

George J. Roy

University of South Florida St. Petersburg
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EDUCATION

Doctor of Philosophy in Education, December 2008

Mathematics Education Track

University of Central Florida, Orlando, Florida

Dissertation title: Prospective teachers' development of whole number concepts and operations during a classroom teaching experiment

Master of Education, May 2002

Mathematics Education Track

Lockheed Martin/UCF Academy

University of Central Florida, Orlando, Florida

Thesis title: The effects of thematic units on 8th grade students' attitudes and achievement in an urban school

Bachelor of Arts, May 1993

Major: Mathematics

Minor: Computer Science

Rollins College, Winter Park, Florida

PROFESSIONAL EXPERIENCE

Assistant Professor of Mathematics Education, August 2009 – Present

College of Education

University of South Florida St. Petersburg, St. Petersburg, Florida

Courses taught:

- Teaching Elementary School Mathematics II, K – 6 (MAE 4326)
- Algebraic Thinking for the Elementary Teacher (MAE 6315)
- Mathematics for All Students (EDG 4909)
- Teaching Pre-Secondary School Mathematics (MAE 6356)
- Teaching Technology-Enhanced Algebra in the Middle Grades (EDG 6931)
- Teaching Technology-Enhanced Geometry in the Middle Grades (EDG 6931)
- Problem Solving for Elementary Teachers (MAE 6334)
- Teaching Technology-Enhanced Data Analysis in the Middle Grades (EDG 6931)

Instructor, August 2007 – June 2009

Department of Teaching and Learning Principles

College of Education

University of Central Florida, Orlando, Florida

Courses taught:

- Teaching Science in the Elementary School (SCE 3310)
- How Children Learn Mathematics (MAE 4326)

Content Coder for SMU Mathematics Project, August 2008 – December 2008

Project Consultant

- Coded international and state mathematics standards as part of Bill and Melinda Gates Foundation funded project, *A COMPARATIVE ANALYSIS OF THE AMERICAN DIPLOMA PROJECT (ADP) BENCHMARKS AND THE TRENDS IN MATHEMATICS AND SCIENCE STUDY (TIMSS) FRAMEWORK*.

Graduate Teaching Assistant, August 2004 – August 2007

Department of Teaching and Learning Principles

College of Education

University of Central Florida, Orlando, Florida

Courses taught:

- Instructional Mathematics for Elementary School (MAE 2801)
- How Children Learn Mathematics (MAE 4326)
- Seminar in Teaching Mathematics and Science (IDS 6933)

Internship Coordinator and Mentor, August 2004 – August 2007

Transition to Mathematics and Science Teaching Program (T-MAST)

University of Central Florida, Orlando, Florida

- Supervised and coordinated graduate students during their first year of teaching at K-12 public schools located in the Orange County School District

Middle School Curriculum Resource Teacher, January 2004 – May 2004

Westridge Middle School

Orange County Public Schools, Orlando, Florida

- Coordinated the school wide implementation of a computer program designed to assist students in learning mathematics and language arts at their individual achievement level
- Created databases to analyze student standardized test scores

Middle School Mathematics Teacher, August 1997 – May 2004

Westridge Middle School

Orange County Public Schools, Orlando, Florida

Courses taught:

- Middle Grades Mathematics, 6-8
- Algebra I, Honors

Summer School Mathematics Teacher, August 2000 - July 2002

Westridge Middle School, Oakridge High School

Orange County Public Schools, Orlando, Florida

- Instructed middle school students, participating in an after school and summer academic program, designed to prepare them for graduation and college enrollment
- Funded by the U.S. Department of Education Federal Grant, *Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)*

Mentor for New Teachers, August 2002 – May 2004

Alternative Certification Program

Orange County Public Schools, Orlando, Florida

- Mentored first year mathematics teachers that possessed college degrees outside of the field of education
- Assisted these teachers in obtaining Florida Teacher Certification

CERTIFICATION

National Board for Professional Teaching Standards

Mathematics/Early Adolescence

Florida Teaching Certification

Middle Grades Mathematics, 5-9

HONORS AND AWARDS

Chancellor's Award for Excellence in Teaching, 2010

College of Education, University of South Florida St. Petersburg, St. Petersburg, Florida

STaR Fellow, 2010

Supporting Research, Teaching, and Service in Mathematics Education (STaR): A National Science Foundation Grant awarded to University of Missouri, Columbia, Missouri

PTMT Cohort Member, 2010; 2011

Technology Using Mathematics Teacher Educators, Preparing to Teach Mathematics with Technology (PTMT): An Integrated Approach Project. A National Science Foundation Grant awarded to North Carolina State University, Raleigh, North Carolina

Harcourt Mathematics Fellow, 2007-2008

College of Education, University of Central Florida, Orlando, Florida

Excellence in Graduate Student Teaching Award, 2005-2006

College of Education, University of Central Florida, Orlando, Florida

Dean's Fellowship Award, 2004-2005; 2005-2006; 2006-2007
College of Education, University of Central Florida, Orlando, Florida

Excellence by a Graduate Teaching Assistant Award, 2004-2005
College of Education, University of Central Florida, Orlando, Florida

NSF-RET Fellow, 2004
National Science Foundation, Research Experience for Teachers through Bridging Engineering and Education through Florida, University of Central Florida, Orlando, Florida

Nominee: Orange County Teacher of the Year, 2002
Westridge Middle School
Orange County Public Schools, Orlando, Florida

Lockheed Martin Scholar, 2000- 2002
College of Education, University of Central Florida, Orlando, Florida

PUBLICATIONS

Roy, G. J. (in review). Prospective teachers' development of addition and subtraction strategies. *Educational Studies in Mathematics*.

Roy, G. J., Vanover, C., Fueyo, V., & Vahey, P. (in review). Providing professional support to teachers that are implementing a middle school mathematics digital unit. *Contemporary Issues in Technology and Teacher Education*.

Thanheiser, E., & **Roy, G. J.** (2011). *Whole number and operation content knowledge of preservice K-8 mathematics teachers: A synthesis of research*.

Dixon, J. K., Andreasen, J. B., **Roy, G.**, Wheeldon, D. A., & Tobias, J. M. (2011). Development of Prospective Teachers' Productive Disposition Related to Fraction Operations. *Motivation and Disposition: Pathways to Learning Mathematics NCTM Seventy-third Yearbook (2011)*.

Roy, G. J., & Safi, F. (2008). Investigating whole number development using contextually based problems. *Florida Association of Teacher Educators Journal*, 1(8), 70-81. Retrieved from <http://www.fate1.org/journals/2008/roy.pdf>

Roy, G. (2007). Alternative algorithms for multiplication. *Dimensions in Mathematics*, 27 (1), 24-28.

PRESENTATIONS

- Thanheiser, E., & **Roy, G. J.** (2011, October). *Whole number and operation content knowledge of preservice K-8 mathematics teachers: A synthesis of research*. Research will be presented at the annual conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. Reno, Nevada.
- Roy, G.***, Vanover, C.*, Unal, Z., Fueyo, V., Collier, N., & Vahey, P. (2011, July). Scaling dynamic mathematics reform: Findings from the SunBay pilot study. Two page paper to be presented to the International Conference on Computer Supported Learning. Hong Kong, China.
- Safi, F., & **Roy, G. J.** (2011, April). Exploring areas of triangles: Five students, five perspectives. Workshop to be presented at the annual meeting and exposition of the National Council of Teachers of Mathematics. Indianapolis, Indiana.
- Vanover, C., **Roy, G.**, Unal, Z., Fueyo, V., Holderness, S., Collier, N., & Vahey, P. (2011, February). SunBay data consultation. Juried presentation for the Penn GSE 32nd Annual Ethnography in Education Research Forum. Philadelphia, PA.
- Roy, G. J.**, Vanover, C., Unal, Z., Fueyo, V., Collier, N. D., & Vahey, P. (2011, February). Designing sustainable mathematics reform: Findings from the SunBay pilot study. Research paper presented at the annual conference of Eastern Education Research Association. Sarasota, Florida.
- Roy, G. J.** (2011, January). *Middle school teachers implementing a digital curriculum*. Research poster presented at the Supporting Research, Teaching, and Service in Mathematics Education (STaR) preconference session at the annual conference of the Association of Mathematics Teacher Educators. Irvine, California.
- Roy, G.** (2010, October). *How fast do you run? Using technology to develop algebraic reasoning*. Workshop presented at the annual conference of Florida Council of Teachers of Mathematics. Orlando, Florida.
- Roy, G. J.**, & Safi, F. (2010, April). *Using context to support algebraic reasoning*. Workshop presented at the annual meeting and exposition of the National Council of Teachers of Mathematics. San Diego, California.
- Roy, G. J.**, Tobias, J. M., Safi, F., & Dixon J. K. (2010, February). *Prospective teachers' development of whole number concepts and operations*. Research presented at the annual conference of Association of Mathematics Teacher Educators. Irvine, California.
- Dixon, J. K., Tobias, J. M., & **Roy, G. J.** (2010, February). *Supporting Teachers' Efforts to Establish Productive Social Norms for Learning Mathematics*. Research presented at the annual conference of Association of Mathematics Teacher Educators. Irvine, California.

- Roy, G.** (2009, September). *Preservice teachers' development of whole number concepts*. Research poster presented at the annual conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. Atlanta, Georgia.
- Roy, G., & Safi, F.** (2009, April). *Context based problem solving with children*. Workshop presented at the annual meeting and exposition of the National Council of Teachers of Mathematics. Washington DC.
- Tobias, J. M., **Roy, G., & Safi, F.** (2009, February). *Prospective teachers' development of number and operations*. Research presented at the annual conference of Association of Mathematics Teacher Educators. Orlando, Florida.
- Roy, G.** (2008, November). *Computational Problem Types*. Workshop presented at UCF Mathematics Professional Development with Hank Kepner: Teaching with Depth, Academy for Teaching, Learning, and Leadership, University of Central Florida. Orlando, Florida.
- Roy, G.** (2008, October). *Computations that make sense*. Workshop presented at the annual conference of the Florida Council of Teachers of Mathematics. Jacksonville, Florida.
- Roy, G., & Safi, F.** (2008, September). *Investigating whole number development using contextually based-problems*. Paper presented at the annual conference of Florida Association of Teacher Educators. Orlando, Florida.
- Roy, G.** (2008, August). *Comparing fractions*. Workshop presented at Orange County, FL Professional Development Day. Orlando, Florida.
- Roy, G.** (2008, June). *Preservice teachers' invented whole number strategies*. Research presented at mini-conference of the Florida Association of Mathematics Teacher Educators. Orlando, Florida.
- Safi, F., & **Roy, G.** (2008, April). *Shedding light on uncertainties in understanding whole-number operations*. Research presented at the annual meeting and exposition of the National Council of Teachers of Mathematics. Salt Lake City, Utah.
- Andreasen, J. B., **Roy, G., Safi, F., Tobias, J. M., & Dixon, J. K.** (2008, January). *Prospective teachers' development of mathematical knowledge for teaching related to number and operations*. Research presented at the annual conference of Association of Mathematics Teacher Educators. Tulsa, Oklahoma.
- Roy, G.** (2007, October). *How do you compute? Multiple ways to add, subtract, multiply and divide*. Workshop presented at the annual conference of the Florida Council of Teachers of Mathematics. Orlando, Florida.
- Roy, G., & Safi, F.** (2007, March). *The algebra of number and operation*. Research presented at the annual meeting and exposition of the National Council of Teachers of Mathematics. Atlanta, Georgia.

- Dixon, J. K., Stephan, M., Andresean, J., Wheeldon, D., & **Roy, G.** (2006, April). *Implementing design-based research: Research that changes practice*. Research presented at the annual Research Pre-session of National Council of Teachers of Mathematics. St. Louis, Missouri.
- Roy, G.** (2006, March). *Preservice teachers' understanding of alternative algorithms*. Research presented at the University of Central Florida's Annual Graduate Research Forum. Orlando, Florida.
- Andreasen, J. B., **Roy, G.**, & Dixon, J. K. (2006, January). *Explaining algorithms: What do preservice teachers need to know?* Paper presented at the annual conference of the Association of Mathematics Teacher Educators. Tampa, Florida.
- Roy, G.** (2005, March). *Examining preservice teachers' selection and facility with three models for fraction operations*. Research presented at the University of Central Florida's Annual Graduate Research Forum. Orlando, Florida.
- Dixon, J. K. & **Roy, G.** (2005, January). *Examining preservice teachers' selection of and facility with three models for fraction operations*. Paper presented at the annual conference of the Association of Mathematics Teacher Educators. Dallas, Texas.
- Swan, B. A., & **Roy, G.** (2004, October). *Classroom management 101: Defining acceptable behavior and prevention*. Workshop presented at the Orange County Council of Teachers of Mathematics, annual new teacher meeting. Orlando, Florida.

PROFESSIONAL DEVELOPMENT FACILITATED

SimCalc Next Wave, SunBay Digital Mathematics, Pinellas County (FL) Schools. Fall 2010 – Spring 2011

SimCalc Implementation, SunBay Digital Mathematics, Pinellas County (FL) Schools. Fall 2009 – Spring 2010

Connections to FCAT, SunBay Digital Mathematics, University of South Florida-St. Petersburg. August 2009

Teaching with the Next Generation Sunshine State Standards, Osceola County (FL) Public Schools. Fall 2008

Fractions in the Middle School, Orange County (FL) Public Schools. Fall 2008

Number Proficiency, University of Central Florida. Fall 2006

Math Blast, University of Central Florida. Fall 2006

Proportional Reasoning. Mathematics and Science Professional Development Program (MSPD), University of Central Florida. Summer 2003, Fall 2003, Fall 2004, Fall 2005

Geometry in the City. Mathematics and Science Professional Development Program (MSPD), University of Central Florida. Fall 2003

Integration of Content Areas by using Thematic Units. Westridge Middle School. August 2004

PROFESSIONAL SERVICE

Quality Enhancement Plan (QEP) Committee Member. *The Success Equation*. University of South Florida St. Petersburg, Fall 2010 – Present.

Journal Reviewer of Teaching Children Mathematics, National Council of Teachers of Mathematics (NCTM), Fall 2010 – Present.

Reviewer of Conference Proposals, Fifteenth Annual Conference of the Association of Mathematics Teacher Educators. Summer 2010.

Curriculum and Program Committee Member, College of Education, University of South Florida St. Petersburg. Fall 2009 – Present.

Collaborative Digital Network (CDN) Evaluator. College of Education, University of South Florida St. Petersburg. Fall 2009 – Present.

Assessment Committee Member. College of Education, University of South Florida St. Petersburg. Fall 2009 – Fall 2010.

Master's Thesis Committee Member, Terry Cuffel. *Mathematical Connections in a Third Grade Class*. April 2009.

Local Arrangements Committee Member. Thirteenth Annual Conference of the Association of Mathematics Teacher Educators. February 2009.

Search Committee Member for Assistant Professor of Secondary Mathematics. College of Education, University of Central Florida. Spring 2009.

Search Committee Member for the Department Chair of Teaching and Learning Principles. College of Education, University of Central Florida. Spring 2007.

Vice President, Kappa Delta Pi, Omicron Lambda Chapter
University of Central Florida. January 2005 – August 2006.

Board Member, Orange County Council of Teachers of Mathematics
August 2003- August 2004.

Mathematics Textbook Adoption Committee Member
Orange County Public Schools. August 2003-February 2004.

University of Central Florida Supervising Teacher Senior Level Internship
August 2001, August 2002, August 2004.

MathCounts Club Sponsor
Westridge Middle School, 2000-2004.

PROFESSIONAL AFFILIATIONS

Association of Mathematics Teacher Educators (AMTE)

National Council of Teachers of Mathematics (NCTM)

North American Chapter of the International Group for the Psychology of Mathematics
Education (PME-NA)

Florida Association of Mathematics Teacher Educators (FAMTE)

Florida Council of Teachers of Mathematics (FCTM)

Florida Association of Teacher Educators (FATE)

Kappa Delta Pi (KDP)

Eastern Educational Research Association (EERA)