Bibliography for Facets of Teacher Content Knowledge

American Association for the Advancement of Science/Project 2061. (1989). *Science for all Americans*. New York, NY: Oxford University Press.

American Association for the Advancement of Science/Project 2061. (2001). *Atlas for science literacy*. Washington, DC: Author.

Askey, R. (Fall, 1999). Knowing and teaching elementary mathematics. *American Educator,* 1-8.

Ball, D. L. (1989). *Teaching mathematics for understanding: What do teachers need to know about the subject matter*. East Lansing, MI: National Center for Research on Teacher Education.

Ball, D. L. (2002). Knowing mathematics for teaching: Relations between research and practice. *Mathematics and Education Reform Newsletter, 14*(3), 1–5.

Ball, D. L. (2003, February). *What mathematical knowledge is needed for teaching mathematics*. Paper presented at the U.S. Department of Education, Secretary's Mathematics Summit, Washington, DC.

Ball, D. L. & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. In J. Boaler (Ed.), *Multiple perspectives on the teaching and learning of mathematics* (pp. 83–104). Westport, CT: Ablex.

Ball, D. L., Lubienski, S. & Mewborn, D. (2001). Research on teaching mathematics: The unsolved problem of teachers' mathematical knowledge. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 433-456). New York: Macmillan.

Brodie, K. (2004). Re-thinking teachers' mathematical knowledge: A focus on thinking practices. *Perspectives in Education, 22*(1), 65–80.

Carlsen, W. S. (1999). Domains of teacher knowledge. In J. Gess-Newsome and N. G. Lederman (Eds.), *Examining pedagogical content knowledge* (pp. 133–144). Kluwer: The Netherlands.

Carpenter, T. P., Fennema, E., Peterson, P. L., Chiang, C., & Loef, M. (1989). Using knowledge of children's mathematical thinking in classroom teaching: An experimental study. *American Educational Research Journal, 26*, 499–532.

Catley, K., Lehrer, R., & Reiser, B. (2004). *Tracing a prospective learning progression for developing understanding of evolution.* Paper commissioned by the National Academies Committee on Test Design for K–12 Science Achievement.

Conference Board of the Mathematical Sciences. (2001) *The mathematical education of teachers*. Providence, RI and Washington, DC: American Mathematical Society and Mathematical Association of America.

Cuoco, A. (2001). Mathematics for teaching. *Notices of the American Mathematical Society, 48*(2), 168–174.

Cuoco, A. (2003). *Mathematics for teaching: Lessons learned on the job and suggestions for mathematics programs for teachers.* Presentation by the Center for Mathematics Education, Education Development Center, Boston, MA.

Ferrini-Mundy, J., Floden, R., McCrory, R., Burrill, G., & Sandow, D. (2005). *Knowledge for teaching school algebra: Challenges in developing an analytic framework.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec.

Goldberg, F. (2006, March). Physics for Elementary Teachers: PET. Paper presented at the 2006 Physics Teacher Education Coalition Conference, Fayetteville, AR.

Hill, H. C. & Ball, D. L. (2004). Learning mathematics for teaching: Results from California's mathematics professional development institutes. *Journal for Research in Mathematics Education, 35*(5), 330–351.

Kennedy, M. (1997). *Defining optimal knowledge for teaching science and mathematics. Research Monograph 10*. Madison, WI: National Institute for Science Education, University of Wisconsin-Madison.

Lehrer, R. & Schauble, L. (2000). Inventing data structures for representational purposes: Elementary grade students' classification models. *Mathematical Thinking and Learning, 2*(1&2), 51–74.

Ma, L. (1999). *Knowing and teaching elementary mathematics: Teachers' understanding of fundamental mathematics in China and the United States*. Mahwah, NJ: Lawrence Erlbaum Associates.

Magnusson, S., Krajcik, J.S., and Borko, H. (1999). Nature, sources, and development of pedagogical content knowledge for science teaching. In J. Gess-Newsome and N. G. Lederman (Eds.), *Examining pedagogical content knowledge* (pp. 95–132). Kluwer: The Netherlands.

McDermott, L. & the Physics Education Group at the University of Washington. (1996). *Physics by inquiry.* New York: John Wiley & Sons, Inc.

McDermott, L. C., Heron, P. R. L., & Shaffer, P. S. (Summer, 2005). Preparing K–12 teachers to teach physics and physical science. *The American Physical Society Forum on Education newsletter*. Retrieved from http://www.aps.org/units/fed/newsletters/

Michaels, S., Shouse, A.W., & Schweingruber, H.A. (2008). *Ready, set, science! Putting research to work in K-8 science classrooms*. Board on Science Education, Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Reston, VA: Author.

National Science Teachers Association. (2003). *Standards for science teacher preparation* (Rev. ed.). Washington, DC: Author.

National Science Teachers Association. (2004). *Position statement: Science teacher preparation*. Retrieved from the National Science Teachers Association website: http://www.nsta.org/pdfs/PositionStatement_TeacherPrep.pdf

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Education Review*, *15*(2), 4–14.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Education Review, 57*(1), 1–22.

Tracy, C. O. & Walsh, K. (2004, Spring). Necessary and insufficient: Resisting a full measure of teacher quality. *NCTQ Reports*.

Usiskin, Z. (2001). Teachers' mathematics: A collection of content deserving to be a field. 16th Annual University of Chicago School Mathematics Project Secondary Conference, Chicago, IL. UCSMP Newsletter.

Wu, H. (1997). On the education of mathematics teachers. Retrieved February 21, 2006, from <http://math.berkeley.edu/~wu/teacher-education.pdf>.

Wu, H. (1999). Preservice professional development of mathematics teachers. Retrieved February 21, 2006, from http://www.math.berkeley.edu/_wu/