (R-3570-NSF). Santa Monica, CA: Co-author. [Portions abstracted: "Steps in designing an indicator system," ERIC Clearinghouse on Tests, Measurements, and Evaluation, EDO-TM-91-4, July 1991. "What are educational indicators and indicator systems?" ERIC Clearinghouse on Tests, Measurement, and Evaluation, EDO-TM-91-5, July 1991.]

The RAND Corporation (1989, July). Indicators for monitoring mathematics and science education: A sourcebook (R-3742-NSF/RC). Santa Monica, CA: Co-author.

The RAND Corporation (1986, July). Administrative policies for increasing the use of micro-computers in instruction (R-3409-NIE). Santa Monica, CA: Co-author.

The RAND Corporation (1986, May). Evaluating student outcomes from telecourse instruction (R-3422-CPB). Santa Monica, CA: Co-author.

The RAND Corporation (1985, February). Individual characteristics and unit performance: A review of research and methods (R-3194-MIL). Santa Monica, CA: Co-author.

The RAND Corporation ( 1984, August). Two-year colleges and vocational schools as sources of military manpower (N-2193-MIL). Santa Monica, CA: Co-author.

The RAND Corporation (1984, May). Delinquency prevention in south Chicago: A fifty-year assessment of the Chicago Area Project (R-3142-NIE). Santa Monica, CA: Co-author.

The RAND Corporation (1984, April). Staff development for instructional uses of microcomputers (P-6983). Santa Monica, CA: Co-author.

The RAND Corporation (1984, April). How effective teachers use microcomputers for instruction (P-6982). Santa Monica, CA: Co-author.

The RAND Corporation (1984, March). Teaching mathematics and science: Patterns of microcomputer use (R-3180-NIE/RC). Santa Monica, CA: Co-author.

The RAND Corporation (1984, March). "Successful" teachers' patterns of microcomputer-based mathematics and science instruction (N-2170-NIE/RC). Santa Monica, CA: Co-author.

The RAND Corporation (1983, August). Successful use of microcomputers in classroom instruction (P-6653). Santa Monica, CA: Co-author.

The RAND Corporation (1983, April). Teachers' instructional uses of microcomputers (P-6888). Santa Monica, CA: Co-author.

The RAND Corporation (1983, January). Recruiting potential of the two-year college postsecondary vocational school markets (N-1946-MRAL). Santa Monica, CA: Co-author.

The RAND Corporation (1982, June). Can implementation of computers be justified on cost-effectiveness grounds? (P-6781). Santa Monica, CA: Co-author.

The RAND Corporation (1981, June). Research on teachers' pedagogical thoughts, judgments, decisions, and behavior (P-6639). Santa Monica, CA: Co-author.

The RAND Corporation (1981, April). Self-concept: Interplay of theory and methods (P-6607). Santa Monica, CA: Co-author.

The RAND Corporation (1980, August). Generalizability theory: 1973-1980 (P-6580). Santa Monica, CA: Co-author.

***Center for Research on Evaluation, Standards and Student Testing (CRESST) Reports***

Ayala, C., Shavelson, R.J., Ayala, M. (2000). On the cognitive interpretation of performance assessment scores. CSE Technical Report 546. Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511

Rosenquist, A., Shavelson, R.J., & Ruiz-Primo, MA. (2000). On the “exchangeability” of hands-on and computer simulation science performance assessments. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, M.A., & Furtak, E. (2004). Informal formative assessment of students’ understanding of Scientific inquiry. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, M.A., Li, M., & Shavelson, R.J. (2001). Looking into students’ science notebooks: What do teachers do with them? National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, MA, Schultz, SE, Li, M., & Shavelson, R.J. (1998). Comparison of the reliability and validity of scores from two concept-mapping techniques. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, MA, Schultz, SE, Li, M., & Shavelson, R.J. (1999). On the cognitive validity of interpretations of scores from alternative concept mapping techniques. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, MA, Schultz, SE, & Shavelson, R.J. (1996). Concept-map based assessment in science: Two exploratory studies. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, M.A., Schultz, S.E., & Shavelson, R.J. (1997). Concept map-based assessment in science: Two exploratory studies. CSE Technical Report 436, National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, MA, & Shavelson, R.J. (1998). On the assessment of science achievement. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Ruiz-Primo, MA, Shavelson, R.J., & Schultz, SE. (1997). On the validity of concept-map based assessment interpretations: An experiment testing the assumption of hierarchical concept maps in science. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Shavelson, R.J., Roeser, R., Kupermintz, H., Lau, S., Ayala, C., Haydel, A, & Schultz, S. (in press). A multidimensional approach to achievement validation. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Shavelson, R.J., Gao, X., & Baxter, G.P. (1993). Sampling variability of performance assessments. CSE Technical Report 361. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Shavelson, R.J., & Ruiz-Primo, M.A. (1998). On the assessment of science achievement: Conceptual underpinnings for the design of performance assessments. CSE Technical Report 491. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Shavelson, R.J., Ruiz-Primo, M.A., Li, M., & Ayala, C.C. (2003). *Evaluating new approaches to assessing learning.* CSE Technical Report XXX. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Solano-Flores, G., Shavelson, R.J., Ruiz-Primo, MA, Schultz, SE, & Wiley, E. (1997). Conceptual underpinnings for the design of performance assessments and concept-map representations of knowledge structures. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

Yin, Y., & Shavelson, R.J. (2004). Application of generalizability theory to concept-map assessment research. National Center for Research on Evaluation, Standards, and Student Testing, Center for the Study of Evaluation, Graduate school of Education & Information Studies, UCLA, Los Angeles, CA. 90024-6511.

***Articles, Reports and Book Chapters***

Shavelson, R.J. (2019). PLATO in Search of Identity. In O. Zlatkin-Troitschanskaia (Ed.), *Frontiers and Advances in Positive Learning in the Age of Information (PLATO).* NY: Springer, Chapter 19.

Hyytinen, H., Toom, A., & Shavelson, R.J. (2019). Enhancing Scientific Thinking through the Development of Critical Thinking in Higher Education. In Mari Murtonen and Kieran Balloo (Eds.) *Redefining Scientific Thinking for Higher Education: Higher-Order Thinking, Evidence-Based Reasoning and Research Skills.*

Shavelson, R. J., Marino, J., Zlatkin-Troitschanskaia, O. & Schmidt, S. (in press). Reflections on the Assessment of Quantitative Reasoning. In B.L. Madison, & L.A. Steen (Eds.), *Calculation vs. context: Quantitative literacy and its implications for teacher education*. Washington, DC: Mathematical Association of America.

Fu, A. C., Kannan, A., & Shavelson, R. J. (2019). Editors’ notes. A. C. Fu, A. Kannan, & R. J. Shavelson (Eds.), Evaluation in Informal Science, Technology, Engineering, and Mathematics Education. *New Directions for Evaluation, 161*, 7 – 15.

Fu, A. C., Kannan, A.,&Shavelson, R. J. (2019). Direct and unobtrusive measures of informal STEM education outcomes. A. C. Fu, A. Kannan, & R. J. Shavelson (Eds.), Evaluation in Informal Science, Technology, Engineering, and Mathematics Education. *New Directions for Evaluation, 161*, 35–57.

Fu, A. C., Kannan, A., & Shavelson, R. J. (2019). Synthesis of issues and future directions. A. C. Fu, A. Kannan, & R. J. Shavelson (Eds.), Evaluation in Informal Science, Technology, Engineering, and Mathematics Education. *New Directions for Evaluation, 161*, 125–131.

Shavelson, R.J. (2018). Discussion of papers and reflections on “Exploring the Limits of Domain-Generality.” In F. Fischer, C. A. Chinn, K. Engelmann & J. Osborne (Eds.), *Scientific Reasoning and Argumentation: The Roles of Domain-Specific and Domain-General Knowledge*. NY: Routledge.

Shavelson, R. J., Zlatkin-Troitschanskaia, O. & Marino, J. (2018). Performance Indicators of Learning in Higher-Education Institutions: Overview of the Field. In E. Hazerkorn, H. Coates & A. Cormick (Eds.), *Research Handbook on Quality, Performance and Accountability in Higher Education*. Edward Elgar.

Shavelson, R. J. (2018). Methodological perspectives: Standardized (summative) or contextualized (formative) evaluation? *Education Policy Analysis Archives, 26*(48). http://dx.doi.org/10.14507/epaa.26.3813.

Holtsch, D., Hartig, J., & Shavelson, R. (2018). Do practical and academic preparation paths lead to different commercial teacher “quality”? *Vocations and learning.* Published online at <https://doi.org/10.1007/s12186-018-9208-0>.

Oser, F., Mueller, S., Obex, T., Volery, T., & Shavelson, R.J. (2018). Rescue an enterprise from failure: A revolutionary assessment tool for simulated performance. In O. Zlatkin-Troitschanskaia, M. Toepper, H.A. Pant, C. Lautenbach & C. Kuhn (Eds.), *Assessment of learning outcomes in higher education: Cross-national comparisons and perspectives.* NY: Springer.

Shavelson, R.J., Zlatkin-Troitschanskaia, & Marino, J.P. (2018). International performance assessment of learning in higher education (iPAL): Research and development. In O. Zlatkin-Troitschanskaia, M. Toepper, H.A. Pant, C. Lautenbach & C. Kuhn (Eds.), *Assessment of learning outcomes in higher education: Cross-national comparisons and perspectives.* NY: Springer.

Zlatkin-Troitschanskaia, O., Shavelson, R.J., & Pant, H.A. (2018). Assessment of learning outcomes in higher education: International Comparisons and Perspectives. In C. Secolsky & D.B. Denison (Eds.), *Handbook on measurement, assessment and evaluation in higher education (2nd Ed.)*. NY: Routledge (Pp. 686-698).

Webb, N.M., Shavelson, R.J., & Steedle, J.T. (2018). Generalizability theory in assessment contexts. In C. Secolsky & D.B. Denison (Eds.), *Handbook on measurement, assessment and evaluation in higher education (2nd Ed.).* NY: Routledge (Pp. 201-216).

Shavelson, R.J. (2017). Statistical significance and program effect: Rejoinder to “Why Assessment Will Never Work in Many Business Schools: A call for Better Utilization of Pedagogical Research.” *Journal of Management Education*, XX, 1-5.

Holtsch, D., Mentele, S., Wenger, E., Eberle, F., & Shavelson, R.J. (2016). Challenges of a cross-national computer-based test adaptation. *Empirical Research in Vocational Education and Training*, *8,* 1-32..

Shavelson, R.J., & Wiley, E.E. (2016). Reflections on (bi) factor analysis. In M. Rosen, K.Y. Hansen & U. Wolff. *Cognitive abilities and educational outcomes: A Festschrift in honour of Jan-Eric Gustafsson.* (Chapter 13, pp. 237-247.) NY: Springer.

Berliner, D, Phillips, D. , Zeidner, M., de Corte, E., Shavelson, R., de Ibarrola, M., & Clark, R. (2016). In Memory of Gavriel Salomon. *Educational Psychological Review,28,* 207-213*.*

Shavelson, R.J., Domingue, B.W., Mariño, J.P., Molina-Mantilla, A., Morales, J.A., & Wiley, E.E. (2016). On the practices and challenges of measuring higher education value added: The case of Colombia. *Assessment and Evaluation in Higher Education*. *41*(5), 695-720. (See also <http://www.tandfonline.com/doi/full/10.1080/02602938.2016.1168772>.)

Fu, A.C., Kannan, A., Shavelson, R.J., Peterson, L. & Kurpius, A. (2016). Room for rigor: designs and methods in informal science education evaluation. *Visitor Studies, 19*(1), 12-38, (See also <http://dx.doi.org/10.1080/10645578.2016.1144025>.)

Shavelson, R., Fu, A., Kurpius, A., & Wiley, E. (2015). Evidence-based practice in science education. In R. Gunstone (Ed.), *Encyclopedia of Science Education.* NY: Springer.

Shavelson, R.J. (2015). Reflections on scientific research in education. In M.J. Feuer, A.I. Berman & R.C. Atkinson (Eds.), *Past as prologue: The National Academy of Education at 50*. Washington, DC: National Academy of Education.

Shavelson, R., (Chair), Davey, T., Ferrara, S., Holland, P., Webb, N., & Wise, L. (2015). *Psychometric considerations for the next generation of performance assessment*. Princeton, NJ: Educational Testing Service.

Fu, A. C., Peterson, L., Kannan, A., Shavelson, R. J., & Kurpius, A. (2015). A framework for summative evaluation in informal science education, *Visitor Studies, 18*(1), 17-38.

Li, M., Shavelson, R.J., Yin, Y., & Wiley, E. (2015). Generalizability theory. In R. Cautin & S. Lilienfield (Eds.), *Encyclopedia of Clinical Psychology*. NY: Wiley.

Yin, Y., Vanides, J., Tomita, M., Shavelson, R.J., & Ruiz-Primo, M.A. (2015). On diagnosing and enhancing students’ understanding of the natural world. In L. Cardellini (Ed,), *Profiles: Professional reflection oriented focus on inquiry-based leaning and education through science.* Ancona, IT: Università Politecnica delle Marche (http://www.profiles.univpm.it).

Zlatkin-Troitschanskaia, O., Shavelson, R.J., & Kuhn, C. (2015). The International State of Research on Measurement of Competency in Higher Education. Studies in Higher Education, 40(3), 393-411.

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Blomeke, S., Gustafsson, J-E., & Shavelson, R. (2015). Beyond dichotomies: Competence viewed as a continuum. Zeitschrift für Psychologie, Zeitschrift für Psychologie, 223(1), 3–13.

Baker, E.L., Barton, P.E., Darling-Hammond, L., Haertel, E., Ladd, H.F., Linn, R.L., Ravitch, D., Rothstein, R., Shavelson, R.J., & Shepard, L.A. (2015). Problems with the use of student test scores to evaluate teachers. Washington, DC: Economic Policy Institute ([www.epi.org](http://www.epi.org)).

Hyytinen, H., Holmab, K. Tooma, A., Shavelson, R.J., & Lindblom-Ylänne, S. (2014). The complex relationship between students’ critical thinking and epistemological beliefs in the context of problem solving. *Frontline Learning Research 6*, 1-25 (available at <http://journals.sfu.ca/flr/index.php/journal/article/view/124>).

Lopez, E., Shavelson, R., Nandagopal, K., Szu, E., & Penn, J. (2014). Ethnically diverse students’ knowledge structures in first-semester organic chemistry. *Journal of Research in Science Teaching, 51*(6),741–758.

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Shavelson, R.J. (2014). Comments on conceptual and measurement challenges in modeling competency. In Toepper, M., Zlatkin-Troitschanskaia, O., Kuhn, C., Schmidt, S. & Brückner, S. (Eds.) (2014). *Advancement of Young Researchers in the Field of Academic Competency Assessment – Report from the International Colloquium for Young Researchers from November 14-16, 2013 in Mainz* (KoKoHs Working Papers, 5). Berlin & Mainz: Humboldt University & Johannes Gutenberg University.

Wiley, E.W., Shavelson, R.J., & Kurpius, A.A. (2014). On the factorial structure of the SAT and implications for next-generation college readiness assessments. *Educational and Psychological Measurement, 74*(5), 859-874.(Online version:

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Brownell, S.E., Kloser, M.J., Fukami, T., & Shavelson, R.J. (2013). Context matters: A comparison using volunteers and non-volunteers in a research-based introductory biology lab course. *Journal of Microbiology & Biology Education*, *24(2),* 176-182.

Lopez, E.J., Nandagopal, K., Shavelson, R.J., Szu, E., & Penn, J. (2013). Self-Regulated Learning Study Strategies and Academic Performance in Undergraduate Organic Chemistry: An Investigation Examining Ethnically Diverse Students. *Journal of Research in Science Teaching*, 50(6), 660–676.

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Shavelson, R.J., & Kurpius, A. (2013). Assessing and Accounting for College Learning. Kyoto, Japan: Doshisha University Press.

Kloser, M.J., Brownell, S.E., Shavelson, R.J. & Fukami, T. (2013). Effects of a research-based ecology lab course: A study of nonvolunteer achievement, self-confidence, and perception of lab course purpose. *Journal of College Science Teaching, 42*(3), 72-81.

Daniel C. Edelson, D.C., Shavelson, R.J., & Wertheim, J.A., Eds. (2013). *Road Map for 21st Century Geography Education Project—Assessment: Recommendations and Guidelines for Assessment in Geography Education*. Washington, DC: National Geographic Society.

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Shavelson, R.J. (2012). An approach to testing and modeling competencies. In S. Blömeke, O. Zlatkin-Troitschanskaia, C. Kuhn & J. Fege (Eds.), *Modeling and Measuring Competencies in Higher Education: Tasks and Challenges*. Boston: Sense.

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Furtak, Shavelson, Shemwell, and Figueroa (2012). To teach or not to teach through inquiry: Is that the question? In S. Carver & J. Shrager (Eds.), *The journey from child to scientist: Integrating cognitive development and the education sciences*. Washington, D.C.: American Psychological Association.

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**SELECTED PAPER PRESENTATIONS AND INVITED TALKS**

Furtak, E.M., Hardy, I., Bienbrech, T., Shavelson, R.J., & Shemwell, J.T. (2008). *A framework for analyzing reasoning in science classroom discourse.* Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY, March 24-28.

Yin, Y., Tomita, M. & Shavelson, R. (2008, March-April). *Using Formative Assessment to Promote Conceptual Change .* Paper presented at the biannual meeting of the National Association of Research on Science Teaching.

MacElvany, M., Srinivasan, M., MD, Shay, J., Shavelson, R.J., PhD, and West, D.C., MD. (May 5-8, 2007). Measuring Knowledge Structure in Medical Education: Reliability of Concept Mapping Assessment. Paper presented at the annual Pediatric Academic Societies’ Annual Meeting, Toronto, Canada.

Shavelson, R.J., & Ruiz-Primo, M..A. (2006, April 8). Assessment of Student Learning In College: Rhetoric And Promises. Paper presented at the annual meeting of the National Council on Measurement in Education, San Francisco, CA.

Shavelson, R.J. (2006, April 8). Assessing learning and holding higher education accountable. Paper presented at the annual meeting of the National Council on Measurement in Education, San Francisco, CA.

Othman, A. R., Shavelson R.J., & Ruiz-Primo, M.A. (2006). Accountability in Malaysian higher education. Proceedings of the Third International Conference on Measurement and Evaluation in Education (ICMEE 2006), Penang, Malaysia.

Heinrichs WL, Lukoff B, Youngblood P, Shavelson R, Dev P. Criterion-based technical training for surgeons. Paper presented at: 15th SLS Annual Meeting and Endo Expo 2006; September 6–9, 2006; Boston, MA.

Heinrichs WL, Lukoff B, Youngblood P, Shavelson R, Dev P. Proficiency as the objective metric of technical surgical competency on the LTS2000 and the hysteroscopy trainers. Paper presented at: 35th Annual Meeting of the American Association of Gynecological Laparoscopy; November 2005; Chicago, IL.

Ruiz-Primo, M. A., Yuan, K., Furtak, E., & Shavelson, R. J., (2005, April). On the validity of teacher logs as a source of information about informal classroom assessment practices. Poster presented at the AERA annual meeting. Montreal, Canada.

Naughton, B.A., Shavelson, R.J., & Ruiz-Primo, M.A. (2004 April). Model assessment programs: What are they modeling? Paper presented at the annual meeting of the American Educational Research Association meeting, San Diego, CA.

Shavelson, R.J. (2004, April). No Child Left Behind and Science Achievement. Sigma Xi Distinguished Lecture, Loyola Marymount University.

Shavelson, R.J. (2004, April). No Child Left Behind and Science Achievement. Sigma Xi Distinguished Lecture, California State University Northridge.

Shavelson, R.J. (2004, April). On What We're Measuring and Not Measuring in Science Achievement: Implications for Teaching and Learning. Sigma Xi Distinguished Lecture, Loyola Marymount University.

Shavelson, R.J. (2004 February). Assessing the No Child Left Behind policy: Is science being left behind. Distinguished Lecture, University of New Mexico Sigma Xi Chapter.

Shavelson, R.J. (April 2003). Reflections on scientific inquiry in education. Invited Talk, Division D Graduate Students. Annual meeting of the American Educational Research Association, Chicago.

Klein, S., Kuh, G., & Chun, M., Hamilton, L., & Shavelson, R.J. (April 2003). The Search for “Value-Added”: Assessing and Validating Selected Higher Education Outcomes. Annual meeting of the American Educational Research Association, Chicago.

Naughton, B.A., Suen, A.Y., & Shavelson, R.J. (April 2003). Accountability for what? Understanding the learning objectives in state higher education accountability programs. Annual meeting of the American Educational Research Association, Chicago.

Shavelson, R.J. (January 2003). Bridging the Gap between Formative and Summative Assessment. Paper presented at the National Research Council Workshop on Bridging the Gap between Large-scale and Classroom Assessment. National Academies Building, Washington, DC.

Shavelson, R.J., Li, M., Ruiz-Primo, M.A., & Ayala, C.C. (August 2002). Evaluating New Approaches to Assessing Learning. Keynote Address,\* Joint Northumbria/EARLI Assessment Conference, University of Northumbria at Newcastle, Longhirst Campus, 28 August 2002

Shavelson, R.J. (April 2002). Assessment & Evaluation. Invited presentation, National Park System’s Leadership Symposium, San Diego.

Shavelson, R.J., Feuer, M.J., Lagemann, E.C., DeHaan, R.L., Eisenhardt, M., & Weiss, C.H. (April 2002). *Scientific Research in Education*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Ayala, C.C., Yin, Y., Shavelson, R.J., & Vanides, J. (April 2002). *Investigating The Cognitive Validity Of Science Performance Assessment With Think Alouds: Technical Aspects*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Yin, Y., Ayala, C.A., & Shavelson, R.J. (April 2002). *Hands-on or Minds-on: Cognitive Activities in Performance Assessments*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Shavelson, Richard J. (September 4, 2001). *Recent Developments in Assessment*. Invited talk, Faculty of Education, University of Helsinki, Helsinki, Finland.

Shavelson, Richard J. (August 29, 2001). *Recent Developments Linking (Science) Teaching, Learning and Assessment*. Invited talk at European Association for Research on Learning and Instruction (EARLI), at Fribourg, Switzerland.

Shavelson, R.J. (April 11, 2001). Panelist, *Science Education in the 21st Century: Pushing the Envelope on Student Assessment*. Illinois Mathematics and Science Academy, Chicago, IL.

Shavelson, R.J. (April 11, 2001). Embedded and Formative Assessment. Invited talk, *Science Education in the 21st Century: Pushing the Envelope on Student Assessment*. . Illinois Mathematics and Science Academy, Chicago, IL.

Li, M. & Shavelson, R.J. (April 12, 2001). *Examining the links between science achievement and assessment.* Paper presented at the annual meeting of the American Educational Research Association, Seattle.

Shavelson, R.J. (April 13, 2001). *Contributions to generalizability theory: Indirect but strong effects through mentoring* . Paper presented at the annual meeting of the American Educational Research Association, Seattle.

Shavelson, R.J. (April 13, 2001). The life of Bill Russell and Good Times for AERA. Invited presentation, annual meeting of the American Educational Research Association, Seattle.

Shavelson, R.J. (February 28, 2001). *Reflections on Achievements in Teaching, Learning and Assessment*. Invited Address, College of Education, Arizona State University.

Shavelson, R.J. (February 28, 2001). *Conceptual and Methodological Issues in Assessment of Achievement.* Invited Seminar, College of Education, Arizona State University.

Shavelson, R.J. & Ruiz-Primo, M.A. (2000, June). Windows into the mind. Invited talk at the University of Ancona, Ancona, Italy.

Shavelson, R.J. (2000, May). Trends in science assessment: Linking methods to facets of achievement. Invited talk to the Department of Educational Measurement, Umea University, Sweden.

Ayala, C.C. & Shavelson, R.J. (2000, April). New dimensions for performance assessments. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New Orleans.

Ham, H.P., Shavelson, R.J., Reinhart, M.A. & Bianchi, L.J. (2000, April). Using compensatory and conjunctive scoring approaches with a medical certification oral examination. Paper presented at the National Council on Measurement in Education (NCME) Annual Meeting, New Orleans.

Min Li, Ruiz-Primo, M.A., Ayala, C.C., Shavelson, R.J. (2000, April). Study of the reliability and validity of inferring students’ understanding from their science journals. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New Orleans.

Ruiz-Primo, M.A., Li, M., Ayala, C.C., & Shavleson, R.J. (2000, April). Students’ science journals as an assessment tool. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New Orleans.

Shavelson, R.J. (2000, March). On balancing accountability and learning goals in assessing science achievement. Invited talk for the Washington Educational Research Association (WERA) Research Conference, Seattle, WA.

Shavelson, R.J. (2000, March). Accountability issues from invited talk & generalizability of performance measurements. Invited breakout session for the Washington Educational Research Association (WERA) Research Conference, Seattle, WA.

Shavelson, R.J. (2000, February). Some (nutty) ideas about evaluation. Invited talk at Lawrence Hall of Science, University of California, Berkeley.

Shavelson, R.J. (1999, December). Into the new millennium: Possible futures for assessing educational achievement. Invited talk at the Malaysia Educational Research Association/Singaporian Educational Research Association’s joint conference, Malacca, Malaysia. (Also used (2000, January) Possible futures for assessing educational achievement. Invited talk for the Learning Research and Development Center, Pittsburgh, PA)

Shavelson, R.J. (1999, November). On the future of technology in education: Designing technology intensive learning environments. Invited talk to the National Institute of Education, Singapore.

Ruiz-Primo, M.A. & Shavelson, R.J. (1999, November). Student science journals as a staff development tool. Invited presentation to the San Francisco Unified School District, San Francisco.

Shavelson, R.J. (1999, September). Accountability in higher education: Deja vu all over again. Presentation at the CRESST National Conference, University of California, Los Angeles.

Shavelson, R.J. (1999, May). On linking assessment to a cognitive model of science achievement. Invited talk to Berkeley Evaluation and Assessment Research (BEAR), Berkeley, CA.

Ruiz-Primo, M.A., Schultz, S.E., Li, M. & Shavelson, R.J. (1999, April). On the cognitive validity of interpretations of scores from alternative concept-mapping techniques. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Montreal, Quebec.

Ruiz-Primo, M.A., Li, M., Ayala, C. & Shavelson, R. J. (1999, March). Student science journals and the evidence they provide: Classroom learning and opportunity to learn. Paper presented at the National Association for Research in Science Teaching (NARST) Annual Meeting, Boston, MA.

R.J. (1998, October). On assessment and evaluation in science education reform. Presentation to Bay Area Schools for Excellence in Education (BASEE), Palo Alto, CA.

Backman, J., Hardy, C. & Shavelson, R.J. (1998, July). Assessing student learning. Presentation to the California LASER K-8 Science Education Strategic Planning Institute.

Shavelson, R.J. (1998, June). On linking assessment of learning with sustainable development. Invited address at the Conference on Sustainable Development, Rantasalmi, Finland.

Ruiz-Primo, M.A., Schultz, S.E., Li, M. & Shavelson, R.J. (1998, April). Comparison of the reliability and validity of scores from two concept-mapping techniques. Paper presented at the American Educational Research Association (AERA) Annual Meeting, San Diego, CA.

Ruiz-Primo, M.A., Wiley, E.W., Rosenquist, A., Schultz, S.E., Shavelson, R.J., Hamilton, L. & Klein, S.P. (1998, April). Performance assessment in the service of evaluating science education reform. Paper presented at the National Council on Measurement in Education (NCME) Annual Meeting, San Diego, CA.

Shavelson, R.J. (1997, December). On standards, testing & school reform: Lessons from the U.S. & U.K. Invited talk for state education officers, Washington D.C.

Shavelson, R.J. (1997, August). What America can do to improve math and science education: Lessons from the Second and Third International Mathematics and Science Studies. Invited talk for the Fellowship Forum, Palo Alto, CA.

Solano-Flores, G., Shavelson, R.J., Ruiz-Primo, M.A., Schultz, S.E., Wiley, E.W., Brown, J.H. (1997, March). On the development and scoring of classification and observation science performance assessments. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Chicago, IL.

Ruiz-Primo, M.A., Shavelson, R.J. & Schultz, S.E. (1997, March). On the validity of concept map-base assessment interpretations: An experiment testing the assumption of hierarchical concept maps in science. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Chicago, IL.

Shavelson, R.J. (1996, November). Curriculum and instruction, yes... but don’t forget assessment! Invited address, The Hong Kong Educational Research Association.

Shavelson, R.J. (1996, October). On a framework for science performance assessment. Presentation, Kings Seminar, School of Education, Kings College, London.

Shavelson, R.J. (1996, June). Science performance assessment. Keynote address at Santa Clara Unified School District, Santa Clara, CA.

Shavelson, R.J. (1996, May). Assessment in education. Invited talk at an education roundtable at the William and Flora Hewlett Foundation, Menlo Park, CA.

Shavelson, R.J. (1996, April). Performance assessment in science: Rhetoric and reality. Invited address to the Association of State Supervisors of Mathematics, San Diego, CA.

Haertel, E.H. & Shavelson, R.J. (1996, April) The effects of measurement error on the trustworthiness of examinee classifications. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New York, NY.

Ruiz-Primo, M.A., Schultz, S.E., & Shavelson, R.J. (1996, April). Concept map-based assessment in science: An exploratory study. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New York, NY.

Druker, S.L, Solano-Flores, G., Brown, J.H. & Shavelson, R.J. (1996, April). A comparison of two approaches to scoring science performance. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New York, NY.

Ruiz-Primo, M.A. & Shavelson, R.J. (1996, April). From one-shot to in-school learning teacher enhancement programs. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New York, NY.

Ruiz-Primo, M.A. & Shavelson, R.J. (1996, April). Concept map-based assessment in science. Paper presented at the American Educational Research Association (AERA) Annual Meeting, New York, NY.

Gao, X., Shavelson, R.J., Brennan, R.L., & Baxter, G.P. (1996, April). A multivariate generalizability theory approach to convergent validity of performance-based assessment. Paper presented at the annual meeting of the National Council on Measurement in Education, New York, NY.

Shavelson, R.J. (1996, February). Role of assessment in science curriculum reform. Invited workshop presentation, C & TE Research in Progress Seminar, Stanford.

Shavelson, R.J. (1996, January). Public school education reform in teaching and assessment. Invited workshop presentation, California Association of Independent School.

Shavelson, R.J. (1995, November) Performance assessment: An update on rhetoric. Invited talk to the World Bank, Washington, D.C.

Shavelson, R.J. (1995, November & December). Performance measures in science: Rhetoric and reality. Invited talk presented at the Rand/NSF Conference on Performance Assessment in Science and Mathematics, Washington, D.C.

Shavelson, R.J. (1995, November). Education standards: Reform and students’ performance. Presentation to the Stanford Club of Washington, D.C.

Shavelson, R.J. (1995, August). On a science performance assessment technology: Implications for the future of NAEP. Paper presented to the National Academy of Education.

Shavelson, R.J. (1995, August). Project-based learning in education. Comments at the International Workshop on Project-Based Learning, Stanford, CA.

Shavelson, R.J. (1995, July & June). Educational innovations: rhetoric, reality, and the future. Invited talk to the University Rotary Club, Stanford, CA. and the Palo Alto Rotary Club, Palo Alto, CA.

Shavelson, R.J. (1995, May). Transferring assessment technology to teachers. Invited talk, National Science Foundation, Washington, D.C.

Shavelson, R.J. (1995, May). Assessment of science curriculum. Invited talk given to the Presidents’ Circle of the National Academy of Sciences, Institute of Medicine, San Francisco.

Ruiz-Primo, M.A. & Shavelson, R.J. (1995, April). Concept maps as potential alternative assessments in science. Paper presented at the American Educational Research Association (AERA) Annual Meeting, San Francisco, CA.

Solano-Flores, G. & Shavelson, R.J. (1995, April). Practical and logistical issues in science performance assessment development and administration. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), San Francisco, CA.

Ruiz-Primo, M.A. & Shavelson, R.J. (1995, April) Rhetoric and reality in science performance assessments: An update. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), San Francisco, CA.

Shavelson, R.J. (1995, March). Assessment of performance in California’ schools: Where to now? Invited talk, Superintendents’ Roundtable, Santa Barbara, CA.

Shavelson, R.J. (1995, March). Science education reform in Pasadena. Invited talk, Stanford Women’s of Pasadena, Pasadena, CA.

Shavelson, R.J. (1994, October). A program of research on performance assessment. Invited talk, Seminar Fur Wirtschaftspadagogik, Georg-August-Universitat, Gottingen, Germany.

Shavelson, R.J. (1994, October). On evaluating educational quality: From national indicators to instructional programs. Invited lectures to the faculty of education, University of Helsinki, Helsinki, Finland.

Shavelson, R.J. (1994, August). Some recent developments in testing and psychometrics. Invited Talk, Korean Psychometric Society, Korean Educational Development Institute, Seoul, Korea.

Shavelson, R.J., & Brown, J.H. (1994, August). Gifted education in the United States: Beliefs, research, and policy. Keynote Address, Third Asia-Pacific Conference on Giftedness, Sheraton Walker Hill Hotel, Seoul, Korea.

Shavelson, R.J. (1994, May). Contributions of research to policy and practice. Invited talk, University of Asmara, Asmara, Eritrea.

Shavelson, R.J. (1994, May). Research program: On science & mathematics assessment reform. Invited talk, Stanford University, Stanford, CA.

Ruiz-Primo, M.A., Shavelson, R.J., & Baxter, G.P. (1994, April). Evaluation of a prototype teacher enhancement program to transfer performance assessment technology. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Solano-Flores, G., Jovanovic, J., & Shavelson, R.J. (1994, April). Development of an item shell for the generation of performance assessments in physics. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Solano-Flores, G., & Shavelson, R.J. (1994, April). Binary-based versus weight-based scoring in science performance assessments. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans.

Solano-Flores, G., & Shavelson, R.J. (1994, April). Evaluation of a model for generating science performance assessments. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Druker, S.L. & Shavelson, R.J. (1994, April). Effects of performance assessment and two other state policy instruments on elementary school teachers’ implementation of science reform goals. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Gao, X., Brennan, R.L. & Shavelson, R.J. (1994, April). Estimating generalizability of matrix-sampled science performance assessments. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Shavelson, R.J. (1994, March & February). Performance assessment in mathematics and science: Consistencies and curiosities. Invited address, Monash University, Melbourne, Australia and University of Arizona, AZ.

Shavelson, R.J. (1994, March). On concept maps as potential 'authentic' assessments in science. Invited address, Monash University, Melbourne, Australia.

Shavelson, R.J. (1993, September). Sampling variability and content validity of performance assessments. Paper presented at the 5th meeting of the European Association for Research on Learning and Instruction, Aix-en-Provence, France.

Baxter, G.P., & Shavelson, R.J. (1993, September). Exchangeability of science performance assessments. Paper presented at the 5th meeting of the European Association for Research on Learning and Instruction, Aix-en-Provence, France.

Shavelson, R.J. (1993 June & July). Assessing student learning in science. Paper presented to the National Science Resource Center's Leadership Institutes, Smithsonian Institution, Washington D.C.

Shavelson, R.J. (1993, June). Hands-on job performance measurement & the JPM Project: A NAS committee perspective. Paper presented at the Workshop for Accession Policy: Modeling Cost/Performance Trade-Offs, Committee on Military Enlistment Standards, National Academy of Sciences/National Research Council, Commission on Behavioral and Social Sciences and Education, Hunt Valley, Maryland.

Shavelson, R.J. (1993, April). Assessment of learning in elementary science. Paper presented at the National Association for Research in Science Teaching, Atlanta, Georgia.

Gao, X., Shavelson, R.J., & Baxter, Gail P. (1993, April). Generalizability of a state-wide performance assessment. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, Georgia.

Shavelson, R.J. (1993, April). Science assessment: The California assessment program and the University of California, Santa Barbara. Symposium, National Association for Research in Science Teaching, Atlanta, GA.

Ruiz-Primo, M.A., Shavelson, R.J., & Baxter, G.P. (1993, April). An approach to formative evaluation for teacher enhancement programs. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, Georgia.

Baxter, G.P. & Shavelson, R.J. (1993, March). Assessment of elementary students’ hands-on science. Paper presented at the NSRC Working Conference for Scientists and Engineers, San Francisco, CA.

Shavleson, R.J. & Baxter, G.P. (1993, February). Performance assessments in science education reform: Research and teacher enhancement. Presentation to the National Science Foundation, Washington D.C.

Shavelson, R.J. (1993, January). On the role of indicators in educational reform. Keynote address, Educational Quality Indicators Conference, Edmonton, Alberta, Canada.

Shavelson, R.J. (1993, January). On performance assessments in mathematics and science: Consistencies and curiosities. Invited Address, American College Testing Program, Iowa City, IA.

Shavelson, R.J. (1992, November). Assessment and accountability: Rhetoric and reality. Invited address, Conference on Assessment and Accountability, Jerusalem, Israel.

Shavelson, R.J. (1992, November). California assessment program: 1992 science assessment. Presentation to the Mathematics and Science Education Seminar, The Hebrew University, Jerusalem, Israel.

Shavelson, R.J. (1992, September). Designing validity studies. Presented at the National Center for Research on Evaluation, Standards, and Student Testing, University of California, Los Angeles, CA.

Baxter, G.P. & Shavelson, R.J. (1992, July). Assessing student learning in science. Paper presented at the NSRC Elementary Science Leadership Institute, Washington D.C.

Shavelson, R.J., & Baxter, G.P. (1992, May). On the symmetry of teaching and testing: Implications for teachers’ instructional decisions. Invited address, Faculty of Education, University of Helsinki, Helsinki, Finland.

Shavelson, R.J., & Baxter, G.P. (1992, May). Research on performance assessments in science. University of Tampere, Tampere, Finland.

Shavelson, R.J. (1992, April). An overview of the basic design. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Francisco, CA.

Baxter, G.P., & Shavelson, R.J. (1992, April). Exchangeability of science performance assessments. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Ruiz-Primo, M.A., Baxter, G.P., & Shavelson, R.J. (1992, April). Evaluating the stability of hands-on science assessments. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Shavelson, R.J., & Baxter, G.P. (1992, March). New frontiers in the assessment of student learning in science: Rhetoric and reality. Paper presented at the Working Conference on Precollege Science Education for Scientists and Engineers, California Institute of Technology.

Shavelson, R.J. & Baxter, G.P. (1992, February). Performance assessments in science: Rhetoric and reality. Presentation to PUSD Principals, Pasadena, CA.

Shavelson, R.J. (1992, January). A possible model for student assessment in California. CEPS-PACE seminar, Sacramento, CA.

Baxter, G.P. & Shavelson, R.J. (1991, December). Exchangeability of science performance assessments. Presentation to NAEP Design and Analysis Committee.

Shavelson, R.J. & Baxter, G.P. (1991, October). On the rhetoric and reality of national, state, & local assessment reform. Presentation to the California Club, Los Angeles.

Shavelson, R.J., Baxter, G.P., and Pine, J. (1991, September). Performance assessments: Political rhetoric and measurement reality. Invited address, Conference on Mehrdimensionale Lehr-Lern-Arrangements: Lernen, Denken, Handeln in Komplexen Okonomischen Situationen, Gottingen, Germany.

Shavelson, R.J. (1991, May). Alternative assessments in mathematics and science. Presentation to the TIMSS Working Group on Alternative Assessment, University of British Columbia, Vancouver, B.C.

Shavelson, R.J. (1991, April). “Authentic” assessment: The rhetoric and the reality. Talk presented at the Annual Meeting of the American Educational Research Association, Chicago.

Baxter, G.P., Shavelson, R.J., Marsh, M., Whisenand, S., & Dixon, C. (1991, April). Toward a technology for assessing mathematical understanding and problem solving. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J., Baxter, G.P., Pine, J., & Yure, J. (1991, April). Alternative technologies for assessing science understanding. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J., Baxter, G.P., Pine, J., & Yure, J. (1991, April). New technologies for large-scale science assessments: Instruments of educational reform. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Pine, J., Baxter, G., & Shavelson, R.J. (1991, March). Assessments for hands-on elementary science curricula. Paper presented at the National Science Teachers Association National Convention, Houston.

Shavelson, R.J. (1990, December). Application of indicator models to IEA studies. Paper presented at Workshop to Develop Policy Issues for the Third International Mathematics and Science Survey, The Hague, The Netherlands.

Shavelson, R.J., & Baxter, G.P. (1990, December). On measuring the quality of mathematics and science education: Achievement indicators. Paper presented at SVO conference on quality of education and how to assess it, The Hague, The Netherlands.

Shavelson, R.J. & Baxter, G. P. (1990, October). What alternative assessments look like in science. Paper presented at The Promise and Peril of Alternative Assessment Conference, U.S. Department of Education, Washington, D.C.

Shavelson, R.J., & Baxter, G.P. (1990, August). The symmetry of teaching and testing: Implications for teachers' instructional decisions. Paper presented at the International Symposium on Research on Effective and Responsible Teaching, Fribourg, Switzerland.

Shavelson, R.J. (1990, May). Assessment and educational reform: Opening remarks. Remarks at the National Academy of Sciences/National Research Council Commission on Behavioral and Social Sciences and Education Conference on Evaluating Education Reform, University of California, Irvine, CA.

Shavelson, R.J. (1990, April). Can indicator systems improve the effectiveness of mathematics and science education? The case of the U. Paper presented at the Annual Meeting of the American Educational Research Association, Boston.

Shavelson, R.J., Pine, J., Yure, J., Goldman, S.R., & Smith, B. (1990, April). Performance indicators for large-scale science assessment. Paper presented at the Annual Meeting of the American Educational Research Association, Boston.

Baxter, G.P. & Shavelson, R.J. (1990, April). Evaluation of procedure-based scoring for hands-on science assessment. Paper presented at the Annual Meeting of the American Educational Research Association, Boston.

Shavelson, R.J., Pine, J., Goldman, S.R., Baxter, G.P., & Hine, M.S. (1989, June). New technologies for assessing science achievement. Paper presented at the Annual Meeting of the American Psychological Society, Washington D.C.

Shavelson, R.J. (1989, April). On the content representativeness of job performance measurements. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, Boston.

Shavelson, R.J. (1989, January). School choice: On politics and the research knowledge base. Talk presented to the Santa Barbara Chapter of Phi Delta Kappa, Santa Barbara, CA.

Shavelson, R.J. (1988, May). Achievement indicators: New options for a powerful policy instrument. Invited address, Pennsylvania Educational Research Association, Harrisburg, PA.

Shavelson, R.J. (1988, April). Contributions of research to policy and practice: Constructing, challenging, changing cognition. Presidential address presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Abedi, J., & Shavelson, R.J. (1988, April). Fractional factorial design: Its stability of estimate and its sensitivity to the violation of ANOVA assumptions. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Shavelson, R.J. (1988, March). A multifaceted academic self-concept: its hierarchical structure and relation to academic achievement. Invited address, Max Planck Institute for Psychological Studies, Munich, Germany.

Shavelson, R.J. (1988, March). Contributions of research to policy and practice: A view from the United States. Invited address presented at the biannual meeting of the German Educational Research Association, Saarbrucken, Germany.

Shavelson, R.J. (1988, March). Symbolic encoding specificity in science problem solving. Invited address, Institut fur Eriehungswissenschaft und Padagogische Psychologie, Universitat der Bundeswehr Munchen, Munich, Germany.

Shavelson, R.J. (1988, March). Teaching mathematical problem solving: Insights from teachers and tutors. Invited address, Faculty of Economics, Gottingen University, Gottingen, Germany.

Shavelson, R.J. (1987, August). Generalizability theory: New developments and novel applications. Invited Division 5 address, Annual Meeting of the American Psychological Association, New York.

Shavelson, R.J. (1987, April). Historical and political considerations in developing a national indicator system. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C.

Shavelson, R.J., Webb, N.M., Shemish, M. & Yang, J.W. (1987, April). Translation among symbolic representations in problem-solving. Paper presented at the Annual Meeting of the American Educational Research Association.

Shavelson, R.J. (1986, June). Interactive decisionmaking: Some thoughts on teacher cognition. Invited address, I Congreso Internacional, "Pensamientos de los Profesores y Toma de Decisiones," Seville, Spain.

Shavelson, R.J., & J. Oakes. (1986, April). Monitoring science and mathematics education: Considerations from a project in progress. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Byrne, B.M., & R.J. Shavelson. (1986, April). On gender differences in the structure of adolescent self-concept. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Short, L.M., R.J. Shavelson, & N.M. Webb. (1986, April). Issues in multivariate generalizability: Weighting schemes and dimensionality. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Webb, N.M., R.J. Shavelson, & J. Hotta. (1986, April). Alternative designs for examining exchangeability of student outcomes from telecourses. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Schlossman, S.L., C. Stasz, R.J. Shavelson, J.Y. Hotta, S. Goldstein, & N.M. Webb. (1986, April). High load, low road: The politics of telecourse evaluation. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Stasz, C., S.L. Schlossman, R.J. Shavelson, J.Y. Hotta, S. Goldstein, & N.M. Webb. (1986, April). Student outcomes from regular and telecourse instruction. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Shavelson, R.J. (1985, April). Schemata and teaching routines: A historic perspective. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J. (1985, April). The measurement of cognitive structure. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J. (1984, August). Patterns of teachers' microcomputer-based mathematics and science instruction. Invited address, Division 15, Annual Meeting of the American Psychological Association, Toronto.

Shavelson, R.J. (1984, April). Application of generalizability theory to measurements from hierarchical populations. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Feibel, W., A.E. Robyn, S. Shaha, R.J. Shavelson, C. Stasz, & J.D. Winkler. (1984, April). Teacher friendly courseware. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Winkler, J.D., R.J. Shavelson, C. Stasz, A.E. Robyn, & W. Feibel. (1984, April). How effective teachers use microcomputers for instruction. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Stasz, C., J.D. Winkler, R.J. Shavelson, A.E. Robyn, & W. Feibel. (1984, April). Staff development for instructional uses of microcomputers: The teachers' perspective. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Shavelson, R.J. (1983, February). The computer and its impact on education, fantasies, facts, and futures. Talk presented to the Southern California Alumni Chapter of Kappa Delta Pi, Marina Del Rey, California.

Winkler, J.D., & R.J. Shavelson. (1982, June). 'Successful' use of computers in classroom instruction. Paper presented at the Computer-Based Education Conference, Center for Interdisciplinary Research in Computer Learning, University of Delaware.

Shavelson, R.J. (1982, April). One psychologist's (not very representative) view of teachers' decisions about grouping students. Paper presented at the Annual Meeting of the American Educational Research Association, New York. [Also Resources in Education, ERIC Clearinghouse on Teacher Education, (ED #215975), September 1982.]

Shavelson, R.J. (1982, February). Review of research on teachers' pedagogical judgments, plans and decisions. Paper presented at the NIE Teaching Synthesis Conference, Airlie, Virginia.

Shavelson, R.J. (1981, April). Review of research on teachers' decision making. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles.

Stern, P., & R.J. Shavelson. (1981, April). The relationship between teachers' grouping decisions and instructional behaviors: An ethnographic study of reading instruction. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles.

Shavelson, R.J. (1981, April). Research cannot prescribe practice. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles.

Shavelson, R.J., & V.M. Porton. (1979, May). An information processing approach to research on mathematics learning and problem solving. Invited address at the Conference on Modeling Mathematical Cognitive Development, University of Georgia, Athens.

Shavelson, R.J., & K. Stuart. (1978, September). Application of causal modeling methods to the validation of self-concept interpretation of test scores. Paper presented at the Self-Concept Symposium, Boston.

Shavelson, R.J. (1978, March). A model of teacher decision making. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Ontario.

Shavelson, R.J. (1978, February). Teachers' decision making. Paper presented at the Universities of Zurich and Fribourg, Switzerland.

Shavelson, R.J., & C. Stasz. (1977, September). Some methods for representing structure of concepts in prose material. Paper presented at the Annual Meeting of the American Psychological Association, San Francisco.

Shavelson, R.J., J. Cadwell, & T. Izu. (1977, April). Are teachers Bayesian in estimating student performance? Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Shavelson, R.J. (1977, April). Applications of cluster analysis in educational research: Looking for a needle in the hay stack. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Erlich, O., & R.J. Shavelson. (1977, April). The search for correlations between measures of teacher behavior and student achievement: Measurement problem, conceptualization problem, or both? Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Shavelson, R.J. (1977, January). Teachers' decision making. Paper presented at the Centre for Research in Teaching, University of Alberta, Edmonton.

Keesling, J.W., & R.J. Shavelson. (1976, June). Apples and oranges: Obtaining meaningful cross-program evaluations. Paper presented to Educational Management and Evaluation Commission of the California State Board of Education, Sacramento.

Dempsey, N.K., & R.J. Shavelson. (1976, April). Generalizability of measures of teaching process. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Clark, C.M., Snow, R.E. & Shavelson, R.J. (1975, September). Experiments on learning to teach. Paper presented to the American Psychological Association, Chicago.

Shavelson, R.J. (1974, September). A method for examining subject-matter structure in written material. Paper presented at the Annual Meeting of the American Psychological Association, New Orleans.

Shavelson, R.J., D.C. Berliner, D. Loeding, A. Porteus, & G.C. Stanton. (1974, September). Adjunct questions, mathemagenics, and mathematics. Paper presented at the Annual Meeting of the American Psychological Association, New Orleans.

Shavelson, R.J. (1974, April). Some methods for examining content structure and cognitive structure in mathematics instruction. Paper presented at the Annual Meeting of the American Educational Research Association.

Shavelson, R.J. (1974, April). Some methods for examining a subject-matter structure in prose material and in a student's memory. Paper presented at the Annual Meeting of the American Educational Research Association.

Berliner, D.C., R.J. Shavelson, M.M. Ravitch, & D. Loeding. (1973, February). Individual differences in the effects of adjunct questions on learning from prose material. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Shavelson, R.J. (1972, September). Some research on the correspondence between content structure and cognitive structure in instruction. Paper presented at the Institut fr die Padagogik der Naturwissenschaften an der Christian-Albrechts-Universitat Kiel, Germany.

Shavelson, R.J. (1972, April). Basic skills of teaching and student achievement: Some reasons for the absence of significant correlations and a proposal for future studies. Invited paper at the Symposium on Basic Skills of Teaching, Chicago.

Shavelson, R.J., N.A. Branca, S. Pelavin, & G. Stanton. (1972, April). Representation of subject-matter structure in teachers' and students' memory. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J., & R.L. Trinchero. (1972, April). The Stanford Secondary Teacher Education Program, 1959-1969: II, prediction of graduate career patterns. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Shavelson, R.J. (1971, February). Some aspects of the correspondence between content structure and cognitive structure in physics instruction. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Shavelson, R.J. (1971, February). Teacher perceptions: An information processing point of view. Introductory remarks to a paper session on "Teacher Perceptions," Annual Meeting of the American Educational Research Association, New York.

Koff, R.H., R.M. Krasno, & R.J. Shavelson. (1971, February). Implications for studying teacher career patterns for selection, training and placement. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Trinchero, R.L., & R.J. Shavelson. (1971, February). The Stanford Secondary Teacher Education Program 1959-1969: A preliminary analysis of graduate career patterns. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Wallace, R.C., Jr. & R.J. Shavelson. (1970, February). Evaluation of curricular programs. Paper presented at the Annual Meeting of the American Educational Research Association, Minneapolis.

Seminara, J.L., R.J. Shavelson, & S.O. Parsons. (1967, March). A lunar environment simulation test bed. Paper presented at the Annual Meeting of the SAE Aerospace Engineers.

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