

Bibliography

- [1] American Mathematical Association of Two-Year Colleges, *Beyond Crossroads*, Washington DC, 2006.
- [2] Deborah L. Ball, Heather Hill and Hyman Bass, “Knowing Mathematics for Teaching: Who Knows Mathematics Well Enough to Teach Third Grade and How Can We Decide?” *American Educator*, 4 (2005) 14–22.
- [3] Carmen Batanero, Joan Garfield, M. G. Ottaviani, and John Truran, “Research in Statistical Education: Some Priority Questions,” *Statistical Education Research Newsletter*, 1 (2000), 2–6.
- [4] I. Beatty, “Transforming student learning with classroom communication systems,” *ECAR Center for Applied Research, Research Bulletin*, 3 (2004), 2–13.
- [5] Ian D. Beatty, William J. Gerace, William J. Leonard, and Robert J. Dufresne, “Designing Effective Questions for Classroom Response System Teaching,” *American Journal of Physics*, 74 (2006) 31–39.
- [6] Dina L. Blodgett, *The Effects of Implementing an Interactive Student Response System in a College Algebra Classroom*, MS Thesis, The University of Maine, Orono, ME, 2006.
- [7] M. D. Bode, D. Drane, Y. B.-D. Kolikant, and M. Schuller, “A Clicker Approach to Teaching Calculus,” *Notices of the AMS*, 56 (2009) 253–256.
- [8] J.D. Bransford, A.L. Brown, and R.R. Cocking (Eds.), *How People Learn: Brain, Mind, Experience, and School*, National Academy Press, Washington D.C., 2000.
- [9] David M. Bressoud, “Should Students Be Allowed to Vote?” *MAA Launchings* (2009), www.maa.org/columns/launchings/launchings_03_09.html
- [10] Derek Bruff, *Teaching with Classroom Response Systems: Creating Active Learning Environments*, Jossey-Bass, San Francisco, 2009.
- [11] Melanie Butler, “What I Learned from Using a Personal Response System,” *FOCUS* 25 (2005) 15.
- [12] J. E. Caldwell, “Clickers in the Large Classroom: Current Research and Best-Practice Tips,” *CBELife Sciences Education*, 6 (2007) 9–20.
- [13] Beth Chance, Robert delMas, and Joan Garfield, “Reasoning about sampling distributions,” in *The Challenge of Developing Statistical Literacy, Reasoning and Thinking*, Dani Ben-Zvi and Joan Garfield, eds., Springer, New York, 2004.
- [14] A.W. Chickering and Z. F. Gamson, “Seven Principles for Good Practice in Undergraduate Education,” *The American Association for Higher Education Bulletin*, 39 (March 1987) 3–7.
- [15] —, “Seven Principles for Good Practices in Undergraduate Education,” in *New Directions for Teaching and Learning* 47, Jossey-Bass Inc., San Francisco, 1991.
- [16] Kelly S. Cline, “Classroom Voting in Mathematics,” *Mathematics Teacher*, 100 (2006) 100–104.
- [17] Kelly Cline, Holly Zullo, Mark Parker, Teaching with Classroom Voting, *FOCUS*, 27 (2007) 22–23.
- [18] —, “Using Classroom Voting in Mathematics Courses,” in *Proc. 19th Annual International Conference on Technology in Collegiate Mathematics*, Addison Wesley, New York, 2007.

- [19] George Cobb, "Teaching statistics," in *Heeding the Call for Change: Suggestions for Curricular Action* (MAA Notes No. 22), Lynn A. Steen, ed., The Mathematical Association of America, Washington, DC, 1992.
- [20] E. Cohen, *Designing Groupwork: Strategies for Heterogeneous Classrooms, Second Edition*, Teachers College Press, New York, 1994.
- [21] Eric Connally, Deborah Hughes-Hallett, Andrew Gleason, et al., *Functions Modeling Change: A Preparation for Calculus*, John Wiley & Sons, Inc., 2007.
- [22] Committee on the Curriculum Renewal Across the First Two Years (CRAFTY). "College Algebra Guidelines," Retrieved on September 30, 2008 from website: www.maa.org/CUPM/crafty/CRAFTY-Coll-Alg-Guidelines.pdf
- [23] Catherine H. Crouch and Eric Mazur, "Peer Instruction: Ten years of Experience and Results," *American Journal of Physics*, 69 (2001) 970–977.
- [24] Catherine H. Crouch, Jessica Watkins, Adam P. Fagen, and Eric Mazur, "Peer Instruction: Engaging Students One-on-One, All at Once," in *Research-Based Reform of University Physics*, E. F. Redish and P. J. Cooney, eds., American Association of Physics Teachers, College Park, MD, 2007.
- [25] Stewart Culin, *Games of the North America Indians Volume 1 — Games of Chance*, Reprint of the 1907 edition published as the Twenty-fourth Annual Report of the Bureau of American Ethnology, University of Nebraska Press, Lincoln, Nebraska, 1992, 244.
- [26] —, "Hawaiian Games," *American Anthropologist*, 1 (4) (1899) 201–47.
- [27] S. W. Draper and M. I. Brown, "Increasing interactivity in lectures using an electronic voting system," *Journal of Computer Assisted Learning*, 20 (2004) 81–94.
- [28] D. Duncan, *Clickers in the classroom: how to enhance science teaching using classroom response systems*, Pearson, San Francisco, CA, 2005.
- [29] Kathryn Ernie, Sherrie Serros, Erick Hofacker, "Using PRS to Facilitate Reasoning and Representation in Mathematics Content Courses for Future Elementary and Middle School Teachers," this volume.
- [30] Adam P. Fagen, Catherine H. Couch, Eric Mazur, "Peer Instruction: Results from a Range of Classrooms," *Phys. Teacher* 40 (2002) 206–209.
- [31] Joan Garfield, "The Challenge of Developing Statistical Reasoning," *Journal of Statistics Education*, 10 (2002).
- [32] —, "Assessing Statistical Reasoning," *Statistics Education Research Journal*, 2 (2003), 22–38.
- [33] Joan Garfield, Martha Aliaga, George Cobb, Carolyn Cuff, Rob Gould, Robin Lock, Thomas Moore, Allan Rossman, Bob Stephenson, Jessica Utts, Paul Velleman, and Jeff Witmer, *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Project College Report*, American Statistical Association, Alexandria, VA, 2005.
- [34] Andrew Gelman and Deborah Nolan, *Teaching Statistics: A Bag of Tricks*, Oxford University Press, Oxford, 2002.
- [35] Sheldon Gordon, "What's wrong with college algebra?" *SUNY/UUP Working Papers series*, 2005.
- [36] Charles Graham, Tonya Tripp, Larry Seawright, and George Joeckell, "Empowering or compelling reluctant participators using audience response systems," *Active Learning in Higher Education*, 8 (2007) 233–258.
- [37] Richard R. Hake, "Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses," *American Journal of Physics*, 66 (1998) 64–74.
- [38] —, "The Physics Education Reform Effort: A Possible Model for Higher Education?" *The National Teaching and Learning Forum*, 15 (1). www.ntlf.com/html/ti/toc.htm
- [39] Nancy Baxter Hastings, editor, *A fresh start for collegiate mathematics: Rethinking the courses below calculus*, Springer Monographs in Mathematics, Mathematical Association of America, Washington DC, 2006.

- [40] Jay Hatch, M. Jensen, and R. Moore, "Manna from Heaven or Clickers from Hell," *Journal of College Science Teaching*, 34(2005) 36–39.
- [41] D. Henderson, *Experiencing Geometry on Plane and Sphere*, Prentice Hall, Upper Saddle River, New Jersey, 1996.
- [42] Clyde Herreid, "Clicker Cases: Introducing Case Study Teaching Into Large Classrooms," *Journal of College Science Teaching*, 36(2006) 43–47.
- [43] Heather Hill, Brian Rowan and Deborah L. Ball, "Effects of Teachers' Mathematical Knowledge for Teaching on Student Achievement," *American Educational Research Journal* 42 (2) (2005) 371–406.
- [44] D. W. Johnson, R.T. Johnson, and K.A. Smith, *Active Learning: Cooperation in the College Classroom*, Interaction Book Company, Edina, MN, 1991.
- [45] ———, "Maximizing Instruction Through Cooperative Learning," *ASEE Prism*, 7 (1998) 24–29.
- [46] Robert Kaleta and Tonya Joosten, "Student Response Systems: A University of Wisconsin System Study of Clickers," *Educase Center for Applied Research Bulletin*, 10 (2007).
- [47] Linda Almgren Kime, Judith Clark, and Beverly K. Michael, *Explorations in College Algebra*, John Wiley & Sons, New York, 2008.
- [48] Libby Krussel, Barbara Edwards, and G.T. Springer, "The teacher's discourse moves: a framework for analyzing discourse in mathematics classrooms," *School Science and Mathematics Journal*, 104(7) (2004) 307–312.
- [49] N. Lasry, "Clickers or Flashcards: Is There Really a Difference?" *The Physics Teacher*, 46 (2008) 242–244.
- [50] David O. Lomen and Maria K. Robinson, "Using ConcepTests in Single and Multivariable Calculus," in *Proc. 16th Annual International Conference on Technology in Collegiate Mathematics*, Addison Wesley, New York, 2004.
- [51] Adam Lucas, "Using Peer Instruction and iclickers to Enhance Student Participation in Calculus," *PRIMUS*, 19 (2009) 219–231.
- [52] F. T. Lyman, "The responsive classroom discussion: The inclusion of all students," in *Mainstreaming Digest*, A. Anderson, ed., University of Maryland Press, College Park MD, 1981.
- [53] Liping Ma, *Knowing and Teaching Elementary Mathematics*, Lawrence Erlbaum Associates, Mahwah, New Jersey, 1999.
- [54] MAA, *Committee on the Undergraduate Program in Mathematics Curriculum Guide*, Mathematical Association of America, Washington, DC, 2004.
- [55] Margie Martyn, "Clickers in the Classroom: An Active Learning Approach," *Educase Quarterly* 2 (2007) 71–74.
- [56] Eric Mazur, *Peer Instruction: A User's Manual*. Prentice Hall, Upper Saddle River, NJ, 1997.
- [57] Raymond J. McGivney, *Contemporary Mathematics*, unpublished textbook.
- [58] Jill Meyers, *In-Stat*, Press Release, May 27, 2008.
- [59] Robyn L. Miller, Everilis Santana-Vega, Maria S. Terrell, "Can Good Questions and Peer Discussion Improve Calculus Instruction?" *PRIMUS*, 16 (3)(2006) 193–203.
- [60] Thomas Moore, ed., *Teaching Statistics: Resources for Undergraduate Instructors (MAA Notes #52)*, The Mathematical Association of America, Washington, DC, 2000.
- [61] William Navidi, *Statistics for Engineers and Scientists*, McGraw-Hill, New York, 2008.
- [62] NCTM, *Principles and Standards*, National Council of Teachers of Mathematics, Reston, Virginia, 2000.
- [63] National Research Council, *How people learn: Brain, mind, experience, and school*, Washington, DC, 2000.

- [64] Brian Phillips, "Statistics Education Research Journal," *Newsletter for the Section on Statistical Education of the American Statistical Association*, 8 (2002).
- [65] Scott Pilzer, "Peer Instruction in Physics and Mathematics," *PRIMUS*, 11 (2)(2001) 185–192.
- [66] Scott Pilzer, M. Robinson, D. Lomen, D. Flath, D. Hughes Hallet, B. Lahme, J. Morris, W. McCallum, and J. Trash. *ConcepTests—to accompany Calculus 3rd Edition (Hughes Hallet et al.)* John Wiley & Sons Inc., New York 2003.
- [67] J. Pratton and L. W. Hales, "The Effects of Active Student Participation on Student Learning," *Journal of Educational Research*, 79 (1986) 210–215.
- [68] Chris Rasmussen and Wei Ruan, "Teaching for Understanding: A Case of Students Learning to Use the Uniqueness Theorem as a Tool in Differential Equations," in *Making the Connection: Research to Practice in Undergraduate Mathematics Education*, Marilyn Carlson and Chris Rasmussen, eds, MAA Notes, 2008.
- [69] N. W. Reay, P. Li, and L. Bao, "Testing a new voting machine question methodology," *American Journal of Physics*, 76 (2008) 171–178.
- [70] M. K. Robinson, D. Lomen, S. Forgoston, B. Armenta, E. McNicholas, M. Varghese, *ConcepTests to Accompany Algebra (McCallum et al.)*, John Wiley & Sons, Inc., New York, 2009.
- [71] Everilis Santana-Vega, *The Impact of the Good Questions Project on Students Understanding of Calculus Concepts* MS Thesis, Cornell University, Ithaca, NY 2004.
- [72] Mark Schlatter, "Writing ConcepTests for a Multivariable Calculus Course," *PRIMUS* 12 (2002) 305–314.
- [73] Daniel L. Schwartz and John D. Bransford, "A Time for Telling," *Cognition & Instruction*, 16 (1998) 475–522.
- [74] Vicki Simpson and Martin Oliver, "Electronic Voting Systems for Lectures Then and Now: A Comparison of Research and Practice," *Australasian Journal of Education Technology*, 23 (2007) 187–208.
- [75] Richard Skemp, "Relational Understanding and Instrumental Understanding," *Mathematics Teaching*, 77 (1976) 44–49.
- [76] Don Small, "An urgent call to improve traditional college algebra programs," *MAA FOCUS*, May/June, 2002.
- [77] M. K. Smith, W. B. Wood, W. K. Adams, C. Wiemen, J. K. Knight, N. Guild, and T. T. Su, "Why Peer Discussion Improves Student Performance on In-Class Concept Questions." *Science*, 323 (2009) 122–124.
- [78] G.T. Springer and Thomas Dick, "Making the right (discourse) moves: facilitating discussion in the Mathematics Classroom," *Mathematics Teacher* 100 (2) (2006) 105–109.
- [79] Marilla Svinicki, *Learning and Motivation in the Postsecondary Classroom*, Anker Publishing Company, Inc., Bolton, MA, p. 120, 2004.
- [80] Maria Terrell, "Asking good questions in the mathematics classroom," *Mathematics and Education Reform Forum Newsletter*, 15 (2003) 3–5.
- [81] April Trees and Michele Jackson, "The learning environment in clicker classrooms: student processes of learning and involvement in large university-level courses using student response systems," *Learning, Media, and Technology*, 32 (2007) 21–40.
- [82] U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. "NAEP Questions," nces.ed.gov/nationsreportcard/itmrls/ (accessed September 25, 2008).
- [83] L. S. Vygotsky, *Mind in Society: Development of Higher Psychological Processes*, 14th ed., Harvard University Press, Cambridge, MA, 1978.
- [84] Grant Wiggins and Jay McTighe, *Understanding by Design*, 2nd edition, Association for Supervision and Curriculum Development, Alexandria, VA, 2005.

- [85] Leland Wilkinson and the APA Task Force on Statistical Inference, "Statistical methods in psychology journals: Guidelines and explanations," *American Psychologist*, 54 (1999), 594–604.
- [86] William Wood, "Clickers: A Teaching Gimmick that Works," *Developmental Cell*, 7 (2004) 796–798.
- [87] Claudia Zaslavsky, *Africa Counts: Number and Pattern in African Cultures 3rd ed.*, Lawrence Hill Books, Chicago, Illinois, 1999.