

DANIEL SIEBERT

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EDUCATION

- Ph.D., Mathematics and Science Education** 2000
San Diego State University/University of California at San Diego
- M.S., Mathematics**, Brigham Young University 1993
- B.S., Mathematics**, Brigham Young University (Magna cum laude) 1989
Second Major: Asian Studies

PROFESSIONAL EXPERIENCE

- Associate Professor**, Department of Mathematics Education, Brigham Young University. 2006-present
- Associate Chair**, Department of Mathematics Education, Brigham Young University 2011-2015
- Associate Editor**, Journal for Research in Mathematics Education 2003-2007
- Assistant Professor**, Department of Mathematics Education, Brigham Young University 2000-2006
- Instructor**, San Diego State University 1997-1998
- Research Assistant**, San Diego State University 1995-2000
- Mathematics Lab Supervisor**, Utah Valley State College, Orem, UT Summer, 1995
- Secondary School Teacher**
Spanish Fork Intermediate School, Spanish Fork, UT Fall, 1994
Mountain View High School, Orem, UT Spring, 1993
- Teaching Assistant**, Brigham Young University 1990-1993

PUBLICATIONS

- Siebert, D. K. (2019). Conducting a timely literature search. In K. R. Leatham (Ed.), *Designing, conducting, and publishing quality research in mathematics education* (pp. 17-30). Cham, Switzerland: Springer.
- Luckau, K., & Siebert, D. K. (2018). Covariation graphing practices: The change triangle. In T. E. Hodges, G. J. Roy, & A. M. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics education* (pp. 233). Greenville, SC: University of South Carolina & Clemson University.
- Siebert, D. K. (2017). Powerful meanings for logarithms. *Mathematics Teacher*, 110, 662-666.
- Wimmer, J. J., & Siebert, D. K. (2017). Digital mathematics literacies. *Journal of Adolescent and Adult Literacy*, 60, 577-580.
- Siebert, D. K., Draper, R. J., Barney, D., Broomhead, P., Grierson, S., Jensen, A. P., . . . Wimmer, J. J. (2016). Characteristics of literacy instruction that supports reform in content-area classrooms. *Journal of Adolescent and Adult Literacy*, 60, 25-33.
- Switzer, J. M., Teuscher, D., & Siebert, D. (2015). See it, try it, and reflect on it (STAR): Using video to scaffold and support preservice teachers in the reflective process of developing participation questioning discourse. In E. Ortlieb, L. E. Shanahan, & M. B. McVee (Eds.), *Video research in disciplinary literacies* (Vol. 6, pp. 3-20). Bingley, UK: Emerald Group Publishing.
- Siebert, D., & Draper, R. J. (2012). Reconceptualizing literacy and instruction for mathematics classrooms. In C. Shanahan & T. L. Jetton (Eds.), *Adolescent literacy in the academic disciplines: General principles and practical strategies* (pp. 172-198). New York: Guilford.
- Siebert, D. (2011). Redefining content-area literacy for mathematics teaching and learning. In L. R. Wiest & T. Lamberg (Eds.), *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 2132-2139). Reno, NV.
- Draper, R. J., Adair, M., Broomhead, P., Gray, S., Grierson, S., Hendrickson, S., Jensen, A. P., Nokes, J. D., Shumway, S., Siebert, D., & Wright, G. (2011). Seeking renewal, finding community: Participatory action research in teacher education. *Teacher Development*, 15(1), 1-18.
- Draper, R. J., Broomhead, P., Jensen, A. P., Nokes, J. D., & Siebert, D. (Eds.). (2010). *(Re)Imagining content-area literacy instruction*. New York: Teachers College Press.

- Draper, R. J., Broomhead, P., Jensen, A. P., & Siebert, D. (2010). Aims and criteria for collaboration in content-area classrooms. In R. J. Draper, P. Broomhead, A. P. Jensen, J. D. Nokes & D. Siebert (Eds.), *(Re)Imagining content-area literacy instruction* (pp. 1-19). New York: Teachers College Press.
- Draper, R. J., Nokes, J. D., & Siebert, D. (2010). (Re)Imagining collaborations for content-area literacy. In R. J. Draper, P. Broomhead, A. P. Jensen, J. D. Nokes & D. Siebert (Eds.), *(Re)Imagining content-area literacy instruction* (pp. 159-171). New York: Teachers College Press.
- Draper, R. J., & Siebert, D. (2010). Rethinking texts, literacies, and literacy across the curriculum. In R. J. Draper, P. Broomhead, A. P. Jensen, J. D. Nokes & D. Siebert (Eds.), *(Re)imagining content-area literacy instruction* (pp. 20-39). New York: Teachers College Press.
- Hendrickson, S., Siebert, D., Smith, S. Z., Kunzler, H., & Christensen, S. (2010). Addressing parents' concerns about mathematics reform. *Virginia Mathematics Teacher*, 37(1), 24-27.
- Siebert, D., & Hendrickson, S. (2010). (Re)Imagining literacies for mathematics classrooms. In R. J. Draper, P. Broomhead, A. P. Jensen, J. D. Nokes & D. Siebert (Eds.), *(Re)Imagining content-area literacy instruction* (pp. 40-53). New York: Teachers College Press.
- Siebert, D. (2010). Professional resources [Review of the book *Mathematical literacy: Helping students make meaning in the middle grades*]. *Journal of Adolescent and Adult Literacy*, 53(5), 440-442.
- Draper, R. J., & Siebert, D. (2009). Content area literacy in mathematics and science classrooms. In S. R. Parris, D. Fisher & K. Headley (Eds.), *Adolescent literacy, field tested: Effective solutions for every classroom* (pp. 105-116). Newark, DE: International Reading Association.
- Siebert, D., & Draper, R. J. (2008). Why content-area literacy messages do not speak to mathematics teachers: A critical review of the literature. *Literacy Research and Instruction*, 47, 229-245.
- Siebert, D., & Gaskin, N. (2006). Creating, naming and justifying fractions. *Teaching Children Mathematics*, 12(8), 394-400.
- Draper, R. J., Smith, L. K., Hall, K. M., & Siebert, D. (2005). What's more important? Choosing literacy or content: Confronting the literacy-content dualism. *Action in Teacher Education*, 27(2), 12-21.

- Draper, R. J., & Siebert, D. (2004). Different goals, similar practices: Making sense of the mathematics and literacy instruction in a *Standards*-based mathematics classroom. *American Educational Research Journal*, 41, 927-962.
- Hendrickson, S., Siebert, D., Smith, S. Z., Kunzler, H., & Christensen, S. (2004). Addressing parents' concerns about mathematics reform. *Teaching Children Mathematics*, 11(1), 18-23.
- Siebert, D., & Williams, S. R. (2004). Understanding-in-discourse as a tool for coordinating the individual and social aspects of learning. In D. E. McDougall & J. A. Ross (Eds.), *Proceedings of the 26th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 2, pp. 892-893). Toronto: OISE/UT.
- Siebert, D., & Williams, S. R. (2003). Students' conceptions of Z_n . In N. A. Pateman, B. J. Dougherty, & J. Zilliox (Eds.), *Proceedings of the 27th Conference of the International Group for the Psychology of Mathematics Education held jointly with the 25th Conference of PME-NA* (Vol. 4, pp. 167-173). Columbus, OH: ERIC Clearinghouse for Science, Mathematics and Environmental Education.
- Lobato, J., & Siebert, D. (2002). Quantitative reasoning in a reconceived view of transfer. *Journal of Mathematical Behavior*, 21(1), 87-116.
- Siebert, D. (2002). Connecting informal thinking and algorithms: The case of division of fractions. In B. Litwiller (Ed.), *Making sense of fractions, ratios, and proportions: 2002 Yearbook* (pp. 247-256). Reston, VA: NCTM.
- Siebert, D. (2000). Prospective secondary mathematics teachers' knowledge of mathematics and their ability to understand nonstandard reasoning. In M. L. Fernandez (Ed.), *Proceedings of the Twenty-Second Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 2, pp. 673-678). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.
- Siebert, D. (2000). Dynamic, coherent accounts of prospective secondary mathematics teachers' knowledge of and beliefs about mathematics (Doctoral dissertation, University of California, San Diego and San Diego State University, 2000). *Dissertation Abstracts International*, AAT 9975029.
- Philipp, R. A., Clement, L., & Siebert, D. (1999). The SDSU/UCSD Joint Doctoral Program in Mathematics and Science Education: An American Example. In K. Hart & F. Hitt (Eds.), *Supervision of higher degrees in mathematics education: An*

international perspective (pp. 57-68). University of Nottingham and Cinvestav-IPN Departamento de Matemática Educativa.

Siebert, D., Lobato, J., & Brown, S. (1998). Understanding how prospective secondary teachers avoid accommodating their existing belief systems. In S. B. Berenson, K. R. Dawkins, M. Blanton, W. N. Coulombe, J. Kolb, K. Norwood, & L. Stiff (Eds.), *Proceedings of the Twentieth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 2, pp. 620-626). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

Siebert, D. (1997). Teachers' beliefs and student failure in algebra. In J. A. Dossey, J. O. Swafford, M. Parmantie, & A. E. Dossey (Eds.), *Proceedings of the Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 1, pp. 91-97). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

McLeod, D. B., & Siebert, D. (1996). Origins and impact of the NCTM *Standards*: The views of the developers. In E. Jakubowski, D. Watkins, & H. Biske (Eds.), *Proceedings of the Eighteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 1, pp. 137-142). Columbus, OH: The ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

PRESENTATIONS

Siebert, D. K. (2019). *Teaching the literacies for mathematics learning, doing, and knowing*. Presentation at the Regional Conference of the National Council of Teachers of Mathematics, Salt Lake City, UT.

Luckau, K., & Siebert, D. K. (2018). *Covariation graphing practices: The change triangle*. Paper presented at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC.

Curtis, K., & Siebert, D. K. (2018). *How positioning affects student learning in an inquiry-based classroom*. Paper presented at the Annual Research Conference of the National Council of Teachers of Mathematics, Washington, D.C.

Siebert, D. K., & Eddington, K. (2018). *The structure of conceptually-oriented mathematics explanations*. Poster presented at the Annual Research Conference of the National Council of Teachers of Mathematics, Washington, D.C.

- Draper, R. J., Barney, D., Broomhead, P., Grierson, S., Jensen, A. P., Nielson, J., Nokes, J. D., Shumway, S. & Siebert, D. (2013). *Problematizing informational texts*. Symposium at the Annual Meeting of the Literacy Research Association, Dallas, TX.
- Siebert, D. (2012). *Supporting literacy growth in disciplinary practices*. Discussant at the Annual Meeting of the Literacy Research Association, San Diego, CA.
- Draper, R. J., Barney, D., Broomhead, P., Grierson, S., Jensen, A. P., Nielson, J., Nokes, J. D., Shumway, S. & Siebert, D. (2012). *Reimagining the preparation of teachers to support students' acquisition and learning of disciplinary literacies*. Symposium at the Annual Meeting of the Literacy Research Association, San Diego, CA.
- Draper, R. J., Barney, D., Broomhead, P., Grierson, S., Jensen, A. P., Nielson, J., Nokes, J. D., & Siebert, D. (2011). *Creating and sustaining collaborations between literacy and content-area research*. Working group at the Annual Meeting of the Literacy Research Association, Jacksonville, FL.
- Draper, R. J., Barney, D., Broomhead, P., Grierson, S., Jensen, A. P., Nielson, J., Nokes, J. D., & Siebert, D. (2011). *The Common Core State Standards: Problems and possibilities for content-area teachers*. Symposium at the Annual Meeting of the Literacy Research Association, Jacksonville, FL.
- Siebert, D. (2011). *Redefining content-area literacy for mathematics teaching and learning*. Paper presented at the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, NV.
- Draper, R. J., Siebert, D., Broomhead, P., & Nokes, J. D. (2010). *Supporting disciplinary literacies: (Re)imagining content and literacy instruction*. Presentation at the 60th Annual Meeting of the National Reading Conference, Fort Worth, TX.
- Siebert, D., & Jeppsen, A. (2010). *An examination of the role of writing in mathematics instruction*. Paper presented at the 60th Annual Meeting of the National Reading Conference, Fort Worth, TX.
- Siebert, D., & Draper, R. J. (2010). *Reframing Content Area Literacy to Recognize and Address Discipline-Specific Texts and Literacies*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
- Brigham Young University Literacy Study Group. (2009). *Seeking renewal, finding community: Participatory action research in teacher education*. Presentation at the Annual Meeting of the American Educational Research Association, San Diego, CA.

- Draper, R. J., Asay, D., Broomhead, P., Grierson, S., Hendrickson, S., Jensen, A. P., Nokes, J.D., Shumway, S., & Siebert, D. (2008). *Applying the Multiliteracies Pedagogical Framework to Content-area Teaching*. Presentation at the National Reading Conference 58th Annual Meeting, Orlando, FL.
- Siebert, D., & Lehman, S. (2008). *Painless literacy instruction*. Presentation at the Annual Meeting of the Utah Council of Teachers of Mathematics, Sandy, UT.
- Siebert, D., & Brinkerhoff, J. A. (2008). *A general model for mathematical explanation*. Paper presented at the Research Presession of the Annual Meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.
- Draper, R. J., Adair, M., Asay, D., Broomhead, P., Hendrickson, S., Jensen, A. P., Nokes, J. D., & Siebert, D. (2007). *Reimagining content-area literacy instruction*. Presentation at the National Reading Conference 57th Annual Meeting, Austin, TX.
- Siebert, D., & Draper, R. J. (2005). *Problematizing writing in the learning of mathematics*. Poster presented at the Twenty-Seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Roanoke, VA.
- Draper, R. J., & Siebert, D. (2004). The promise of co-operative inquiry to locate texts and literacy in content-area classrooms. Roundtable presented at the National Reading Conference 54th Annual Meeting, San Antonio, TX.
- Siebert, D., & Williams, S. R. (2004). *Understanding-in-discourse as a tool for coordinating the individual and social aspects of learning*. Paper presented at the Twenty-Sixth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Toronto, Canada.
- Draper, R. J., & Siebert, D. (2003). *Why content-area literacy messages do not speak to content-area teachers: A critical review of the literature*. Paper presented at the National Reading Conference 53rd Annual Meeting, Scottsdale, AZ.
- Siebert, D., & Williams, S. R. (2003). *Students' Conceptions of Z_n* . Paper presented at the Twenty-Seventh Annual Meeting of the International Group for the Psychology of Mathematics Education, Honolulu, Hawaii.
- Siebert, D., & Williams, S.R. (2002). *Students' Difficulties with Z_n* . Poster presented at the Twenty-Fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Athens, GA.

Siebert, D. (October 2001). *Traipsing Across the Curriculum with Division*. Presentation to the Advanced Learning Laboratory (ALL) Teachers in Alpine School District, Highland, UT.

Siebert, D., & Voyles, J. (October 2001). *Developing Fraction Images*. Workshop presented at the Annual Meeting of the Utah Council of Teachers of Mathematics, Salt Lake City, UT.

Siebert, D. (October, 2000). *Prospective secondary mathematics teachers' knowledge of mathematics and their ability to understand nonstandard reasoning*. Paper presented at the Twenty-Second Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Tucson, AZ.

Siebert, D. (April, 2000). *The emergence of quantitative reasoning in prospective secondary mathematics teachers*. Report presented at the Research Pre-session of the Seventy-eighth Annual Meeting of the National Council of Teachers of Mathematics, Chicago, IL.

Lobato, J., Siebert, D., & Brown, S. (November, 1998). *Understanding how prospective secondary teachers avoid accommodating their existing belief systems*. Paper presented at the Twentieth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Raleigh, NC.

Siebert, D. (October, 1997). *Teachers' beliefs and student failure in algebra*. Paper presented at the Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Bloomington/Normal, IL.

GRANT PROPOSALS

Jones, S, Williams, S. R., and Siebert, D. (2014). *Determining Mechanisms of Success in the BYU CURM Program*. NSF, \$242,947, not funded.

CURRICULAR MATERIALS

Williams, S. R. & Siebert, D. (2002). *Number, Measurement and Algebra*. A semester-long set of student materials for MthEd 306.

Siebert, D. (2001). *Fractions, Probability, and Geometry for Preservice Elementary Teachers*. A semester-long set of teacher and student materials for MthEd 305.

Siebert, D. (1998). *Organizing and Interpreting Data*, an eight week unit of teacher and student materials, developed for the National Science Foundation Project,

Reforming the preparation and professional development of elementary and middle school mathematics teachers, J. T. Sowder and P. W. Thompson (co-PIs). The unit will be distributed via CD-ROM once a publisher is located.

PROFESSIONAL INVOLVEMENT

- Reviewer for the *Journal for Research in Mathematics Education*; *Cognition and Instruction*; *Journal of the Learning Sciences*; *Journal of Mathematical Behavior*; *Mathematics Teacher: Teaching and Learning, PK-12*; *Mathematical Thinking and Learning*.
- Member of the *National Council of Teachers of Mathematics (NCTM)* and *North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*.