

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
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NAME: Christopher M. Sarlo

eRA COMMONS USER NAME:

POSITION TITLE: Co-Director Foundational Math Projects Group

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date MM/YYYY	FIELD OF STUDY
SUNY College at New Paltz, New Paltz, NY	BS	05/1996	Psychology
Dowling College, Oakdale, NY	MS	5/1999	Elementary Education
Hofstra University, Hempstead, NY	EdD	5/2020 (anticipated)	Learning and Teaching (Specialization: Elementary Mathematics)

A. Personal Statement

My role in this project is that of Co-PI. I am a philosopher-practitioner, with over 20 years of classroom experience, whose interests lie in foundational math learning, and its impacts on building mathematical understanding through secondary algebra. My work as a content writer on the fifth grade EngageNY math modules led to starting a consulting company with the intent of educating parents and teachers on the importance of building conceptual math knowledge along a progression of competencies. In working with numerous school districts and parent groups across New York State, it became evident that the need for a comprehensive "handbook" was necessary. I co-authored a series of k-5 guides titled, *Thinking Math Differently*, in an effort to train and inform a wider audience. To further put theory into practice, I am pursuing an EdD in Learning and Teaching with a primary focus in Elementary Mathematics (anticipated 5/2020). I became a senior staff member at the National Laboratory for Education Transformation in 2017 as Co-director of the Foundational Math Projects group. In this capacity I hope to merge my extensive classroom experience, my understanding of foundational math teaching and learning, and my theoretical knowledge to improve math education.

- 1) Dieck, P.J., & Sarlo, C.M. (2016). *Thinking math differently: An essential guide for parents and teachers. United States: Conceptual Learning Associates.*

B. Positions and Honors**Positions and Employment**

1999- Classroom Teacher, Amityville UFSD, Amityville, NY
2013-2014 Mathematics Curriculum Writer (EngageNY Curriculum), Great Minds, Inc., Washington,DC
2016 Mathematics Assessment Item Writer, Questar Assessment, Apple Valley, MN
2017-2018 Mathematics Assessment Content Editor, The Achievement Network, Boston, MA
2012-2013 Common Core Math Exemplar Lesson Writer/Editor, Suffolk's Edge Teacher Center, Wheatley Heights, NY

- 2012-2013 Common Core Math Implementation Developer/Facilitator, Western Suffolk BOCES, Wheatley Heights, NY
- 2013- President/Lead Consultant, Conceptual Learning Associates, Inc., Amityville, NY
- 2018- Co-Director, Foundational Math Projects Group, NLET, Carmel, CA

Other Experience and Professional Memberships

- 2003-2008 Member, Leadership Team, Math-Science-Technology-Partnership grant program, Amityville Public Schools, Amityville, NY
- 2010- Cooperating Teacher, Student Teachers and Student Observer/Participants, Hofstra University, Hempstead, NY
- 2012- Member, National Council of Teachers of Mathematics
- 2014-2018 Member, Past-Treasurer, Learning and Teaching Doctoral Society, Hofstra University, Hempstead, NY

C. Contributions to Science

1. Creation of common core elementary math curriculum for grade 5

I was part of a team of exemplary elementary mathematics teachers along with mathematicians and researchers from Louisiana State University to create the grade 5 New York State common core mathematics curriculum, the EngageNY Grade 5 Mathematics Modules (a.k.a. Eureka Math). As a content writer I was responsible for the creation of assessments, topic progressions, and sequencing of lessons within each module, including the descriptive narratives written for teachers. These modules focus on far fewer topics at each grade level with a much greater depth of understanding. The goal being to establish a deep conceptual understanding of foundational mathematics along a progression of understanding. This curriculum requires a high degree of mathematical reasoning along with high expectations for mastery. It is currently the most widely used curriculum in America.

- a. Grade 5 Mathematics. Retrieved from <https://www.engageny.org/resource/grade-5-mathematics>
- b. Great Minds. (2015). *Eureka math: A story of units, grade 5*. Wiley.

2. Writing and publication of common core mathematics guidebooks for parents and teachers

I co-authored a series of six guides for parents and teachers of children in kindergarten through grade 5. The focus of mathematics learning in the common core learning standards is on the efficient and effective solving of real-world problems, rather than simply getting right answers. The teaching of algorithms and “what to do” is secondary to teaching what each algorithm means and why it works. This way of learning is in stark contrast to the way most of today’s adults learned math, creating a disconnect for parents and teachers. *Thinking Math Differently* introduces every learning standard at each grade level, explains it in everyday language, and provides multiple examples of what children’s assignments and thinking might look like. Also discussed at length are the many models students are first introduced to in Kindergarten, that grow with them and provide scaffolding for new concepts to be built upon. These books provide guidance for parents and teachers irrespective of the curriculum in use. They are currently in use in school districts as a professional development tool, by university professors as preservice teacher mathematics methods textbooks, and by student teaching supervisors to support field experience.

- a. Dieck, P. J., & Sarlo, C. M. (2016). *Thinking math differently: an essential guide for second grade parents and teachers*. United States: Conceptual Learning Associates.
- b. Dieck, P. J., & Sarlo, C. M. (2016). *Thinking math differently: an essential guide for third grade parents and teachers*. United States: Conceptual Learning Associates.

- c. Dieck, P. J., & Sarlo, C. M. (2016). *Thinking math differently: an essential guide for fourth grade parents and teachers*. United States: Conceptual Learning Associates.
- d. Dieck, P. J., & Sarlo, C. M. (2016). *Thinking math differently: an essential guide for fifth grade parents and teachers*. United States: Conceptual Learning Associates.

3. Presentations and workshops

In an effort to further understanding and practical application of the newly adopted elementary math standards, I led or co-led various presentations, at Regional and National NCTM conferences as well as annual conferences for the NY City Math Project. These workshops involved breakout sessions where teacher participants engaged in practical problem-solving demonstrations, having the opportunity to use the strategies and information provided in preparation for sharing it with their students.

The various workshops encompassed information for grades K through 12, and the progression of mathematical understandings were the underpinnings of all learning.

- a. Conference Session: *Making MODEL Students: Using Models for Problem Solving*, National Council of Teachers of Mathematics Annual Meeting and Expo, Boston, MA, April 2015
- b. Conference Session: *Decontextualizing and Contextualizing: Important Keys to Problem Solving*, National Council of Teachers of Mathematics Regional Conference, Hartford, CT, November 2012

4. Local mathematics educator conference presentations

- a. Conference Sessions: *ELL Success Strategies for the General Education Math Classroom*, and *Elementary Math Progressions for ENL/Bilingual Teachers*, New York City Math Project Annual Conference, Lehman College, Bronx, NY, March 2017
- b. Conference Sessions: *Progression by Regression: Finding HS Foundational Skills in Elementary Standards and Curricula* and *Read-It, Write-It, Picture-It: The Only Problem-Solving Strategy Students Need*, New York City Math Project Annual Conference, Lehman College, Bronx, NY, March 2016
- c. Conference Sessions: *Making MODEL Students: Using Models for Problem-Solving and Fractions Without Fear: The Grades 3-5 Common Core Fractions Progression*, New York City Math Project Annual Conference, Lehman College, Bronx, NY, March 2015
- d. Conference Sessions: *Key Words No More: The Real Keys to Problem-Solving* and *The Best Way to Teach Algorithms...Exactly Backwards!*, New York City Math Project Annual Conference, Lehman College, Bronx, NY, March 2014

D. Additional Information: Research Support and/or Scholastic Performance

Pending Grants

IES Thompson (PI) 07/01/20-06/30/24 Using the Common Core Math Analysis Platform (CCMAP) to Track Changes in Third Graders' Metacognitive Monitoring and Control: CPI; 13% CY effort

Ongoing Research Support

No current research support.