

CURRICULUM VITA
ELIZABETH T. WALKER, PH.D.

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Education

Ph.D.	University at Buffalo	Mathematics Education	2014
M.S.	St. John Fisher College	Mathematics/Science/Technology Education	2003
B.S.	Buffalo State College	Mathematics Education	1979

Employment History

Adjunct Professor. Department of Mathematics, Monroe Community College; Rochester, NY, 2021-present

Curriculum and materials developer. Math-Explorations; Marion, NY, 2014-present

Math/Science Coach, Rochester Discovery Charter School, Rochester, NY, 2016-2020

Building Blocks Professional Development Trainer. Manpower Demonstration Research Corporation (MDRC), Robin Hood Foundation and Bank Street School; New York, NY, 2012-2014

Research Assistant. TRIADIII/*Building Blocks* Early Mathematics Research Laboratory under the direction of Drs. Doug Clements and Julie Sarama, University at Buffalo/Denver University; Buffalo, NY, 2011-2013

Assistant Visiting Professor. Department of Mathematics, Graduate Program in Math, Science, and Technology Education, St. John Fisher College; Rochester, NY, 2010-2011

Adjunct Professor. Department of Learning and Instruction, University at Buffalo; Buffalo, NY, 2008-2013

Adjunct Professor. Department of Mathematics, Graduate Program in Math, Science, and Technology Education, St. John Fisher College; Rochester, NY, 2004-2010, 2012

Mathematics Instructor/Enrichment Coordinator/Teacher Coach Grades K-12. Marion Central Schools; Marion, NY, 2000-2010

Summer Math Academy Director. Marion Central Schools; Marion, NY, 2001

HEOP Mathematics Professor, St. John Fisher College; Rochester, NY, 2000

Adjunct Professor. Department of Mathematics, Monroe Community College; Rochester, NY, 1998-2001

Adjunct Professor. Department of Mathematics and Computer Science, Onondaga Community College; Syracuse, NY, 1986-1993

Remedial Math Lab Coordinator. Department of Mathematics and Computer Science, Onondaga Community College; Syracuse, NY, 1984-1986

Instructor. Department of Mathematics, Buffalo Academy of Visual and Performing Arts; Buffalo, NY, 1980

Elizabeth T. Walker, Ph.D.

PROFESSIONAL CERTIFICATION

Permanent New York State Teacher Certification

PreK-6 and 7-9 Mathematics Extension, 2004

Mathematics, 7-12, 2004

Gifted and Talented Extension, Pre K – 12, 2004

LEADERSHIP POSITIONS, HONORS AND AWARDS

Leadership Positions

District Representative. Association of Mathematics Teachers of New York State (AMTNYS), 1993-2014

Mathematics Elementary Project Leader. Marion Central Schools; Marion, NY, 2000-2010

Awards

Distinguished Researcher Award. Graduate Program in Math, Science and Technology Education (GMST), St. John Fisher College; Rochester, NY, 2003

PUBLICATIONS

Books

Walker, E.T. (2021). *A Skills Trajectory Approach: Finding & Correcting Errors Whole Number Computation Addition and Subtraction*. Math Explorations.

Walker, E.T. (2022). *A Skills Trajectory Approach: Finding & Correcting Errors Whole Number Computation Multiplication and Division*. Math Explorations.

Ph.D. Dissertation

Walker, E.T., (2014). A study of questions proposed by teachers using the theoretical model for changing behavior. *State University of New York at Buffalo*, 230.

<http://pqdtopen.proquest.com/doc/1620255461.html?FMT=AI>

Peer-Reviewed Journal Articles

Current

Moore-Russo, D., & Walker, E.T. (in progress, target December 2022). Conceptual knowledge of dimensional change. *Journal of Mathematics Teacher Education*.

Walker, E.T. (in progress, target October 2022). Professional behavior: A theoretical model for behavioral change. *Journal of Educational Change*.

2014

Walker, E.T., & Molisani, J. (2014). Driving students to performance assessments: Learning what students can do. *Mathematics Teaching in the Middle School*, 19(8), 468-476.

Walker, E.T. (2014). Data driven instruction: Using an item analysis. *New York State Mathematics Teachers' Journal*, 64(1), 17-22.

2013

Walker, B. (2013). The shared vocabulary of math and life: Get there first. *AMTNYS News*. Association of Mathematics Teachers of New York State, 3.

2012

Moore-Russo, D., Buchheit, J., & Walker, E.T. (2012, online). Cognitive and social themes in children's public television programming in the United States. *Journal of Children and Media*, 7(2), 253-272.

PROFESSIONAL PRESENTATIONS

Peer Reviewed Conference Presentations

Walker, E.T. & Moore-Russo, D. (2012). Conceptual understanding of dimensional change. *34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (p. 1044)*. Kalamazoo, MI: Western Michigan State University.
<http://www.pmena.org/proceedings/PMENA%2034%202012%20Proceedings.pdf>

Other Workshops and Presentations

Association of Mathematics Teachers of New York State (AMTNYS)

- *Using Skills Trajectories to Find and Correct Computation Errors, AMTNYS 70th Annual Conference, Virtual, 2021*
- *Giant Math – Vive le Volume! AMTNYS 69th Annual Conference, Rochester, NY 2019*
- *Student-Centered Math Coaching, AMTNYS 69th Annual Conference, Rochester, NY 2019*
- *Giant Math – SOMA cubes, AMTNYS 68th Annual Conference, Saratoga, NY 2018*
- *Giant Math – Giant Tetrahedron, AMTNYS 67th Annual Conference, Buffalo, NY 2017*
- *Luck, risk, and the roll of the dice: Playing around with probability, AMTNYS 64th Annual Conference; Syracuse, NY, 2013*
- *Luck, risk, and unfairness: Playing around with probability, AMTNYS Summer Institute; Rochester, NY, 2013*
- *Exploring transfer of understanding with fractions, AMTNYS 62nd Annual Conference; Rochester, NY, 2011*
- *Exploring the truth behind geometric constructions, AMTNYS 62nd Annual Conference; Rochester, NY, 2011*
- *Exploring 3D through Soma cubes, AMTNYS Summer Institute; Syracuse, NY, 2008*
- *Differentiating instruction through writable cubes, AMTNYS 58th Annual Conference; Rye, NY, 2008*
- *Musical Math: Exploration of part and whole through a hands-on music box, AMTNYS 58th Annual Conference; Rye, NY, 2008*
- *Designing a family math night, AMTNYS 57th Annual Conference; Rochester, NY, 2007*
- *The giant tetrahedron: Patterns in fractals, AMTNYS 55th Annual Conference; Buffalo, NY, 2005*
- *Going around in circles: Area and circumference problem-based learning lessons, AMTNYS 55th Annual Conference; Buffalo, NY, 2005*
- *Thinking algebraically: The gingerbread man, AMTNYS 54th Annual Conference; Rye, NY, 2004*
- *Fractions through manipulatives, AMTNYS 53rd Annual Conference; Ellenville, N, 2003*

Wayne Finger Lakes Teacher Resource Center; Newark, NY

- *Teaching fractions and the Common Core State Standards I, 2012*
- *Teaching fractions and the Common Core State Standards II, 2012*
- *Understanding the Common Core State Standards, 2011*
- *Algebraic thinking, 2009*
- *Algebraic thinking, 2008 and Taking the fear out of fractions, 2008*

Association of Math Teachers of the Rochester Area (AMTRA); Rochester, NY

- *Messing around with fractions, 2011*
- *The giant tetrahedron, 2010*
- *Circles, compasses, and equilateral triangles: Building a tetrahedron from scratch, 2010*

Gifted/Talented Consortium, Monroe 2 BOCES; Spencerport, NY

- *Creativity and math, 2011*
- *Performance assessments, 2009*
- *Thinking like a mathematician, 2008*
- *Problem-based learning, 2007*
- *Algebraic thinking in the elementary school, 2006*

TEACHING

Courses taught in Marion Central Schools

- Math enrichment - grades Kindergarten – 8th grade
- Reading, History, and Science Enrichment - grades Kindergarten – 8th grade
- Math Olympiad coach - grades Kindergarten – 8th grade
- Arts in education coordinator - grades Kindergarten – 8th grade
- Teacher workshops
- Remedial Algebra I & II – High School
- Math A & B
- Pre-Calculus (dual credit with FLCC)
- AP Calculus A&B (dual credit with FLCC)

Courses taught at the University at Buffalo, State University of New York (graduate level)

- Enrichment topics in Elementary and Middle School Mathematics
- Teaching and Learning Rational Numbers and Proportional Reasoning
- Improving Elementary Mathematics Instruction

Courses taught at St. John Fisher College (graduate level unless noted)

- Inquiry in the Classroom
- Classroom Dynamics
- Differentiation
- Teaching Math through Exploration
- Assessment in Math, Science, and Technology Education
- Teaching Math and Science
- Math Explorations II (undergraduate)

Courses tutored

- Calculus 1, 2, 3
- Statistics
- Common core Algebra I
- Common Core Geometry
- Common Core Algebra II

Courses taught at Monroe Community College (associate level)

- Mathematics for Elementary School Teachers I & II
- Basic Mathematics
- Beginning and Intermediate Algebra

Courses taught at Onondaga Community College (associate level)

- Basic Mathematics
- Beginning and Intermediate Algebra
- College Mathematics

PROFESSIONAL SERVICE

Reviewer. Journal of Research in Childhood Education, 2012-present

Reviewer. Mathematics Teaching in the Middle School, 2013-present

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GRANTS

Creator/director inter-disciplinary project, Musical ethnographies: Who are we? Marion Central School Mini-Grant, 2009, \$3000

Creator/director interdisciplinary project, Musical ethnographies, New York State Arts in Education Re-grant from New York State Council on the Arts (NYSCA), 2009, \$2000

Writer, Grade level document readers for sharing student work. Marion Central School Mini-grant, 2009, \$2200

Creator/director of inter-disciplinary project, Dancing through history, Teacher Resource Center Mini-Grant, 2008, \$1000

Creator/director inter-disciplinary project, Dancing through History, New York State Arts in Education Re-grant from New York State Council on the Arts (NYSCA), 2008, \$3000

PROFESSIONAL MEMBERSHIPS

Association of Math Teachers of New York State (AMTNYS)

SERVICE TO CHURCH AND COMMUNITY

Marion Central Schools

2000-2018 Spelling Bee Pronouncer
2000-2010 Family Math Night Coordinator
1997-2010 Volunteer Math Olympiad Coach
1994-1998 Volunteer Science Kit Coordinator
1993-present Community Math Tutor, pro bono

Bethlehem Lutheran Church

2012-2021 Mission and Social Concerns Committee Chair
2010-present Mission and Social Concerns Committee Member
2003-2012 Confirmation Program Coordinator
2002-2003 Call Committee Chairperson
2000-2003 Church Council Member

Upstate NY Synod Evangelical Lutheran Church in America (ELCA)

2010-present Global Ministry Chairperson
2010 Global Ministry Ambassador to Zimbabwe
2008-present Companion Synod and Zimbabwe Twinned Parish Coordinator
2007-2018 Lutheran World Relief Speakers' Bureau for Fair Trade