

Noreen M. Webb

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Educational History

Ph.D. Educational Psychology, 1978, Stanford University, School of Education
Advisor and Dissertation Chair: Professor Lee J. Cronbach

M.S. Statistics, 1977, Stanford University, Department of Statistics

B.A. Mathematics, 1973, Swarthmore College

Professional Experience

- 1977-1978 Human Factors Analyst, Sr., System Development Corporation, Studies and Evaluation Department. Senior analyst for "National Evaluation of Title I Programs for Neglected or Delinquent Youth in State Institutions."
- 1978 Lecturer in Research Methods and Evaluation, Graduate School of Education, University of California, Los Angeles.
- 1978-1983 Assistant Professor in Research Methods and Evaluation and Learning and Instruction, Graduate School of Education, University of California, Los Angeles.
- 1983-1988 Associate Professor in Research Methods and Evaluation and Learning and Instruction, Graduate School of Education, University of California, Los Angeles.
- 1988-present Professor in the Division of Social Research Methodology, Department of Education, Graduate School of Education & Information Studies, University of California, Los Angeles. Courses include statistics, experimental and quasi-experimental design, measurement theory and applications, and human abilities. (Joint appointment with the UCLA Department of Applied Linguistics). Advanced to Distinguished Professor 2017.
- 1994-2004: Vice Chair, Department of Education, Graduate School of Education and Information Studies.
- 2004-2014: Joint appointment with the UCLA Department of Applied Linguistics and Teaching English as a Second Language
- 2006-2008: Associate Dean for Research, Graduate School of Education and Information Studies.
- 2013-2015: Vice Chair for Academic Promotions, Department of Education, Graduate School of Education and Information Studies.
- 2015-present: Vice Chair, Department of Education, Graduate School of Education and Information Studies.

Honors/Awards/Elections (alphabetical listing)

American Education Research Association 1984—Review of Research Award (Webb, N. M. “Student interaction and learning in small groups.” in *Review of Educational Research*, 52, 421-445.)
American Education Research Association 1987—Early Career Award for Programmatic Research
American Education Research Association, Fellow, 2008
American Psychological Association, Fellow, 1987
American Psychological Association, Member-at-Large, Division 15
Bobbie and Mark Greenfield Faculty Award for Applied Research in Learning and Achievement, 2009
Harold A. and Lois Haytin Faculty Award for research on classroom practice, 2010
International Association for the Study of Cooperation in Education, Treasurer
King’s College, University of London, Visiting Professor, Department of Education & Professional Studies, 2008-2009
National Academy of Education, 2015
UCLA Department of Education Distinguished Teaching Award, 2002

Professional Activities

Chair, E. F. Lindquist Award Committee, American Educational Research Association
Chair, Early Contribution Award Committee, Division 15, American Psychological Association
Chair, Professional Development and Training Committee, American Educational Research Association
Chair, Publications Committee, Division 15, American Psychological Association
E. F. Lindquist Award Committee, member, American Educational Research Association
Early Career Award Committee, member, American Educational Research Association
Early Contribution Award Committee, Division 15, American Psychological Association
Executive Board, International Association for the Study of Cooperation in Education
Executive Committee, Division 15, American Psychological Association
Member-at Large, American Psychological Association, Division 15
Postdoctoral Fellow Mentor, Dissertation Fellow Mentor, National Academy of Education
Program Chair, Division C, American Educational Research Association
Program Chair, Section 6, Division C, American Educational Research Association
Publications Committee, Division 15, American Psychological Association
Research Advisory Committee, National Academy of Education
Sylvia Scribner Award Committee, Division C, American Educational Research Association
Thorndike Award Committee, Division 15, American Psychological Association
Treasurer, International Association for the Study of Cooperation in Education

Books

Shavelson, R. J., & Webb, N. M. (1991). *Generalizability Theory: A Primer*. Newbury Park, CA: Sage Publications.

Journal Articles and Book Chapters

- Webb, N. M., Franke, M. L., Ing, M., Johnson, N. C., Zimmerman, J. (in press). The details matter in mathematics classroom dialogue. In N. Mercer, R. Wegerif, & L. Major (Eds.), *International Handbook of Research on Dialogic Education*. Routledge.
- Webb, N. M., Franke, M. L., Johnson, N. C., Ing, M., & Zimmerman, J. (2019). Promoting productive student participation across multiple classroom participation settings (pp. 43-63). In R. M. Gillies (Ed.), *Promoting Academic Talk in Schools*. Routledge.
- Webb, N. M. & Ing, M. (2018). The role of teacher practice in promoting academically productive student dialogue. *International Journal of Educational Research*. <https://doi.org/10.1016/j.ijer.2018.11.009>
- Webb, N. M., Franke, M. L., Johnson, N. C., Turrou, A. C., & Ing, M. (2018). Dude, Why did you start without me? Fostering engagement with others' mathematical ideas. (pp. 292-309). In C. Chinn, E. Manalo, & Uesaka, Y. (Eds.), *Promoting Spontaneous Use of Learning and Reasoning Strategies: Theory, Research, and Practice*. Routledge.
- Webb, N. M., Franke, M. L., Ing, M., Turrou, A. C., Johnson, N. C., & Zimmerman, J. (2017). Teacher practices that promote productive dialogue and learning in mathematics classrooms. *International Journal of Educational Research*. <https://doi.org/10.1016/j.ijer.2017.07.009>
- Webb, N. M. (2016). Incorporating groupwork into performance assessments: Psychometric issues (pp. 253-284). In P. F. Wimmers & M. Mentkowski (Eds.), *Assessing Competence in Professional Performance across Disciplines and Professions*. Springer International Publishing.
- Webb, N. M., Franke, M. L., Ing, M., Turrou, A. C., & Johnson, N. C. (2015). Student participation, teacher instructional practices, and the development of mathematical understanding in the elementary classroom (pp. 47-68). In R. Gillies (Ed.), *Collaborative Learning: Developments in Research and Practice*. Nova Press.
- Webb, N. M., Franke, M. L., Turrou, A. C., & Ing, M. (2015). An exploration of teacher practices in relation to profiles of small-group dialogue (pp. 87-98). In Resnick, L. et al. (Eds.), *Socializing Intelligence through Academic Talk and Dialogue*. American Educational Research Association.
- Webb, N. M., Franke, M. L., Ing, M., Johnson, N. C., Turrou, A. C., & Zimmerman, J. (2015, Spring). Engaging students in others' mathematical ideas (pp. 20-21). *Better: Evidence-based Education*. The University of York and Johns Hopkins University.
- Ing, M., Webb, N. M., Franke, M. L., Turrou, A. C., Wong, J., Shin, N., & Hernandez, C. H. (2015). Student participation in elementary mathematics classrooms: The missing link between teacher practices and student achievement? *Educational Studies in Mathematics*, 90, 341-356.
- Franke, M. L., Turrou, A. C., Webb, N. M., Ing, M., Wong, J., Shin, N., & Fernandez, C. H. (2015). Student engagement with others' mathematical ideas: The role of teacher invitation and support moves. *Elementary School Journal*, 116, 126-148.
- Webb, N. M., Franke, M. L., Ing, M., Wong, J., Fernandez, C. H., Shin, N., & Turrou, A. C. (2014). Engaging with others' mathematical ideas: Interrelationships among student participation, teachers' instructional practices, and learning. *International Journal of Educational Research*. 63, 79-93.
- Webb, N. M., Franke, M. L., Turrou, A. C., & Ing, M. (2013). Self-regulation and learning in peer-directed small groups. *British Journal of Educational Psychology Monograph Series II*, 10, 69-92.

- Webb, N. M. (2013). Information processing approaches to collaborative learning (pp. 19-40). In C. E. Hmelo-Silver, C. A. Chinn, C. K. K. Chan, & A. O'Donnell. (Eds.), *The International Handbook of Collaborative Learning*. Taylor & Francis, Inc.
- Webb, N. M. (2013). Collaboration in the classroom. (pp. 215-218). In J. Hattie & E. M. Anderman (Eds.), *International Guide to Student Achievement*. Routledge Publishers.
- Wiley, E. W., Webb, N. M., & Shavelson, R. J. (2013). The generalizability of test scores. In K. F. Geisinger (Ed.), *Handbook of Testing and Assessment in Psychology* (pp. 43-60). American Psychological Association.
- Webb, N. M., Shavelson, R. J., & Steedle, J. (2012). Generalizability theory in assessment contexts (pp. 132-149). In Secolsky, C. (Ed.), *Measurement, Assessment and Evaluation in Higher Education*. Routledge. [revised version published in the 2nd edition, 2016-2017]
- Ing, M., & Webb, N. M. (2012). Characterizing mathematics classroom practice: Impact of observation and coding choices. *Educational Measurement: Issues and Practice*, 31, 14-26.
- Webb, N. M. (2010). Peer learning in the classroom. (pp. 162-169). In S. Jarvela (Ed.), *International Encyclopedia of Education*, 3rd Ed. (vol. 6, pp. 636-642). Elsevier.
- Franke, M. L., Webb, N. M., Chan, A. G., Ing, M., Freund, D., & Battey, D. (2009). Teacher questioning to elicit students' mathematical thinking in elementary school classrooms. *Journal of Teacher Education*, 60, 380-392.
- Webb, N. M., Franke, M. L., De, T., Chan, A. G., Freund, D., Shein, P., & Melkonian, D. K. (2009). Teachers' instructional practices and small-group dialogue. *Cambridge Journal of Education*, 39, 49-70.
- Webb, N. M. (2009). The teacher's role in promoting collaborative dialogue in the classroom. *British Journal of Educational Psychology*, 79, 1-28.
- Shavelson, R. J., & Webb, N. M. (2009). Generalizability theory and its contribution to the discussion of generalizability of research findings (pp. 13-32). In K. Ercikan & Roth, W.M. (Eds.), *Generalizing from Educational Research*.
- Webb, N. M. & Shavelson, R. J. (2008). Generalizability Theory (pp. 436-438). In Neil. J. Salkind (Ed.), *Encyclopedia of Educational Psychology*. Sage.
- Webb, N. M. (2008). Learning in small groups (Vol. 1, pp. 203-211). In Thomas L. Good (Ed.), *21st Century Education: A Reference Handbook*. Sage.
- Webb, N. M., Franke, M. L., Ing, M., Chan, A., De, T., Freund, D., & Battey, D. (2008). The role of teacher instructional practices in student collaboration. *Contemporary Educational Psychology*, 33, 360-381.
- Webb, N. M. (2008). Teacher practices and small-group dynamics in cooperative learning classrooms. In R. M. Gillies et al. (Eds.), *The Teacher's Role in Implementing Cooperative Learning in the Classroom*. (pp. 199-219). Springer.
- Webb, N. M., Herman, J. L., & Webb, N. L. (2007). Alignment of mathematics' state-level standards and assessments: The role of reviewer agreement. *Educational Measurement: Issues and Practice*, 26, 17-29.
- Herman, J. L., & Webb, N. M. (Eds.) (2007). Special Issue of *Applied Measurement in Education: Alignment Issues*, 20, 1-135.

- Herman, J. L., Webb, N. M., & Zuniga, S. A. (2007). Measurement issues in the alignment of standards and assessments: A Case study. *Applied Measurement in Education, 20*, 101-126.
- Webb, N. M., Shavelson, R. J., & Haertel, E. H. (2007). Reliability Coefficients and Generalizability Theory. In Rao, C. R. (Ed.), *Handbook of Statistics, Vol. 26* (Volume on Psychometrics) (pp. 81-124). Elsevier.
- Shavelson, R. J., & Webb, N. M. (2006). Generalizability theory. In Green, J. L., Camilli, G. & Elmore, P. B. (Eds.), *Complementary Methods for Research in Education*, (pp. 309-322). (3rd ed.) Washington, DC: AERA.
- Webb, N. M., Nemer, K. M., & Ing, M. (2006). Small-group reflections: Parallels between teacher discourse and student behavior in peer-directed groups. *Journal of the Learning Sciences, 15*(1), 63-119.
- Webb, N. M., Ing, M., Nemer, K. M., & Kersting, N. (2006). Help seeking in cooperative learning groups (pp. 45-88). In R. S. Newman and S. A. Karabenick (Eds.), *Help Seeking in Academic Settings: Goals, Groups and Contexts*. New York, NY: Erlbaum.
- Webb, N. M., & Shavelson, R. J. (2005). Generalizability Theory: Overview. In B. S. Everitt & D. C. Howell, Eds.), *Encyclopedia of Statistics in Behavioral Science* (pp. 717-719). Wiley.
- Shavelson, R. J., & Webb, N. M. (2004). Generalizability theory. In Kemp-Leonard, K., (Ed.), *Encyclopedia of Social Measurement* (pp. 99-105). Oxford, UK: Elsevier.
- Webb, N. M. & Mastergeorge, A. M. (2003). The development of students' helping behavior and learning in peer-directed small groups. *Cognition and Instruction, 21*, 361-428.
- Webb, N. M. & Mastergeorge, A. M. (2003). Promoting effective helping behavior in peer-directed groups. *International Journal of Educational Research, 39*, 73-97.
- Webb, N. M., Nemer, K. M., & Zuniga, S. (2002). Short circuits or superconductors? Effects of group composition on high-achieving students' science performance. *American Educational Research Journal, 39*, 943-989.
- Webb, N. M., Farivar, S. H. , & Mastergeorge, A. M. (2002). Productive helping in cooperative groups. *Theory Into Practice, 41*, 13-20.
- Fall, J. R., Webb, N. M., & Chudowsky, N. (2000) Group discussion and large-scale language arts assessment: Effects on students' comprehension. *American Educational Research Journal, 37*, 911-942.
- Webb, N. M., Schlackman, J., & Sugrue, B. (2000). The dependability and interchangeability of assessment methods in science. *Applied Measurement in Education, 13*, 277-302.
- Webb, N. M., & Shavelson, R. J. (1999). Generalizability theory. In Kotz, S., Read, C. B., & Banks, D. L. (Eds.), *Encyclopedia of the Statistical Sciences* (Update Volume 3, pp. 258-266). New York: Wiley.
- Webb, N. M. & Farivar, S. (1999). Developing productive group interaction in middle school mathematics. In A. M. O'Donnell & A. King (Eds.), *Cognitive Perspectives on Peer Learning* (pp. 117-149). Hillsdale, NJ: Erlbaum.
- Webb, N. M. with Weishaupt, L. (Fall, 1998). Preparing students for collaborative work. *Connections*. Urban Education Studies Center, Seeds University Elementary School, UCLA.
- Webb, N. M., Nemer, K., Chizhik, A., & Sugrue, B. (1998). Equity issues in collaborative group assessment: Group composition and performance. *American Educational Research Journal, 35*(4), 607-651.

- Farivar, S., & Webb, N. M. (1998). Preparing teachers and students for cooperative work: Building communication and helping skills. In C. M. Brody & N. Davidson (Eds.), *Professional Development for Cooperative Learning: Issues and Approaches* (pp. 169-188). Albany, NY: State University of New York.
- Webb, N. M., Baxter, G. P., & Thompson, L. (1997). Teachers' grouping practices in fifth-grade science classrooms. *Elementary School Journal*, *98*, 91-113.
- Webb, N. M. (1997). Assessing students in small collaborative groups. *Theory Into Practice*, *36*, 205-213.
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- Webb, N. M., Troper, J. D., & Fall, R. (1995). Constructive activity and learning in collaborative small groups. *Journal of Educational Psychology*, *87*, 406-423.
- Webb, N. M. (1995). Group collaboration in assessment: Multiple objectives, processes, and outcomes. *Educational Evaluation and Policy Analysis*, *17*, 239-261.
- Webb, N. M., & Farivar, S. (1994). Promoting helping behavior in cooperative small groups in middle school mathematics. *American Educational Research Journal*, *31*, 369-395.
- Farivar, S., & Webb, N. M. (1994). Helping and getting help: Essential skills for group problem solving. *Arithmetic Teacher*, *41*, 521-525.
- Farivar, S. H., & Webb, N. M. (1994). Are your students prepared for group work? *Middle School Journal*, *25*, 51-54.
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- Farivar, S., & Webb, N. (1993). Helping: An essential skill for cooperative learning. *Cooperative Learning*, *13*(2), 20-23.
- Webb, N. M. (1992). Testing a theoretical model of student interaction and learning in small groups. In Hertz-Lazarowitz, R., & N. Miller (Eds.), *Interaction in Cooperative Groups: The Theoretical Anatomy of Group Interaction* (pp. 102-119). Cambridge University Press.
- Shavelson, R. J., & Webb, N. M. (1992). Generalizability theory. In Alkin, M. C. (Ed.), *Encyclopedia of Educational Research, Sixth Edition* (Volume 2, pp. 538-543). New York, New York: Macmillan.
- Webb, N. M. (1991). Task-related verbal interaction and mathematics learning in small groups. *Journal for Research in Mathematics Education*, *22*, 366-389.
- Burstein, L., Ravitch, M. M., Shavelson, R. J., & Webb, N. M. (1991). "I'm sorry but...": Our intellectual heritage from LJC. In R. E. Snow & D. E. Wiley (Eds.), *Improving inquiry in social science: A volume in honor Lee J. Cronbach* (pp. 375-383). Hillsdale, NJ: Erlbaum.
- Shavelson, R. J., Carey, N. B., & Webb, N. M. (1990). Indicators of science achievement: Options for a powerful policy. *Phi Delta Kappan*, *71*, 692-697.

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- Webb, N. M., Shavelson, R. J., Kim, K. S., & Chen, Z. (1989). Reliability (Generalizability) of Job performance measurements: Navy Machinists Mates. *Military Psychology*, 1, 91-110.
- Shavelson, R. J., Webb, N. M., & Rowley, G. L. (1989). Generalizability theory. *American Psychologist*, 44, 922-932.
- Webb, N. M., guest editor. (1989). Peer Interaction, Problem Solving, and Cognition: Multidisciplinary Perspectives. *International Journal of Educational Research*, 13, 1-119.
- Webb, N. M. (1989). Peer interaction and learning in small groups. *International Journal of Educational Research*, 13, 21-40.
- Shavelson, R. J., Webb, N. M., Stasz, C., & McArthur, D. (1988). Teaching mathematical problem solving: Insights from teachers and tutors. In R. I. Charles & E. Silver (Eds.), *The Teaching and Assessing of Mathematical Problem Solving* (pp. 203-231). Hillsdale, NJ: Erlbaum.
- Webb, N. M., Shavelson, R. J., & Rowley, G. L. (1988). Using generalizability theory in counseling and development. *Measurement and Evaluation in Counseling and Development*, 21, 81-90.
- Webb, N. M., & Lewis, S. (1988). The social context of learning computer programming. In R. Mayer (Ed.), *Research on Teaching and Learning Computer Programming*. Erlbaum (pp. 179-206).
- Webb, N. M. (1987). Peer interaction and learning with computers. *Computers in Human Behavior*, 3, 193-209.
- Webb, N. M. (1987). Generalizability theory and achievement testing. In D. L. McArthur (Ed.), *Alternative approaches to the assessment of achievement*. Boston: Kluwer Academic Publishers.
- Shavelson, R. J., Webb, N. M., & Hotta, J. Y. (1987). The concept of exchangeability in designing telecourse evaluations. *Journal of Distance Education*, 2, 27-40.
- Webb, N. M., Herman, J. L., & Cabello, B. (1987). A domain-referenced approach to diagnostic testing using generalizability theory. *Journal of Educational Measurement*, 24, 119-130.
- Webb, N. M., Herman, J. L., & Cabello, B. (1986). Diagnosing students' errors from their response selections in language arts. *Journal of Educational Measurement*, 28, 163-170.
- Webb, N. M., Ender, P., & Lewis S. (1986). Problem-solving strategies and group processes in small groups learning computer programming. *American Educational Research Journal*, 23, 248-262.
- Webb, N. M., & Shavelson, R. J. (1985). Computers, education, and educational psychologists. *Educational Psychologist*, 20, 163-166.
- Webb, N. M., Shavelson, R. J. (Eds.) (1985). Special Issue: Computers and Education. *Educational Psychologist*, 20, 163-244.
- Webb, N. M. (1985). The role of gender in computer programming learning processes. *Journal of Educational Computer Research*, 1, 441-458.
- Webb, N. M. (1985). Cognitive requirements of learning computer programming in group and individual settings. *Association for Educational Data Systems Journal*, 18, 183-194.
- Webb, N. M. (1985). Verbal interaction and learning in peer-directed groups. *Theory into Practice*, 24, 2-9.

- Webb, N. M., & Kenderski, C. M. (1985). Gender differences in small group interaction and achievement in high-achieving and low-achieving classrooms. In L. C. Wilkinson & C. B. Marret (Eds.), *Gender related differences in classroom interaction* (pp. 209-26). Academic Press.
- Shavelson, R. J., Webb, N. M., Burstein, L. (1985). The measurement of teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (Third Edition). New York: Macmillan.
- Webb, N. M. (1985). Student interaction and learning in small groups: Research summary. In R. Slavin, S. Sharan, S. Kagan, R. Hertz-Lazarowitz, C. Webb & R. Schmuck (Eds.), *Learning to cooperate, cooperating to learn* (pp. 147-172). New York: Plenum.
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- Webb, N. M. (1984). Stability of small group interaction and achievement over time. *Journal of Educational Psychology*, 76, 211-224.
- Webb, N. M. (1984). Sex differences in interaction an achievement in cooperative small group. *Journal of Educational Psychology*, 76. 33-34.
- Webb, N. M. & Kenderski, C. M. (1984). Student interaction and learning in small group and whole class settings. In P. L. Peterson, et al. (Eds.), *The social context of instruction: Group organization and group processes* (pp. 153-170). Academic Press.
- Webb, N. M., Shavelson, R. J., & Maddahian, E. (1983). Multivariate generalizability theory. *New Directions in Testing and Measurement: Generalizability Theory*, 18. 67-82.
- Webb, N. M. (1983). Predicting learning from student interaction: Defining the interaction variables. *Educational Psychologist*, 18, 33-41.
- Webb, N. M., & Cullian, L. K. (1983). Group interaction as a mediator between student and group characteristics and achievement: Stability over time. *American Educational Research Journal*, 20, 411-424.
- Webb, N. M. (1982). Peer interaction and learning in cooperative small groups. *Journal of Educational Psychology*, 74, 642-655
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- Webb, N. M. (1982). Group composition, group interaction, and achievement in cooperative small groups. *Journal of Educational Psychology*, 74, 475-484.
- Webb, N. M., & Shavelson, R. J. (1982). Response to Nussbaum. *Journal of Educational Measurement*, 19, 157-168.
- Shavelson, R. J., & Webb, N. M. (1981). Generalizability theory: 1978-1980. *British Journal of Mathematical and Statistical Psychology*, 34, 133-166.
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- Webb, N. M. (1980). A process-outcome analysis of learning in group and individual settings. *Educational Psychologist*, 15, 69-83.
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Essays

- Webb, N. M. (2015). The importance of fostering productive student participation (pp. 181-184). 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.

Reports

- Davey, T., Ferrara, S., Holland, P. W., Shavelson, R. J., Webb, N. M., & Wise, L. L. (2015). *Psychometric considerations for the next generation of performance assessment*. Educational Testing Service: Center for K-12 Assessment & Performance Management at ETS.
- Webb, N. M., Franke, M. L. & Ing, M. (2013). *Improving mathematics achievement through active student participation in mathematics classrooms*. Final report to the Institute of Education Sciences.
- Webb, N. M., & Franke, M. L. (2008, December). *Teacher practices that make a difference for student participation and learning in mathematics*. Final report to the Spencer Foundation.
- Webb, N. M., Franke, M. L., Ing, M., Chan, A., De, T., Freund, D., & Battey, D. (2007). *Measurement Issues in the Alignment of Standards and Assessments: A Case Study*. National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education & Information Studies, UCLA. CSE Technical Report No. 726.
- Franke, M. L., Webb, N. M., Chan, A., Battey, D., Ing, M., Freund, D., & De, T. (2007). *Eliciting student thinking in elementary school mathematics classrooms*. National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education & Information Studies, UCLA. CSE Technical Report No. 725.
- Webb, Noreen M., Herman, Joan L., & Webb, Norman L. (2006). *Alignment of Mathematics State-level Standards and Assessments: The Role of Reviewer Agreement*. National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education & Information Studies, UCLA. CSE Technical Report No. 685.

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- Webb, N. M., Nemer, K. M., Kersting, N., Ing, M., & Forrest, J. (2004). *The Effects of Teacher Discourse on Student Behavior and Learning in Peer-Directed Groups*. National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education & Information Studies, UCLA. CSE Technical Report No. 627.
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- Webb, N. M., Farivar, S. H., & Mastergeorge, A. M. (2001). *Productive helping in cooperative groups*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M., Welner, K. M., & Zuniga, S. (2000). *Short Circuits or Superconductors? The Effects of Group Composition on High-Ability Students' Achievement in Science*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
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- Webb, N. M., Nemer, K., Chizhik, A., & Sugrue, B. (1997). *Equity issues in collaborative group assessment: Group composition and performance*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Jacobson, P., & Webb, N. M. (1996). *Mid-Point Evaluation of Westwood Charter School: 1995-1996*. Report submitted to Westwood Charter School, Los Angeles Unified School District.
- Fall, R., Webb, N. M., & Wise, N. (1996). *Group discussion and large-scale language arts assessment: Effects on students' comprehension*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M., Nemer, K., & Chizhik, A. (1995). *Using group collaboration as a window into students' cognitive processes*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.

- Fall, R., Webb, N. M., & Wise, N. (1995). *Group Discussion and Large-scale Language Arts Assessment: Effects on Students' Comprehension*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M. (1994). *Group Collaboration in Assessment: Competing Objectives, Processes, and Outcomes*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M. (1992). *Collaborative Group Versus Individual Assessment in Mathematics: Group Processes and Outcomes*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M., & Yasui, E. (1992). *The Influence of Problem Context on Mathematics Performance*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M. (1991, June). *Promoting Problem-Solving Skills in Middle School Mathematics*. Graduate School of Education, UCLA, Final Report to the National Science Foundation (Grant No. MDR-8751309).
- Webb, N. M., Yan, K., Qi, S., & Bushey, B. (1990). *Assessment of Problem Solving: Structured Alternatives to Traditional Word Problems*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/ Department of Education.
- Webb, N. M., Li, W., & Shavelson, R. J. (1989). *The Effects of Differential Weighting of Steps and Tasks On the Reliability (Generalizability) of Navy Machinist Mates' Job Performance Measurements*. Report to the U.S. Navy Personnel Research and Development Center, San Diego, CA.
- Webb, N. M., Gold, K., & Qi, S. (1989). *Mathematical Problem-Solving Processes and Performance: Translation Among Symbolic Processes*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/Department of Education.
- Webb, N. M., Qi, S., & Novak, J. (1988). *The Role of Symbolic Representation in Achievement and Instruction*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/Department of Education.
- Shavelson, R. J., Webb, N. M., Shemesh, M., & Wang, J. W. (1987). *Translation among symbolic representations in problem solving: Results of a preliminary study*. Center for the Study of Evaluation, Graduate School of Education, UCLA, Report to the Office of Educational Research and Improvement/Department of Education (Rep. 26).
- Webb, N. M., Kim, K. S., & Chen, Z. (1987). *Generalizability of Measurements of Navy Machinist Mates' Job Performance*. Report to the U.S. Navy, Navy Personnel Research and Development Center.
- Webb, N. M., Shavelson, R. J., Kim, K. S., & Short, L. (1986). *Reliability (Generalizability) of job performance measurements: Navy Machinist Mates*. Report to the U.S. Navy, Navy Personnel Research and Development Center.
- Shavelson, R. J., Webb, N. M., & Lehman, P. (1986). *Alternative strategies for measuring higher order skills: The role of symbol systems*. Center for the Study of Evaluation, UCLA, Report to the Office of Educational Research and Improvement/Department of Education.
- Shavelson, R. J., Webb, N. M., & Lehman, P. (1986). *The role of symbol systems in problem solving: A literature review*. Center for the Study of Evaluation, UCLA, Report to the Office of Educational Research and Improvement/Department of Education (Rep. 29).

- Shavelson, R. J., Stasz, C., Shlossman, S., Webb, N. M. Hotta, J., & Goldstein, S. (1986). *Evaluating student outcomes from telecourse instruction: A feasibility study*. Santa Monica, CA: The Rand Corporation.
- Kahan, J. P., Webb, N. M., Shavelson R. J., & Stolzenberg, R. M. (1985). *Individual characteristics and unit performance*. Santa Monica, CA: The Rand Corporation.
- Webb, N. M., & Herman, J. (1984). *Diagnosing students' errors from their response selections in language arts*. Center for the Study of Evaluation, UCLA, report to the National Institute of Education.
- Webb, N. M. (1984). *Microcomputer learning in small Groups: Cognitive requirements and group processes*. Center for the Study of Evaluation, UCLA, Technical Report.
- Herman, J., & Webb, N. M. (1983). *Item structures for diagnostic testing*. Center for the Study of Evaluation, UCLA, report to National Institute of Education.
- Webb, N. M., Herman, J., & Cabello, B. (1983). *Optimizing the diagnostic power of tests: An illustration from language arts*. In J. Herman & N. Webb (Eds.), *Item structures for diagnostic testing*. Center for the Study of Evaluation, UCLA, report to National Institute of Education.
- Webb, N. M. (1982). *Generalizability theory*. In B. Choppin (Ed.), *A critical comparison of psychometric models for measuring achievement*. Center for the Study of Evaluation, UCLA, report to National Institute of Education.
- Webb, N. M. (1981). *Group interaction and learning in the mathematics laboratory and the regular classroom*. Report to the National Institute of Education.
- Webb, N. M. (1980). *The implementation of BTES interaction activities in junior high school mathematics classrooms*. Report to the California Commission for Teacher Preparation and Licensing.
- Webb, N. M., Keesling, J. W. (1978). *Handbook for evaluation of Title I programs in state institutions for neglected or delinquent youth*. Santa Monica, CA: System Development Corporation.
- Snow, R. E., Lohman, D., Marshalek, B., Yalow E., & Webb, N. M. (1977). *Correlational analyses of reference aptitude constructs* (Technical Report No. 5). Aptitude Research Project, School of Education Stanford University, Stanford, California.
- Webb, N. M. (1977). *Learning in individual and small group settings* (Technical Report No. 7). Aptitude Research Project, School of Education, Stanford University, Stanford, California. (Also unpublished doctoral dissertation.)

Papers Presented

- Ing, M. M., Webb, N. M., Franke, M. L., Johnson, N. C., & Zimmerman, J. (2018). *Interaction: Who and what to observe?* Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Webb, N. M., Ing, M., Franke, M. L., Johnson, N. C., & Zimmerman, J. (2017). *Teacher practices, student participation, and learning: Variation across classroom structures*. Paper presented at the Biennial Conference of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.
- Johnson, N. C., Franke, M. L., Ing, M., Turrou, A. C., Webb, N. M., & Zimmerman, J. (2017). *Negotiating multiple mathematical goals: Broadening competence and engaging with each other's mathematical ideas*.

Paper presented at the annual meeting of the American Educational Research Association, San Antonio, TX.

- Webb, N. M., Franke, M. L., et al. (2016, May). Small-group dialogue and student learning in classrooms. Invited paper presented at the Learning in Social Contexts Conference, Tepper School of Business, Carnegie Mellon University and the Learning Research and Development Center, University of Pittsburgh.
- Webb, N. M., Franke, M. L., et al. (2016, August). Student participation, teacher practices, and student learning in mathematics classrooms. Invited paper presented at the Biennial Conference of the Special Interest Group on Argumentation, Dialogue and Reasoning, European Association of Research in Learning and Instruction, Ghent, Belgium.
- Webb, N. M., Franke, M. L., Ing, M. M., Turrou, A. C., Johnson, N. C., & Zimmerman, J. (2016, April). Teacher practices that promote productive dialogue and learning in mathematics classrooms. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.
- Johnson, N. C., Franke, M. L., Ing, M. M., Turrou, A. C., Webb, N. M., & Zimmerman, J. (2016, April). Constructing competence: Creating space for students to engage with each other's mathematical ideas. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.
- Webb, N. M. (2015, June). Measuring the performance of individuals working in groups: Issues impacting validity and reliability. Paper presented at the Council of Chief State School Officers National Conference on Student Assessment, San Diego.
- Ing, M. M., Webb, N. M., Franke, M. L., & Turrou, A. C. (2015, April). Benefits of student participation in elementary mathematics classrooms: Only for high-ability students? Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Webb, N. M., Franke, M. L., Turrou, A. C., Ing, M. M., & Johnson, N. C. (2015, April). Teacher practices that support student engagement in mathematics classrooms. Paper presented at the annual meeting of the American Educational Research, Chicago.
- Webb, N. M. (2015, April). Role of groupwork in performance assessment. Paper presented at the annual meeting of the National Council of Measurement in Education, Chicago.
- Ing, M. M., Webb, N. M., Franke, M. L., Turrou, A. C., Wong, J., Shin, N., Fernandez, C. H. (2014, April). How student participation mediates the relationship between teacher practices and student achievement. Paper presented at the annual meeting of the American Educational Research, Philadelphia.
- Shin, N., Ing, M. M., Webb, N. M., Franke, M. L., Turrou, A. C., Wong, J., & Hernandez, C. H. (2014, April). Measuring classroom contexts that support student participation and learning: Applications of social network analysis. Paper presented at the annual meeting of the American Educational Research, Philadelphia.
- Webb, N. M., Franke, M. L., & Ing, M. (2014, February). Student participation, teachers' instructional practices, and student learning in mathematics classrooms. Paper presented at the Psychology Speakers Series, RAND Corporation, Santa Monica, CA.
- Webb, N. M., Franke, M. L., Fernandez, C. H., Shin, N., Turrou, A. C., Wong, J., & Ing, M. (2013, May). *The Teacher's Role in Promoting Productive Student Dialogue in Elementary Mathematics Classrooms*. Paper presented at the annual meeting of the American Educational Research, San Francisco.

- Webb, N. M., Ing, M., Franke, M. L., Turrou, A. C., & Shin, N. (2012, April). Facilitating Productive Student Dialogue in Mathematics Classrooms. Paper presented at the annual meeting of the American Educational Research Association, Vancouver.
- Franke, M., Turrou, A. & Webb, N. (2011, October). Teacher follow-up: Communicating high expectations to wrestle with the mathematics. Invited paper presented at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.
- Webb, N. M., Franke, M. L., Turrou, A. C., & Ing, M. (2011, September). Supporting Student Explanations in Mathematics Classrooms: The Role of Teacher Instructional Practices. Invitational AERA Research Conference: Socializing Intelligence Through Academic Talk and Dialogue. LRDC, University of Pittsburgh, Pittsburgh, PA.
- Webb, N. M., Franke, M. L., Turrou, A. C., & Ing, M. (2011, September). Learning in Peer-Directed Small Groups: Student and Teacher Engagement. Math Forum, Drexel University, Philadelphia, PA.
- Webb, N. M., Franke, M. L., Turrou, A. C., & Ing, M. (2011, June). Self-regulation and learning in peer-directed small groups. Invited paper presented at the Psychological Aspects of Education Current Trends Conference: Self-Regulation and Dialogue in Primary Classrooms, University of Cambridge, Cambridge, England.
- Franke, M. L. & Webb, N. M. (2011, Jan.) Eliciting students' thinking in elementary mathematics classrooms. Invited address for the Center for Research in Mathematics and Science Education, San Diego, CA.
- Webb, N. M., Franke, M. L., & Chan, A. G. (2010, April). Teacher practices that support student participation in mathematics conversations: Influences on student achievement. Paper presented at the annual meeting of the American Educational Research Association, Denver.
- Webb, N. M., Ing, M., & Shih, J. (2010, April). Validity of observational measures of classroom practices: Class-level vs. student-level protocols. Paper presented at the annual meeting of the National Council of Measurement in Education, Denver.
- Franke, M. L., Webb, N. M., Chan, A. G., Freund, D. P. N., Melkonian, D., & Shein, P. (2009, April). Supporting Student Explanations: Variability in Teacher Practice Across Classrooms, Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Webb, N. M., & Shavelson, R. J. Using Generalizability Theory to Think about Validity Issues. (2008, March). Paper presented at the annual meeting of the American Educational Research Association, New York.
- Webb, N. M., Franke, M. L., Ing, M., Chan, A., Battey, D., Freund, D., De, T., & Shein, P. (2007, April). The Role of Teacher Discourse in Effective Groupwork. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Franke, M. L., Webb, N. M., Ing, M., Chan, A., Battey, D., Freund, D., De, T., & Shein, P. (2007, April). Understanding student mathematical learning: Relationships among mathematical tasks, teacher practice, student participation, and student achievement. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Webb, N. M., Herman, J., & Webb, N. L. (2006, April). Alignment of science and mathematics state-level standards and assessments: The role of rater agreement. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M., & Ing, M. (2006, April). Student Discourse, Teacher Practices, and Student Learning in Mathematics Classrooms. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

- Webb, N. M., & Ing, M. (2006, April). Student Discourse and Learning in Elementary School Mathematics Classrooms. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Herman, J. L., Webb, N. M., Zuniga, S. A. (2005, April). Measurement Issues in the Alignment of Standards and Assessments: A Case Study. Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Webb, N. M., Nemer, K. M., Ing, M., & Kersting, N (2004, September). The Effects of Teacher Discourse on Student Behavior in Peer-Directed Groups. Paper presented at the annual meeting of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Research Guidance: Assessment, Accountability, Action, UCLA.
- Webb, N. M., Ing, M., Kersting, N., & Nemer, K. (2004, April). Help Seeking in Cooperative Learning Groups. Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Webb, N. M., Nemer, K. M., Kersting, N., & Ing, M. (2004, April). The Effects of Teacher Discourse on Student Behavior in Peer-Directed Groups. Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Webb, N. M., Kersting, N., Ing, M., & Nemer, K. M. (2003, April). The Evolution of Group Dynamics and Learning in Peer-Directed Groups. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Webb, N. M., & Mastergeorge, A. M. (2003, April). Peer Collaboration and Documentation of Learning in Cooperative Groups. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Herman, J. L., Webb, N. M., & Zuniga, S. (2002, April). Alignment and College Admissions: The Match of Expectations, Assessments, and Educator Perspectives. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Webb, N. M. & Mastergeorge, A. M. (2001, September). Productive Collaborative Problem Solving: Responsibilities of Teachers and Students. Paper presented at the annual meeting of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Evolving Purposes of Testing and Assessment Systems, UCLA.
- Webb, N. M., Zuniga, S., & Welner, K. M. (2001, April). Effects of group composition on high-ability students' achievement in science. Paper presented at the annual meeting of the American Educational Research Association, Seattle.
- Mastergeorge, A., Webb, N. M., Roc, C., & Baure, G. (2000, September). Understanding collaborative learning environments: The development of students' mathematical thinking. Paper presented at the annual conference of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Educational Accountability in the 21st Century, UCLA.
- Webb, N. M., Welner, K. M., & Zuniga, S. (2000, September). "Short Circuits or Superconductors? The Effects of Group Composition on High-Ability Students' Achievement in Science". Paper presented at the annual

conference of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Educational Accountability in the 21st Century, UCLA.

- Mastergeorge, A., Webb, N. M., Roc, C., & Baure, G. (April, 2000). Understanding collaborative learning environments: The development of students' mathematical thinking. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Grohar, I., Webb, N. M., Thum, Y. M., Seltzer, M., & Grasell, J. (April, 2000). Hierarchical modeling approaches for comparing group and individual contexts. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Webb, N. M., Schlackman, J., & Sugrue, B. (1999, September). "Stability of Student Performance on Science Assessments. Paper presented at the annual conference of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Benchmarks for Accountability: Are We There Yet?, UCLA.
- Webb, N. M., Grohar, I., & Welner, K. (1999, April). "Effects of Ability Grouping on High-Ability Students' Achievement in Science". Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Farivar, S., & Webb, N. M. (1999, April). "Professional Development for Cooperative Learning: Issues and Approaches". Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Webb, N. M., Schlackman, J., & Sugrue, B. (1999, April). "The Dependability and Interchangeability of Assessment Methods in Science". Paper presented at the annual meeting of the National Council of Measurement in Education, Montreal.
- Webb, N. M., Grohar, I., Nemer, K. (1998, September). "Getting By With a Little Help From My Friends: Science Learning and Testing in Groups." Paper presented at the annual conference of the National Center for Research and Evaluation on Standards, and Student Testing (CRESST): Comprehensive Systems for Educational Accountability and Improvement, UCLA.
- Sugrue, B., & Webb, N., Schlackman, J. (1998, April). "The Interchangeability of Assessment Methods in Science". Paper presented at the annual meeting of the National Council of Measurement in Education, San Diego.
- Webb, N., Nemer, K., Chizhik, A. (1998, April). "Getting By With a Little Help From My Friends: Science Learning and Testing in Groups". Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Webb, N. (1997, May). "Group and Individual Performance in Collaborative Contexts" Invited lecture at the Naval Personnel Research and Development Center, San Diego.
- Webb, N. M., Chizhik, A., Nemer, K., Sugrue, B. (1996, September). "Equity issues in collaborative group assessment: Group composition and performance." Paper presented at the annual CRESST Conference, University of California, Los Angeles.
- Webb, N. M., Chizhik, A., Nemer, K., Sugrue, B. (1996, April). "Equity issues in collaborative group assessment: Group composition and performance." Paper presented at the annual meeting of the American Educational Research Association, New York.
- Webb, N. M., Sugrue, B., Nemer, K., Chizhik, A., Schlackman, J., Moody, J., & Valdes, R. (1995, September). "Group collaboration and performance in science assessment". Paper presented at the annual CRESST Conference: Assessment at the Crossroads, University of California, Los Angeles.

- Webb, N. M., Nemer, K., & Chizhik, A. (1995, April). "Using group collaboration as a window into students' cognitive processes." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Fall, R., Webb, N. M., & Wise, N. (1995, April). "Group discussion and large-scale language arts assessment: Effects on students' comprehension. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M. (1993, September). "What we know about assessing challenging skills across content areas". Paper presented at the annual CRESST Conference: Getting Assessment Right, University of California, Los Angeles.
- Webb, N. M. (1994, August). "Preparing Students for Collaborative Group Assessment". Paper presented at the annual meeting of the American Psychological Association, Los Angeles.
- Webb, N. M., Shih, J., Baxter, G., Thompson, L. (1994, April). "Teachers' Grouping Practices for Small-Group Learning". Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Webb, N. M. (1993, September). "Factors Influencing Student Performance in Group Assessment: Lessons from Research". Paper presented at the annual CRESST Conference: Assessment Questions, Equity Answers, University of California, Los Angeles.
- Webb, N. M. (1993, April). "Implications of Collaboration on the Measurement of Student Achievement". Paper presented at the annual meeting of the American Educational Research Association, Atlanta.
- Webb, N. M. (1993, April). "Collaborative Group versus Individual Assessment in Mathematics". Paper presented at the annual meeting of the American Educational Research Association, Atlanta.
- Webb, N. M. & Farivar, S. (1993, April). "Training in Communications Skills to Increase Learning in Small Groups". Paper presented at the annual meeting of the American Educational Research Association, Atlanta.
- Webb, N. M. (1993, January). "Promoting the Right Kinds of Helping Behavior in Cooperative Groups". Colloquium Series on Educational Research and Practice, Urban Education Studies Center, Graduate School of Education, UCLA.
- Webb, N. M. (1992, September). "Collaborative Group Versus Individual Assessment in Mathematics". Paper presented at the Conference on "What Works in Performance Assessment", National Center for Research on Evaluation, Standards, and Student Testing, UCLA.
- Webb, N. M., & Troper, J. (1992, April). "Effective helping behavior in cooperative small groups". Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M. (1992, April). "Promoting helping behavior in cooperative groups in middle school mathematics". Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M. (1991, April). "Managing small-group processes in the classroom." Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Webb, N. M., Qi, S., Bushey, B., & Yan, K. X. (1990, April). "Cooperative small group problem solving in middle school mathematics." Paper presented at the annual meeting of the American Educational Research Association.

- Webb, N. M., Gold, K., Qi, S., & Novak, J. (1989, March). "Mathematical problem-solving processes and performance: Translation among symbolic representations." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M., Novak, J., & Gold, K. (1989, March). "Translation among symbolic representations in mathematical problem solving." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M. (1988). "Peer interaction and learning in small groups." Paper presented at the annual meeting of the American Educational Research Association, New Orleans (invited symposium on peer interaction and learning).
- Webb, N. M. (1988). "Small group problem-solving: Peer interaction and learning." Paper presented at the annual meeting of the American Educational Research Association, New Orleans (Raymond B. Cattell Early Contribution Award Address).
- Webb, N. M. (1987, November). "Peer interaction and learning in the classroom." Invited colloquium at the University of Michigan, Ann Arbor.
- Webb, N. M. (1987, October). "The social context of computer learning." Invited paper presented at the annual meeting of Computer-Using Educators, Inc., San Jose, CA.
- Webb, N. M. (1987). "Helping behavior to maximize learning." Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Webb, N. M., & Kroeker, L. (1987). "A generalizability study of job performance measurements in the Navy." Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Webb, N. M., & Shavelson, R. J. (1987). "Alternative strategies for measuring higher-order skills: The role of symbol systems." Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Webb, N. M., Lewis, S. (1987). "The role of peers and the instructor in learning computer programming." Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Webb, N. M., Shavelson, R. J. (1987). "Generalizability theory and job performance measurement." Paper presented at the Department of Defense/Educational Testing Service Conference on Job Performance Measurement, San Diego.
- Webb, N. M. (1986). "Peer learning with microcomputers." Invited paper presented at the Spring Conference of Computer Using Educators, Los Angeles.
- Short, L. Shavelson, R. J., & Webb, N. M. (1986). "Extensions of generalizability theory: The multivariate case." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M., Shavelson, R. J., & Hotta, J. Y. (1986). "Alternative designs for examining exchangeability of student outcomes from telecourses." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Webb, N. M., & Ender, P. (1985). "Planning and execution strategies in small groups learning computer programming." Paper presented at the annual meeting of the American Psychological Association, Los Angeles.

- Webb, N. M., Herman, J., & Cabello, B. (1985). "The use of student answer choice in diagnostic testing. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Herman, J., Webb, N. M., & Cabello, B. (1985). "A domain referenced approach to diagnostic testing." Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Brennan, R. L., & Webb, N. M. (1985). "Generalizability theory." Pre-session at the American Educational Research Association, Chicago.
- Webb, N. M. (1984). "Cognitive requirements of learning computer programming." Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Webb, N. M. (1984). "Problem-solving strategies and group processes in small groups learning computer programming." Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- Webb, N. M. (1983). "Microcomputer learning in small groups: Cognitive requirements and group processes." Presented at the annual meeting of the American Psychological Association, Los Angeles.
- Webb, N. M. (1983). Discussant for "Cooperative learning." At the annual meeting of the American Educational Research Association, Montreal.
- Webb, N. M. (1983). "Combining generalizability theory and the Rasch model to investigate test structure." Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Webb, N. M., & Kenderski, C. (1983). "Sex and race differences in interaction and achievement in low-achieving classes learning in small groups." Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Webb, N. M. (1983). "A longitudinal study of peer interaction and learning in small groups." Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Brennan, R. L. & Webb, N. M. (1983). "Generalizability theory." Pre-Session at the American Educational Research Association, Montreal, Canada.
- Webb, N. M. (1982). "Peer interaction and learning in cooperative settings." Symposium organized for the Second International Conference on Cooperation in Education, International Association for the Study of Cooperation in Education.
- Webb, N. M. (1982). "Sex differences in interaction and achievement in cooperative small groups." Paper presented at the annual meeting of the International Association for the Study of Cooperation in Education, Provo, Utah.
- Webb, N. M. (1982). "Student interaction and learning in small groups: Research summary." Paper presented at the annual meeting of the International Association for the Study of Cooperation in Education, Provo, Utah.
- Webb, N. M., & Kenderski, C. (1982). "Student interaction and learning in small group and whole class settings." Paper presented at the Conference on Student Diversity and the Organization. Processes and Use of Instructional groups in the classroom, University of Wisconsin-Madison.
- Webb, N. M. (1982). "Peer interaction and learning in the classroom: Inter-disciplinary perspectives." Symposium organizer for the annual meeting of the American Educational Research Association, New York.

- Webb, N. M. (1982). "Predicting learning from student Interaction: Defining the variables." Paper presented at the annual meeting of the American Educational Research Association, New York.
- Webb, N. M. (1982). "Generalizability of classroom processes: Taking into account the correlation between observations." Paper presented at the annual meeting of the American Educational Research Association, New York.
- Webb, N. M. (1982). "Interaction patterns: Powerful predictors of achievement in cooperative small groups." Paper presented at the annual meeting of the American Educational Research Association, New York.
- Webb, N. M. (1981). "Group process and learning in cooperative small groups: Stability over time." Paper presented at the annual meeting of the California Educational Research Association, San Diego.
- Webb, N. M. (1981). Invited discussant for "Characteristics and applications of generalizability theory." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Webb, N. M. (1981). Invited discussant for "Multilevel analyses in classroom research." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Webb, N. M., and Cullian, L. (1981). "Group process as the mediator between aptitudes and achievement: Stability over time." Paper presented at the annual meeting of the American Psychological Association, Los Angeles.
- Webb, N. M., and Cullian, L. (1981). "Personality and ability correlates of group interaction and achievement in small groups." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Webb, N. M. (1981). "Small group interaction in teaching." Paper presented at the annual meeting of the Invisible College on Research on Teaching, Los Angeles.
- Webb, N. M. (1981). "Group composition, group interaction and achievement in cooperative small groups." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Webb, N. M. (1980). "Implementation of BTES interaction activities in junior high school mathematics." Paper presented at the California Council on the Education of Teachers' spring conference, San Diego.
- Webb, N. M. (1980). "Relation of student, program and institution characteristics to achievement and attitudes among confined youth." Paper presented at the American Educational Research Association's annual meeting, Boston.
- Webb, N. M. (1980). "Learning in interacting groups: A process-outcome analysis." Paper presented at the American Educational Research Association's annual meeting, Boston.
- Webb, N. M. (1979). "Learning in individual and group settings." Paper presented at the American Educational Research Association's annual meeting, San Francisco.
- Yalow, E., & Webb, N. M. (1977). "Introspective strategy differences reflecting aptitude processes." Paper presented at the American Psychological Association's annual meeting, San Francisco.

Research Grants and Awards

Academic Senate Committee on Research, Los Angeles Division, University of California (1979-2018: maximum: \$10,000 per yearly grant)

Classroom Interaction and Achievement: Validation of Observation Procedures
 Effective Collaborative Problem Solving in Mathematics Classrooms: The Teacher's Role
 Effective Collaborative Problem Solving in Mathematics
 Effects of Ability Grouping on High-Ability Students' Achievement in Science
 Equity Issues in Collaborative Group Assessment
 Equity Issues in Collaborative Group Assessment in Science: Group Dynamics in Successful and Unsuccessful Groups
 Fostering Growth in Students' Mathematical Understanding: Links among Teacher Practices, Student Participation, and Student Achievement
 Fostering Mathematics Competence and Confidence in the Elementary Grades
 Growth in Students' Mathematical Understanding: Links among Teacher Practices, Student Participation, and Student Achievement
 Getting By with a Little Help From My Friends: Science Learning and Testing in Groups
 Group Assessment: Collaboration and Student Performance
 Group Process and Achievement in Small Group Settings.
 Group Process and Learning in Group Settings
 Help Seeking in Cooperative Learning Groups
 Helping Teachers Increase Student Engagement and Mathematics Skills and Understanding
 Improving Mathematics Achievement through Student Participation in Classroom Conversations
 Mathematical Problem Solving in Realistic Contexts
 Promoting Successful Collaborative Problem Solving in Mathematics Classrooms
 Statistical Methods for Comparing Groups and Individuals
 Student Collaboration and Learning in Small Groups: Integrative Review and Critical Analysis
 The Development of Students' Mathematical Thinking in Collaborative Settings
 The Effects of Classroom Discourse on Students' Mathematics Learning
 The Effects of Teacher Practices and Student Participation on Students' Mathematics Learning
 Validity of Scores from Collaborative Group Achievement Tests
 Helping Teachers Increase Student Engagement and Learning in Mathematics Classrooms
 Improving Mathematical Competence through Active Student Participation
 Fostering Active Student Participation and Mathematical Proficiency in the Elementary Grades
 Improving Mathematical Competence through Active Student Participation
 Promoting Students' Mathematical Competence through Active Classroom Participation
 Graduate School of Education, UCLA: Microcomputer Learning in Group and Individual Settings.
 Institute of Education Sciences (IES, U.S. Department of Education)
 Advanced Quantitative Methods in Education Research. Predoctoral Training Grant, 2008-2014, \$4,026,000. (PI; co-PI's: Michael Seltzer, Steve Reise)
 Improving Mathematics Achievement through Active Student Participation in Mathematics Classrooms, 2010-2013, \$453,520. (PI; co-PI's: Megan Franke, Marsha Ing)
 National Institute of Education: Group Interaction and Learning in the Mathematics Laboratory and the Regular Classroom, 1980-1981, \$14,813. (PI)
 National Science Foundation: Promoting Inquiry Skills in Middle School Mathematics, 1988-1991, \$249,177. (PI)
 Spencer Foundation:
 Understanding Collaborative Learning Environments: A Study of the Development of Students' Mathematical Knowledge, 1999-2000, \$35,000. (PI)
 Effective Strategies for Developing Students' Mathematical Understanding in Peer-Directed Groups, 2002-2003, \$35,000. (PI)

Teacher Practices that Make a Difference for Student Participation and Learning in Mathematics, 2007-2009, \$38,180. (PI; co-PI's: Megan Franke, Marsha Ing)

Teacher Practices for Increasing Student Engagement and Learning in Mathematics Classrooms, 2014-2017, \$49,337. (PI; co-PI's: Megan Franke, Marsha Ing)

State of California Commission for Teacher Preparation and Licensing: Implementation of Beginning Teacher Evaluation Study Interaction Activities in Junior High School Mathematics, 1979-1980, \$5,000. (PI)

University of California: Career Development Awards (multiple)

Editorial and Review Services

American Educational Research Journal (Editorial Board, 1984 - 1994)

American Educational Research Association, Division C, Division D

American Psychological Association, Division 15

Applied Measurement in Education (Editorial Board, 2002 – present)

Assessment in Education: Principles, Policy, & Practice

British Journal of Educational Psychology

Cognitive Science

Computers in Human Behavior

Educational Assessment

Educational Evaluation and Policy Analysis

Educational Measurement: Issues and Practice

Educational Psychologist (Editorial Board, 2002 –present)

Educational and Psychological Measurement

Educational Research and Evaluation

Educational Researcher

Elementary School Journal

European Journal of Psychology of Education

Handbook of Educational Psychology

Handbook of Research on Training

Institute of Education Sciences (IES) Review Panel

International Encyclopedia of Education

International Journal of Educational Research

International Conference of the Learning Sciences

International Society of the Learning Sciences

Instructional Science

Journal of Educational and Behavioral Statistics

Journal for Research in Mathematics Education

Journal of Educational Measurement (Editorial Board, 1984 - 1989)

Journal of Educational Psychology (Editorial Board, 1986 - 1989)

Journal of Educational Statistics

Journal of the Learning Sciences (Editorial Board, 2005 – present)

Journal of Sex Roles

Journal of Studies in Educational Evaluation

Learning and Instruction

Learning, Culture and Social Interaction (Editorial Board, 2011-present)

Longman Publishers

Measurement and Evaluation in Counseling and Development

Multivariate Behavioral Research

National Science Foundation

National Institute of Education

Psychological Bulletin

Psychological Methods
Psychometrika
Research Grants Council, Hong Kong
Review of Educational Research
Spencer Foundation
The Elementary School Journal
Prentice-Hall Publishers
World Education Research Yearbook