

Anthony Dane Rickard

Education

1993	Ph.D.	Michigan State University. Major: Curriculum, Teaching, and Educational Policy: Disciplinary Knowledge and Mathematics Education. Minor: Teacher Preparation and Staff Development.
1989	M.A.T.	University of Alaska Fairbanks. Major: Mathematics. Cognate: Education.
1987	B.S.	University of Alaska Fairbanks. Major: Mathematics. Secondary Teaching Certification (gr. 7-12) in Mathematics. Graduated with honors.

Professional Experience

Professional Positions

2003 – Present	Associate Professor of Mathematics Education (tenure track), Dept. of Mathematical Sciences and School of Education, University of Alaska Fairbanks. Courses taught include Mathematics for Elementary Teachers (two semester sequence), Elementary Mathematics Methods, Precalculus, and supervision of graduate students in the School of Education.
1999 – 2003	Associate Professor of Education (with tenure), Dept. of Education, Alma College. Courses taught include Principles of Secondary Education, Introduction to Secondary Education, Elementary Mathematics Methods, and supervision of elementary and secondary student teachers.
1993 - 1999	Assistant Professor of Education (tenure track), Dept. of Education, Alma College.

Research

1996 – Present	Investigation of teachers' implementation of the Connected Mathematics Project (CMP) curriculum and teaching and learning problem solving.
2000 - 2003	Synthesis of research study on implementation of the CMP curriculum.
1993 - 1996	Curriculum Development Consultant for the Connected Mathematics Project, Michigan State University.
1991 - 1993	Research Assistant for the Connected Mathematics Project, Michigan State University.
1991 - 1993	Doctoral dissertation research study: <i>Teachers' Use of a Problem-Solving Oriented Sixth-Grade Mathematics Unit: Two Case Studies</i> , Michigan

State University. Co-directed by Deborah Loewenberg Ball and Sandra K. Wilcox.

1990 Research Assistant for the National Center for Research on Teacher Education, Michigan State University.

Service

Professional Service

2003 – Present Mathematics education in-service presenter, various public school districts in Alaska.

1999 – 2001 Member, Michigan Department of Education Periodic Review Committee for Mathematics (appointed by Michigan State Board of Education).

1999 – 2000 Member, Mathematics Content Advisory Committee for the Michigan Test for Teacher Certification in mathematics (elementary and secondary).

1998 – 2000 Member, advisory group to the Michigan Department of Education to review and revise the Michigan State Board of Education Periodic Review/Periodic Evaluation process.

1990 - 1993 Coordinator: C.W. Otto Professional Development School Mathematics Inquiry Project, Michigan Partnership for New Education.

1990 - 91 Charlevoix Mathematics/Science Education Project, Michigan State University and Charlevoix School District.

Institutional Service

2003 – Present Appointed member, Student Support Services Advisory Board, University of Alaska Fairbanks.

2003 – Present Graduate degree candidate advisor and committee chair (School of Education) and undergraduate advisor for secondary mathematics education students (Department of Mathematical Sciences), University of Alaska Fairbanks.

1993 – 2003 Academic advisor, Alma College.

2001 Chair, faculty search committee for one full-time tenure-track position in Education.

1993 – 2000 Ex-Officio member of the Teacher Education Committee, Alma College.

1996 – 2000 Member, faculty search committees, Alma College. Member of search committees for full-time tenure-track faculty positions in Psychology, Instructional Technology, and Education (two positions).

1994 – 1997 Elected member, President's Advisory Council, Alma College.

1994 – 1997 Appointed member, Diversity Enhancement Team, Alma College.

1991 – 1992 Coordinator for classroom field placements at C.W. Otto Middle School, Lansing, Michigan, for the Multiple Perspectives Teacher Education Program, Michigan State University.

Community Service

2003 – Present Elected member, Board of Directors and Treasurer of the Interior AIDS Association (IAA), Fairbanks, Alaska.

1999 – 2003 Member, Lansing Association for Human Rights (LAHR), Lansing, Michigan.

Administration and Leadership

2000 – 2003 Chairperson, Education Department, Alma College. Responsibilities include providing overall leadership and coordination of the Education Department and the Teacher Education Program (e.g., budget, course schedule, evaluation and supervision of all department faculty and staff, program evaluation and development). The Teacher Education Program enrolls approximately 400 students.

2000 – 2003 Chairperson, Teacher Education Committee (TEC), Alma College. The TEC consists of elected faculty and appointed administrators from across the College. The TEC develops, reviews, and makes recommendations on policies affecting the Teacher Education Program (TEP), including evaluation of students in the TEP.

2001 – 2003 Elected member, Faculty Personnel Committee (FPC). FPC reviews and evaluates all full-time faculty for tenure, promotion, sabbaticals, and post-tenure review. FPC develops and reviews policies affecting faculty members.

2000 – 2003 Institutional Title II Coordinator, Alma College.

2000 – 2003 Coordinator for Michigan State Board of Education Periodic Review/Periodic Evaluation, Alma College.

1993 – 2000 Director of Secondary Education, Alma College. Responsibilities include coadvising approximately 200 students in the Secondary Education Program, arranging secondary student teaching placements with approximately 25 public school districts, coordinating the Secondary Education Program.

Additional Professional Experience in Teaching and Teacher Education

- 1989 – 1993 Field Instructor and Program Advisor, Multiple Perspectives Teacher Education Program, Michigan State University.
- 1990 - 1993 Middle school mathematics instruction, Michigan Partnership for New Education and Lansing Public Schools, Lansing, Michigan.
- Fall, 1989 Teaching Assistant for College Algebra, Michigan State University.
- 1987 - 89 Teaching Assistant for Mathematics and Mathematics Methods for Elementary School Teachers, University of Alaska at Fairbanks.
- Spring, 1987 Secondary mathematics instruction, Kodiak High School, Kodiak, Alaska.

Selected Presentations

- Rickard, A. (1988). *The Spring 1988 math anxiety clinic*. Paper presented at the Meeting of the American Association for the Advancement of Science, Arctic Division, Fairbanks, Alaska.
- Burgis, K., Rickard, A., Theule-Lubienski, S., and Eshelman, A. (February, 1993). *What is the Connected Mathematics Project?* Invited presentation to the Michigan Council of Teachers of Mathematics, Region III Conference, Grand Rapids, MI.
- Rickard, A. (July, 1993). *Covering and surrounding*. Curriculum unit presented at the Connected Mathematics Project 1993 Summer Institute, East Lansing, MI.
- Rickard, A. (August, 1993). *Problem-centered mathematics teaching for middle school: Perimeter, area, surface area, and volume*. Invited presentation, Central Michigan University, Mt. Pleasant, MI.
- Rickard, A. (November, 1993). *The Connected Mathematics Project*. Invited Presentation, Detroit Area Council of Teacher of Mathematics, Fall Conference, Canton, MI.
- Rickard, A. (February, 1994). *Spatial visualization*. Connected Mathematics Project inservice, East Lansing, MI.
- Rickard, A. (October, 1994). *Spatial visualization: Representations and problem solving*. Invited presentation, Detroit Area Council of Teachers of Mathematics, Fall Conference, Canton, MI.
- Rickard, A. (November, 1995). *Slides, flips, and turns! Transformational geometry*. Invited presentation, Detroit Area Council of Teachers of Mathematics, Fall Conference, Canton, MI.
- Rickard, A. (March, 1996). *Problem solving and mathematical connections: Unpacking a teacher's use of a problem-centered mathematics unit*. Invited presentation, Department of Mathematics and Statistics, Western Michigan University, Kalamazoo, MI.
- Rickard, A. (October, 1996). *Covering and surrounding*. Invited presentation, Detroit Area Council of Teachers of Mathematics, Fall Conference, Canton, MI.

- Rickard, A. (October, 1997). *Overview of the Connected Mathematics Project*. Invited presentation, Detroit Area Council of Teachers of Mathematics, Fall Conference, Canton, MI.
- Rickard, A. (February, 2000). *Overview of the Connected Mathematics Project*. Invited presentation, Saginaw Public Schools, Saginaw, MI.
- Rickard, A. (March, 2000). *Computation and basic skills in the Connected Mathematics Project*. Invited presentation, Saginaw Public Schools, Saginaw, MI.
- Rickard, A. with Findley, N., Navarro, J., Pattison, D., Root, S., Seals, M. (February, 2003). *Embedded service-learning: One approach for implementation in a pre-service education program*. Invited presentation, Michigan Campus Compact 2003 Institute on Service Learning, Central Michigan University, Mt. Pleasant, MI.
- Rickard, A. (September, 2003). *Problem solving in middle school mathematics revisited: Reform, roadblocks, and resources*. Invited presentation, Fairbanks North Star Borough School District 2003 Mathematics Summit, Fairbanks, Alaska.
- Rickard, A. (October, 2003). *K-8 Alaska math standards and teaching K-8 mathematics*. Invited presentation and professional workshop, Rural Education Preparation Partnerships (REPP), University of Alaska Fairbanks, Fairbanks, Alaska.

Scholarship

Selected Papers and Technical Reports

- Rickard, A. (1991). *Research, teaching practice, and the 91-92 framework* (Mathematics Inquiry Project, Paper #4). East Lansing, MI: The Michigan Partnership for New Education.
- Rickard, A. (1991). *Vygotskian perspectives on assessment: Teaching and learning problem solving and the zone of proximal development* (Mathematics Inquiry Project, Paper #5). East Lansing, MI: The Michigan Partnership for New Education.
- Rickard, A., Williams, D., and Jackson, B. (1992). *C.W. Otto Middle School professional development school: Mathematics - 1991-92 final report*. East Lansing, MI: Michigan Partnership for New Education.
- Rickard, A. (1996). *Summary of the Michigan Mathematics Educators' Conference*. Report for the Michigan Statewide Systemic Initiative, Michigan Department of Education, Lansing, MI.
- Rickard, A. (1997). *Teaching problem solving in middle school mathematics: A case study of changing beliefs and practice*. Unpublished manuscript, Department of Education, Alma College, Alma, MI.
- Rickard, A. (1997). *Correlation of the Connected Mathematics Project curriculum with the Proficiencies for Academic Excellence in Mathematics (Grades 6-8) of the St. Vrain Valley School District*. Report for the St. Vrain Valley School District, Longmont, CO.
- Rickard, A. (1999). *Connecting and applying three representations for teaching perimeter and area*. Unpublished manuscript, Department of Education, Alma College, Alma, MI.

- Rickard, A. (contributor) et al. (1999). *Institutional Report, March 1999: Report to the Michigan State Board of Education Periodic Review/Program Evaluation*. Department of Education, Alma College, Alma, MI.
- Rickard, A. (2000). *Teacher questionnaire: Pilot study draft questionnaire for study of the implementation of the Connected Mathematics Project*. Connected Mathematics Project, Department of Mathematics, Michigan State University, East Lansing, MI.
- Rickard, A. (contributor) et al. (2000). *First annual report: Response to the March 1999 Michigan State Board of Education Periodic Review/Periodic Evaluation*. Department of Education, Alma College, Alma, MI.
- Rickard, A. (contributor) et al. (2001). *Second annual report: Updated response to the March 1999 Michigan State Board of Education Periodic Review/Periodic Evaluation*. Department of Education, Alma College, Alma, MI.
- Rickard, A. (2001). *Alma College Title II Report*. Department of Education, Alma College, Alma, MI.
- Rickard, A. (2002). *Alma College Title II Report*. Department of Education, Alma College, Alma, MI.
- Rickard, A. (2003). *Alma College Title II Report*. Department of Education, Alma College, Alma, MI.
- Reyes, M.E., Weise, J.W., Rickard, T., and Schwafel, B. (March, 2004). *Technology in the frozen north: Chronicles from the University of Alaska Fairbanks*. Paper presented at the International Conference of the Society for Information Technology in Teacher Education (SITE), Atlanta, GA.

Publications

- Rickard, A. (1993). Inquiry into problem solving in middle school mathematics. *Mathematics in Michigan*, 33 (4), pp. 5-11.
- Rickard, A. (1995). Problem solving and computation in school mathematics: Tensions between reforms and practice. *National Forum of Applied Educational Research Journal*, 8 (2), pp. 41-51.
- Rickard, A. (1995). Teaching mathematics for understanding: Unpacking two mathematical representations. *Mathematics in Michigan*, 35 (4), pp. 6-9.
- Rickard, A. (1995). Teaching with problem-oriented curricula: A case study of middle school mathematics instruction. *Journal of Experimental Education*, 64 (1), pp. 5-26.
- Rickard, A. (1996). Connections and confusion: Teaching perimeter and area with a problem-solving oriented unit. *Journal of Mathematical Behavior*, 15 (3), pp. 303-327.
- Rickard, A. (1998). Conceptual and procedural understanding in middle school mathematics. In L. Leutinger (Ed.), *Mathematics in the Middle* (pp. 25-29). Reston, VA: National Council of Teachers of Mathematics.

Rickard, A. (with Grant, Y. and Ludema, H.). (2001). *Connected Mathematics Project: Research and evaluation summary*. Columbus, OH: Prentice Hall.

Rickard, A. (contributing writer and editor) et al. (2002). *MiClimb mathematics: A clarification of the mathematics benchmarks* (published in CD format). Lansing, MI: Macomb Intermediate School District, Michigan Council of Teachers of Mathematics, Michigan Department of Education.

Rickard, A. (with Rivette, K., Grant, Y. and Ludema, H.). (2003). *Connected Mathematics Project: Research and evaluation summary 2003 edition*. Upper Saddle River, NJ: Pearson Prentice Hall.

Connected Mathematics Project (CMP) Curriculum

Contributor to the development of student and teacher editions of CMP units (e.g., *Covering and Surrounding, Filling and Wrapping, Ruins of Montarek*) and materials that support the implementation of the CMP curriculum (e.g., *Getting to Know CMP*). CMP is a complete middle school mathematics curriculum consisting of eight units at each grade level 6-8. CMP is published by Prentice Hall and is aligned with the National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*.

Externally Funded Projects

Preparing Tomorrow's Teachers to use Technology (PT3); Co-Principal Investigators Dr. Maria Reyes and Dr. John Weise. Funded by the U.S. Dept. of Education for \$1.374 million 2003-06, ED Grant Number P342A030147, funded 10/01/2003 through 09/30/2006; collaborator with this project as mathematics education specialist and consultant, working with K-8 students and teachers from rural Alaskan school districts.

Professional Memberships

Alaska Council of Teachers of Mathematics (ACTM)

American Association of Colleges for Teacher Education (AACTE)

National Council of Teachers of Mathematics (NCTM)

Awards and Recognitions

Certificate of Appreciation, University of Alaska Fairbanks Women's Basketball Team, 2004.

Certificate of Appreciation, National Council of Teachers of Mathematics, 1998.

Recognition award for contributions to the Multiple Perspectives Teacher Education Program, Michigan State University, 1993.

Elected member of Phi Kappa Phi, University of Alaska at Fairbanks, 1986.