

Jon F. Hasenbank

(revised 26-Nov-08)

Position:

Assistant Professor of Mathematics Education

Mathematics Department

University of Wisconsin – La Crosse

August 2006 – Present

Education:

Doctor of Philosophy in Mathematics with Mathematics Education Specialization

Montana State University – Bozeman, May 2006

Dissertation Title: The Effects of a Framework for Procedural Understanding on College Algebra Students' Procedural Skill and Understanding.

This study examined the impact of teaching for understanding on college algebra students' procedural understanding and skill. Six college algebra instructors were matched according to teaching experience. Data consisted of classroom observations, homework samples, common hour exams, procedural understanding assessments, and interviews with treatment instructors. Treatment students scored significantly higher than control group students on procedural understanding without declines in procedural skill.

Master of Science in Mathematics

Montana State University – Bozeman, May 2003

GK-12 Graduate Fellow, National Science Foundation K-12 Outreach Program

Michigan Technological University, Houghton, September 2000 – May 2001

Bachelor of Science in Mathematics, emphasis in Secondary Education

Michigan Technological University, Houghton, May 2000

Courses Taught:

Mathematics for Elementary Teachers I and II

Geometry for Elementary Teachers

Introductory Statistics

Calculus and Analytic Geometry I, II, and III

Procedural Understanding in Algebra (Mth595)

The Language of Mathematics

College Algebra

Grants:

- 2008-2009. Hasenbank, J. F. (Co-Principal), Kosiak, J. J. (Co-Principal), *Implementing a Framework for Understanding Algebra*, UW-La Crosse Faculty Development SoTL Grant, \$6,000.00.
- 2008-2009. Kinne, L. (Director), Hodgson, T. (Supporting), Rowley, E. (Supporting), Eisenhart, S. (Supporting), Soled, S. (Supporting), Lorentz, C. (Contractual), Smith, V. (Contractual), Eckler, J. (Contractual), Hasenbank, J.F. (Evaluator). Improving Educator Quality (IEQ) grant: E^2 : *Enlivening and Energizing EPAS Professional Development*, Northern Kentucky University.
- 2008-2009. Thompson, M., (Director), et al., and Hasenbank, J. F. (Statistical consultant). Project supported by NSF Math/Science Partnership grant: *Indiana Mathematics Initiative*, Indiana University.
- 2008-2010 (Submitted, not funded). Kosiak, J. J. (Principal), Tyser, K. (Co-Principal), Gerber, D. T. (Co-Principal), Brunsell, E. S., Shaw, T. (Co-Principal), Hasenbank, J. F. (Supporting), Kelly, S. E. (Supporting), Grunwald, S. K. (Supporting), *Partnering with Community Resources to Improve Math and Science in Western Wisconsin*, National Science Foundation MSP-START Grant, \$271,296.
- 2008-2011 (Submitted, not funded). Hasenbank, J. F. (Project Director), Kosiak, J. (Co-Director). *Mentoring and Action Research for Improving Understanding in Mathematics (MARIUM)*. Elementary and Secondary Education Act (ESEA) Title II Higher Education Professional Development Program – Wisconsin Improving Teacher Quality (WITQ). \$200,125. UW-La Crosse.
- 2007-2008. Kosiak, Jennifer J. (Project Director), Hasenbank, Jon F (Supporting), *Wisconsin PREP Mathematics: PReparing Educators for Praxis II*. UW System Grant, \$19,244. (May 30, 2007 - September 2008).
- 2007-2008. Hasenbank, J. F. (Project Director), Kosiak, J. (Co-Director). *Professional Development Partnership for Improving Understanding in Algebra*. Elementary and Secondary Education Act (ESEA) Title II Higher Education Professional Development Program – Wisconsin Improving Teacher Quality (WITQ) #07-0711. \$64,898. UW-La Crosse. (May 2007 – July 2008)

K-12 and Other Teaching Experience:

- 2008 (October). STEM Saturdays Workshop: “Where on Earth?” (grades 4-8).
- 2008 (July). Young Scholars Workshop (5 days): “Experimenting with Mathematics” (grades 5-8).
- 2008 (June). Girls in Science Workshop: “Candy Meteors and Other Sweet Math” (grades 6-8).
- 2007 (June). Girls in Science Workshop: “Candy Meteors and Other Sweet Math” (grades 6-8).
- 2005 (January – April). Belgrade High School, MT. Two periods of 9th grade Algebra.
- 2004 – 2005. GRE Prep Course – Next Step Test Prep, Bozeman, MT.
- 2001 (May – June). Jeffers High School, Painesdale, MI. Substitute teacher for grades 7, 8 and 9.
- 2001 (February – April). Family Math Night presenter for Grades 2-4.
- 2000 (June – July). TRIO Upward Bound Summer Program Instructor. Hancock, MI.
- 1998 – 2001. TRIO Upward Bound after-school high school mathematics tutor. Hancock, MI.

Professional Development and K-12 Outreach:

- 2008 (March). “Implementing an Understanding Curriculum (part II).” Professional development follow-up workshop for teacher-participants of WITQ grant #07-0711.

- 2007 – 2008. Classroom observations in grade 8-12 classrooms in western and central Wisconsin (27 hours of classroom time). Funded by WITQ Grant #07-0711.
- 2007 (October). “Implementing an Understanding Curriculum (part I).” Professional development follow-up workshop for teacher-participants of WITQ grant #07-0711.
- 2007 (August). “Improving Understanding in Algebra.” Five-day professional development workshop for high school teachers. Funded by WITQ grant #07-0711.
- 2007 (August). Standards-based Instruction for Special Needs and Gifted Students. Onalaska High School, Onalaska, WI.
- 2004 – 2005. *Six Through Eight Mathematics Project*. External evaluation assistant. Montana State University, Bozeman, MT.
- 2002 – 2003. Grades 7-12 Outreach Assistant – Big Sky Institute, Bozeman, MT.
- 2002 (June). Grades 7-12 Workshop Co-Developer / Facilitator – Teachers Integrating Mathematics and Environmental Science (TIMES). Big Sky Institute, Bozeman, MT.
- 2000 (December). Guest speaker, Jeffers High School, Painesdale, MI. “A Career in Math: It Means More Than Just Teaching.”

Undergraduate Research:

2008. Mentor for one pre-service mathematics teacher’s work as a Dean’s Distinguished Undergraduate Research Fellow: “Assessing Growth in Procedural Understanding in 8-12 Mathematics.”
2008. Mentor for three undergraduate students working to develop flash-based digital learning objects for the PRAXIS-WI project (Bob Hoar, PI).
2007. Mentor for four undergraduate students working to develop flash-based digital learning objects for the PRAXIS-WI project (Bob Hoar, PI).

Refereed Publications:

2008. Hasenbank, J. F., Kosiak, J. J. “The Implementation of a Framework for Procedural Understanding in 7-12 Mathematics.” *Wisconsin Teacher of Mathematics*, 58(2), 24-28.
2006. Hasenbank, J. F. *The Effects of a Framework for Procedural Understanding on College Algebra Students’ Procedural Skill and Understanding*. Unpublished Doctoral Dissertation. Montana State University, Bozeman, MT.
2005. Hasenbank, J. F. “Multivariate Calculus Student Perceptions: Homework, Quizzes, and Motivation.” *The Researcher*, Northern Rocky Mountain Educational Research Association (NRMERA).

Papers Published in Conference Proceedings:

2008. Hasenbank, J. F., Kosiak, J. “A Digital Observation Instrument for Quantifying Educator Effectiveness.” *Wisconsin Research Seminar on Improving Educator Quality*, Wisconsin Dells, WI.
2007. Hasenbank, J. F., Hodgson, T. “A Framework for Developing Algebraic Understanding & Procedural Skill: An Initial Assessment.” *Tenth Conference on Research in Undergraduate Mathematics Education*, by the Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME). San Diego, CA.

Works In Progress:

- 2007 (submitted, under revision). Hodgson, T., Hasenbank, J. F., Burke, M. "Building Competence by Building Connections: A Framework for the Teaching and Learning of Algebra." *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*.
- Hasenbank, J. F., Kosiak, J., Hodgson, T. (in progress). "Teaching for Understanding in Algebra: Measuring the Impact." *Educational Studies in Mathematics*.

Conference Presentations:

2008. Hasenbank, J. F., Kosiak, J. J., Belter, A. "The Impact for Teaching for Understanding Experiment in 8 – 12th Grade mathematics." *MathFest 2008*, Mathematical Association of America, Madison, WI.
2008. Hasenbank, J. F., Kosiak, J. J., and nine 8-12 teachers (three sessions). "Teaching Math for Understanding - Our Shared Experience." *Wisconsin Mathematics Council's Annual Meeting*, Green Lake, WI.
2008. Chaouki, R., Hasenbank, J. F. "A Deeper Understanding of Algebra / Math." *Western Wisconsin Education Conference*, La Crosse, WI.
2007. Hasenbank, J. F. Procedural Understanding in Mathematics: A Framework for Building Connections. *Wisconsin Mathematics Council's Annual Meeting*, Green Lake, WI.
2007. Hoar, R., Kosiak, J., Ledocq, R., Hasenbank, J. F., Ernie, K., Hofacker, E., Serros, S. "The PRAXIS WI Project." *75th Annual State Meeting of the Mathematical Association of America*, Eau Claire, WI.
2005. Hasenbank, J. F. "A vision of a Three-Dimensional Re-Conceptualization of Mathematical Knowledge." Poster presentation, *Annual Meeting of the International Group for the Psychology of Mathematics Education*, North American Chapter (PME-NA). Roanoke, VA.
2004. Hodgson, T. R., Burke, M. J., Hasenbank, J. F. "Striking a Balance Between Concepts and Procedures." *Presentation at the Annual Meeting of the Montana Education Association / Montana Federation of Teachers (MEA/MFT)*. Helena, MT.
2004. Hasenbank, J. F. "Homework, Quizzes, and Student Motivation." *Presentation at the 22nd Annual Conference of the Northern Rocky Mountain Educational Research Association (NRMERA)*. Custer, SD.
2003. Simonsen, L., Kosiak, J., Hasenbank, J. F. "Integrating Mathematics and Environmental Science in Yellowstone." Workshop session, *Annual Meeting of the National Council of Teachers of Mathematics (NCTM)*. San Antonio, TX.
2002. Simonsen, L., Kosiak, J., Hasenbank, J. F. "Integrating Mathematics and Environmental Science in Yellowstone." *Workshop session at the Annual Meeting of the Montana Education Association / Montana Federation of Teachers (MEA/MFT)*. Missoula, MT.

Other Presentations:

2008. Hasenbank, J. F., Kosiak, J. "A Collection of SMART and Engaging Classroom Activities." *Seminars on Teaching Mathematics*, Mathematics Department, UW-La Crosse.
2008. Belter, A., Hasenbank, J. F. "A Discussion on Teaching for Understanding." *Seminars on Teaching Mathematics*, Mathematics Department, UW-La Crosse.

2006. Hasenbank, J. F. "The Effects of a Framework for Procedural Understanding on College Algebra Students' Procedural Skill and Understanding." Doctoral Defense, Montana State University, Bozeman, MT.
2006. Hasenbank, J. F. "Procedural Understanding and Procedural Skill – Dissertation Research Results." *Mathematics Education Seminar*. Montana State University, Bozeman, MT.
2006. Hasenbank, J. F., Hayes, C. "The Academic Job Search: The Process Explained." *Dynalite Mathematics Seminar*. Montana State University, Bozeman, MT.
2006. Hasenbank, J. F. "Teaching College Math for Understanding (Without Sacrificing Procedural Skill)." *Dynalite Mathematics Seminar*. Montana State University, Bozeman, MT.
2005. Hasenbank, J. F. "Teaching for Procedural Understanding in Algebra." Invited Talk, UW-La Crosse, La Crosse, WI.
2005. Hasenbank, J. F. "The Effects of a Framework for Procedural Understanding on College Algebra Students' Procedural Skill." Dissertation Proposal & Oral Defense. Montana State University, Bozeman, MT.
2005. Hasenbank, J. F. "Reflections on a Teaching Internship." *Mathematics Education Seminar*. Montana State University, Bozeman, MT.
2005. Hasenbank, J. F. "Homework, Quizzes, and Student Motivation." *Dynalite Mathematics Seminar*. Montana State University, Bozeman, MT.
2005. Hasenbank, J. F. "Striving for Procedural Understanding." *Mathematics Education Seminar*. Montana State University, Bozeman, MT.

Professional Service:

2008. Search and Screen Committee, Mathematics Department, UW-La Crosse.
- 2007 – 2008. Mathematics Education (School of Education) Accreditation Report Committee, Member.
- 2007 to present. School of Education Content Liaisons Committee, Member.
- 2007 to present. Wisconsin Math Council (WMC): Membership & Marketing Committee Member and WMC Ambassador.
- 2007 to present. Scholarship & Awards Committee, UW-La Crosse
2007. Hasenbank, J. F., Kosiak, J. Three staff training sessions at the La Crosse Tribune, including: *The Wonders of Statistics*; *Budget, Taxes, and Levies*; and *News and Numbers: Rates, Percents, and Averages*.
2007. Christiansen Scholarship Review Committee Member.
- 2007 (Summer). School of Education Working Group: Conceptual Framework and Standards. UW-La Crosse.
- 2004 – 2005. Graduate Program Committee, Montana State University.
- 2003, 2004. Graduate Student Orientation assistant, Montana State University.
- 2003, 2004. New Graduate Student Teaching Assistant seminar assistant, Montana State University.

Honors and Awards:

2006. College of Science and Health Summer Research Appointment. UW-La Crosse
2005. Outstanding Graduate Student Award Recipient, awarded to two graduate students per year by Montana State University.

2004. Research Enhancement Award Recipient, Montana State University College of Letters and Science.
2003 – 2004. Mentorship Position, awarded by the Computer Science, Engineering, and Mathematical Sciences (CSEMS) scholarship program, Montana State University.
2002 – 2003. CSEMS Scholar and Intern, Montana State University.
2001. Graduate Scholarship Recipient, Department of Mathematical Sciences, Montana State University.

Professional Affiliations:

Wisconsin Mathematics Council (WMC, 2007 – present)

National Council of Teachers of Mathematics (2001 – present).

Special Interest Group on Research in Undergraduate Education (SIG-RUME) of the Mathematical Association of America (MAA, 2007 – present).

MAA-Project NExT – Wisconsin (2006 – present).

Psychology of Mathematics Education, North American Chapter (PME-NA).

Northern Rocky Mountain Educational Research Association (NRMERA).