

## CURRICULUM VITA

**Mary T. McMahon**

Associate Professor of Mathematics

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Education M.S. Mathematics Education - September 1972  
Queens College of the City University of New York  
Flushing, New York

B.A. Mathematics - June, 1969  
St. John's University  
Grand Central and Utopia Parkways  
Jamaica, New York

### Experience Highlights

#### Teaching

1986 North Central College  
to Naperville, Illinois 60540  
present Assoc. Professor of Mathematics – presently teaching Quantitative Reasoning and Techniques in Secondary Education - Mathematics to traditional and non-traditional undergraduates; supervising clinical and student teachers; advising undergraduates. Have previously taught Intermediate Algebra, Finite Mathematics, College Algebra, Trigonometry, Business Calculus and Statistics, , Elementary Mathematics II (elementary education mathematics content course) and a graduate course, Discrete Mathematics for Teachers

2009 Mathematics Education Coordinator  
to  
present

2010 Mathematics Mentor on Line and alumni Coach of New Teachers in High  
to Need Schools at Associated Colleges of Illinois  
2011

2005 Certification Officer for NCC Education Department  
to  
2009

2003 Assessment coordinator for NCC Education Department  
to  
2005

1976 1985 College of DuPage  
to to Glen Ellyn, Illinois 60137  
1977 2013 Part time Mathematics Faculty - taught Introduction to Mathematics, College Algebra, Mathematics for Technical Majors and Business Mathematics. independent learning classes (Subject matter ranges from basic algebra and geometry to college algebra, trigonometry and mathematics for elementary school teachers).

1984 Test Taking Tutors, a college test preparation tutoring business  
to  
present

2003  
to  
present  
Illinois State University  
Bloomington, Illinois  
University Supervisor - observe and evaluate two mathematics student teachers during spring semesters.

1988  
to  
1989  
University of Northern Illinois  
DeKalb, Illinois 60115  
University Supervisor - observed and evaluated seven mathematics student teachers during two spring semesters.

1977 1984 1988  
to to  
1978 1985  
Benedictine University  
Lisle, Illinois 60532  
Part time Mathematics Lecturer - taught College Algebra and Finite Mathematics.

1981  
to  
1983  
Sacred Heart University  
Bridgeport, Connecticut 06606  
Adjunct Instructor - taught "College Algebra" and special classes for mature people entering college.

1980  
to  
1982  
Fairfield University  
Fairfield, Connecticut 06430  
Adjunct instructor - taught Mathematics for Business and Social Science Majors which included some calculus.

1979  
to  
1980  
Marion Heights Academy  
Monroe, Connecticut 06468  
Part time Mathematics Lecturer - taught Mathematical Analysis and Consumer Mathematics to high school seniors.

1975  
to  
1976  
Naperville Community School District 203  
Naperville, Illinois 60540  
Mathematics Substitute Teacher - taught high school mathematics on short term assignments.

1971  
Coppinville Junior High School  
Enterprise School District  
Enterprise, AL.  
Mathematics Chairperson - taught and supervised three teachers in regard to the mathematics curriculum for 350 students. Planned and spent budget of \$750.

1969  
to  
1971  
McArthur High School  
Union Free School District No. 5  
Levittown, New York  
High School Mathematics Teacher - taught algebra, geometry, intermediate algebra and trigonometry to average and slow students.

**Professional Activity**  
- **membership**

National Council of Teachers of Mathematics (NCTM)  
Illinois Council of Teachers of Mathematics (ICTM)  
Metropolitan Mathematics Club (MMC)  
Association of Mathematics Teacher Educators (AMTE)

Illinois Mathematics Teacher Educators (IMTE)  
Former President  
Mathematics Department Heads of the Western Chicago Suburbs (MDHWCS)  
College Representative on the Steering Committee

**- presentations**

- "Classroom Snapshots of Implementing the Standards" at the ICTM Annual Leadership Pre-Conference Meeting (refereed), Oct 18, 2001
- "Interpreting Middle School Students' Proportional Reasoning Strategies: Observations From Preservice Teachers", School Science and Mathematics Association Annual Meeting (refereed), October 23, 2003
- "Getting Acquainted with Middle School Students' Proportional Reasoning Strategies", Metropolitan Mathematics Club Annual Conference, January 31, 2004
- "Lesson study with Pre-Service Teachers", at annual conference of Illinois Council of Teachers of Mathematics (refereed) on October 15, 2004 in Springfield, IL
- "Lesson Study with Pre-Service Teachers" at the 9th Annual National Conference of the Association of Mathematics Teacher Educators (refereed) on January 29, 2005 in Dallas, TX
- "Using Writing in the Mathematics Classroom" to high school math teachers at Jefferson H.S. in Rockford for Project REAL (The Rockford Education Alliance, a grant sponsored program with NIU) on April 15, 2005.
- "Student Teaching: Rite of Passage? Arranged Marriage? Oxymoron???" at the January meeting of the Mathematics Department Heads of the Western Suburbs at Lake Park High School in Roselle, Ill., on Jan. 10, 2006
- "Certification and Endorsement Issues" with Todd Oberg (Illinois College) at the Illinois State Mathematics Association of America Meeting on April 7, 2006.
- "An Introductory Experience with Lesson Study." at the Associated Colleges of Illinois Annual Center Arts and Science Colloquium, in DesPlaines, Il on Sept. 29, 2006.
- "LESSON STUDY: Implementation, Best Practice & Professional Development." at the Associated Colleges of Illinois Annual Retreat (refereed), in Springfield, IL on June 21, 2007.
- "Is there an Arranged Marriage in your Future?" at the Illinois Council of Teachers of Mathematics (refereed), in Peoria, IL on October 19, 2007.
- "Is there an Arranged Marriage in your Future?" at the Illinois Council of Teachers of Mathematics (refereed), in Peoria, IL on October 17, 2008
- "Mathematics: Tied To Your Students' Present and Future" at the Associated Colleges of Illinois Science and Math Learning Collaborative in Naperville, IL on April 25, 2009
- "Mathematics: Tied To Your Students' Present and Future" at the Associated Colleges of Illinois Summer Institute in Joliet, IL on June 19, 2009
- "Introduction to Lesson Study" a workshop to teachers from Oak Park Elementary School in East Aurora on Sept. 26, 2009 for the Associated Colleges of Illinois /Science Math Learning Collaborative.
- "Where's Math?" at the Associated Colleges of Illinois Teacher Induction Academy in Oak Brook, IL on January 29, 2010
- Wisconsin Mathematics Council 42nd Annual Conference, Green Lake, WI, May 7, 2010, An Introduction to Lesson Study? Is it for my school and me? (refereed)

- “College on the MIND?” for parents at Math Night, an event sponsored by the mathematics department at Neuqua Valley High School on Oct. 27, 2010.
- “Welcome to Discrete Mathematics—The Mathematics that You Never Learned in School” to K-12 teachers at the Associated Colleges of Illinois Teacher Induction Academy, held at Dominican University Jan. 28, 2011
- “The Common Core State Standards for Mathematics” to K-12 teachers at the Associated Colleges of Illinois Summer Symposium, held at Illinois Math and Science Academy (IMSA) June 24, 2011 .
- “Teaching Mathematics Using the Common Core Standards: What’s Really Changed?” co- facilitated to the staff at Goldblatt Elementary School, Chicago, Illinois, September 2, 2011.
- “A Reasoning-Based Approach to the Algebra Strand of the Common Core Standards” for K-12 teachers at the Associated Colleges of Illinois Teacher Induction Academy at Concordia University in River Forest on Sept. 23, 2011.
- “College on the MIND?” for parents at Math Night, an event sponsored by the mathematics department at Neuqua Valley High School on Oct. 19, 2011.
- “Discrete Mathematics—The Mathematics that You Never Learned in School” to 6-12 teachers at the Illinois Council of Teachers of Mathematics Annual Meeting in Springfield, IL on Oct. 21, 2011 (refereed)
- Science Math learning Collaborative Network Colloquium, September 29, 2012, one of three local moderators.
- Associated Colleges of Illinois Partnership Meeting, December 7, 2012, “Integrating the Common Core Into Pre-Service Preparation”
- “MATHEMATICAL MODELING: WHAT IS IT? WHY DOES IT MATTER?” to 6-12 teachers at the Associated Colleges of Illinois Teacher Induction Academy on Friday, April 19<sup>th</sup>, 2013 at Dominican University, River Forest, IL
- Girls and Math Workshop for Middle School Girls: 9am-1pm, July 22-26, 2013.
- “Finding Success and Satisfaction in Realizing the Common Core in Mathematics” Single Paper with Multiple Presenters, Association of Teacher Educators 2014 Annual Meeting, St. Louis, Missouri, February 17, 2014
- “Lesson Study: A Mathematics Tool for Teacher Collaboration in the Midst of the Common Core Standards” to K-12 teachers at the Associated Colleges of Illinois Summer Symposium, held at North Central College, June 27, 2014 .
- Girls and Math Workshop for Middle School Girls: 9am-1pm, July 25-29, 2014.
- “From Coloring to Scheduling” for K-12 teachers at the Metropolitan Mathematics Club Annual Conference of Workshops, Stevenson HS, January 24, 2014
- Girls and Math Workshop for Middle School Girls: 9am-1pm, July 24-28, 2015.
- Girls and Math Workshop for Middle School Girls: 9am-1pm, July 11-15, 2016.
- "Coding and CAD in the Classroom: 21st Century Education", Metropolitan Mathematics Club of Chicago Conference Of Workshops, Saturday January 28th, 2017, at Evanston Township High School, in Evanston, IL with Jocelyn Wilcox, Irving Middle School.
- "The New SAT" The 2017 Annual Meeting of the Illinois Section of the Mathematical Association of America, on April 1, 2017, College of Dupage in Glen Ellyn, Illinois. The SAT test from the College Board underwent a number of

significant changes recently (they were put into effect in spring 2016). In this session we will look at the new SAT Math test, its makeup, format, and structure. In this session we will raise some of the math placement issues surrounding use of the new SAT scores and share ideas. Co-presented with Jim Olsen, Western Illinois University.

- Girls and Math Workshop for Middle School Girls: 9am-1pm, July 10-14, 2017.
- Metea Valley SIP Day presentation
- McMahon, M. (2020, April). *What do Fish Tanks, Compatible Groupings, Scheduling, and Coloring have in common?* NCTM Annual National Meeting. Chicago, IL: NCTM. Accepted
- McMahon, M., Mika, E., Loprieno, L., & Kadolph, J. (2021, November). *What do Fish Tanks, Compatible Groupings, Scheduling, and Coloring have in common?* NCTM Virtual Regional Conference, Pre-recorded Presentation, Session Number 1327. Virtual: National Council of Teachers of Mathematics.
  - <https://noctrl.app.box.com/s/iffw6wka7ghixu0nr5q0wique4y6ha8mq>
- McMahon, M. (2022, February). "What do Fish Tanks, Compatible Groupings, Scheduling, and Coloring have in common?" NCTM 2022 New Orleans Regional Conference & Exposition. New Orleans: National Council of Teachers of Mathematics, Accepted

#### **-publications**

- Published paper: Hines, E. & McMahon M. (2005). Interpreting middle school students' proportional reasoning strategies: Observations from preservice teachers. *School Science and Mathematics*, 105(2), 88-100.
- Published in electronic journal: McMahon M. [2006]. An Introductory Experience with Lesson Study. *Success in High Needs Schools, Vol2, Issue 3, 2006*, <http://www.successinhighneedschools.org/journal/issue/2/3?ACISESSID=6e3cb042d2f845b3179d949681a72530>
- Published paper: McMahon M. [2008]. "An Introductory Experience with Lesson Study" in *Illinois Mathematics Teacher*, Spring 2008
- Published paper: Hines, E. & McMahon M. (2008). "Lesson Study with Preservice Teachers" *Mathematics Teacher*.
- Published paper: Ellen Hines, Ed.D., Max McGee, Ph.D., Mary McMahon, Todd Oberg, Ph.D., Julie Tonsing-Meyer, Ed.D., and Jan Fitzsimmons, Ph.D (2013) "Realizing the Common Core: Integrating the Math Common Core Practices and Standards into Instruction", *Success in High-Need Schools Journal Volume 10, #1*

#### **-grants**

##### **Summer Faculty Research Grant – Summer 2005**

Worked on paper entitled "Lesson Study with Preservice Teachers"

##### **Faculty Enhancement Grant and Associated Colleges of Illinois Grant**

- Teacher In-Service for 10 teachers at Cowherd Middle School: July 12-14, 2006 –
  - detailed in published article
- Teacher In-Service for 7 teachers at Cowherd Middle School:

August 23, September 11, 15, 25, October 16, 30 and November 13, 14, 2006 – facilitated a complete cycle of lesson study.

**Sonia Kovalevsky Grant from the Association of Women in Mathematics and National Science Foundation.**

- Co-led a workshop in math activities on deciphering codes, Fibonacci numbers, golden rectangles and tessellations for middle school Junior Scholar girls in April and May 2011.

**FIHE grant**

- Associated Colleges of Illinois Basic Skills Boot Camp Task Force, Summer 2011

**Science Math learning Collaborative Network Grant 2012-13**

- Lead Faculty for the North Central College Regional PLC

**- attendance and participation at the following:**

- Next Generation Personal Finance, virtual, 5.5 hours NGPF provides personal finance curriculum resources for middle and high school teachers, an extensive suite of live and on-demand Teacher PD, and advocacy support by partnering with educators to expand access to personal finance courses, all AT NO COST. Fall 2021 – Ongoing

- Workshop on Undergraduate Teaching with Mathematics and Statistics Action Technologies. The Workshop on Undergraduate Teaching with Mathematics and Statistics Action Technologies (will be referred to as the PTMT-Workshop) is a National Science Foundation funded multi-day virtual workshop for anyone that teaches a course (mathematics, statistics, or mathematics methods) that includes preservice secondary mathematics teachers. The purpose of this virtual workshop is to provide opportunities for course instructors who would like to learn about dynamic mathematics and statistics technologies that can be used in undergraduate courses for prospective secondary mathematics teachers. The workshop will focus on teaching instructors how to use dynamic mathematics and statistics technology that prospective teachers will use in their future classrooms such as GeoGebra, Desmos, Tuva, and CODAP. Support for this work was partially supported by the National Science Foundation under grant DUE 1954692 awarded to University of North Carolina at Charlotte and Middle Tennessee State University. Any opinions, findings, and conclusions or recommendations expressed herein are those of the principal investigators and do not necessarily reflect the views of the National Science Foundation.

- Meeting Within a Meeting (MWM) 2021: A Virtual Workshop for High School Math and Science Teachers. The MWM program provides middle and high school mathematics and science teachers an opportunity to discuss and apply the data analysis, data science, and statistical concepts embodied in the NCTM Catalyzing Change books and the American Statistical Association's (ASA) Guidelines for Assessment and Instruction in Statistics Education (GAISE) Pre-K-12 Curriculum Framework. Teachers will examine the Mathematical Practices from a statistical point of view and study ways to assess student understanding of statistical concepts. Teachers will explore problems that require them to formulate statistical questions, collect, organize, analyze, and draw conclusions from data. The MWM program includes examining

what students can be expected to do at the most basic level of understanding data analysis and what can be expected of them as their skills develop and experience broadens. The workshop is free and we expect to provide a small stipend for teachers who participate in the entire virtual workshop. This workshop is being conducted on behalf of the Joint Committee of the American Statistical Association and the National Council of Teachers of Mathematics.

<https://www.amstat.org/ASA/Education/MWM/home.aspx>