

Julien Corven
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Education

PhD in Education (Specialization: Mathematics Education)

Expected May 2022

University of Delaware, Newark, DE

MS in Mathematics Education

December 2014

Towson University, Towson, MD

BA in Mathematics, *magna cum laude*

May 2005

Haverford College, Haverford, PA

Teaching Experience

Teaching Assistant – Elementary Curriculum: Mathematics

2020

School of Education, University of Delaware, Newark, DE (Supervisor: E. Sisofo)

- Assisted the instructor of record with creating, grading, and providing feedback on course assignments, including weekly discussion posts and lesson plans
- Provided technical support in moving three sections of the course online via Canvas in response to the COVID-19 crisis
- Held weekly office hour consultations with students to review course material and aid with completing lesson plans
- Co-planned and co-presented material with instructor for weekly lecture videos
- Collaborated with instructor to comprehensively redesign the course, developing new assessments and instructional materials on essential topics

Teaching Assistant – Math for K-8 Teachers: Geometry, Algebra, & Measurement **2019**

School of Education, University of Delaware, Newark, DE

- Served as the instructor of record for one section of the course
- Collaborated in weekly meetings with two other instructors to review the materials and assessments to continuously improve the lesson plans
- Created a lesson analysis as a new course assignment to better evaluate student understanding of early algebraic reasoning and their ability to analyze and modify tasks
- Facilitated a partnership with the Education Resource Center to provide relevant resources for students taking the course

Secondary Mathematics Teacher

2013-2017

Baltimore City College High School, Baltimore, MD

- Courses Taught: IB Algebra I, IB Geometry, IB Mathematics Standard Level I and II
- Trained group of seven senior students to serve as peer tutors for IB Mathematics Standard Level I in school's Math Center
- Co-led 10-week Professional Development workshop on Teaching for Conceptual Understanding with participants across all departments
- Mentored student teaching interns in SY 2014-15 and SY 2015-16

Adjunct Faculty **2014-2017**

Mathematics Department, Towson University, Towson, MD

- Courses taught: Calculus for Applications, Calculus I, Calculus II

Middle School Mathematics Teacher **2007-2013**

Montebello Elementary/Middle School, Baltimore, MD

- Team lead for grade level team and Leadership Team member, 2009-2013
- Analyzed and tracked student achievement data using various sources, including EdisonLearning benchmarks, curricular pre- and post-tests, and teacher-created unit assessments, and modified instructional strategies accordingly
- Served as peer resource for training on and implementation of instructional technology
- Produced alignment and pacing guides that aligned school-wide mathematics curriculum materials to state content standards

Research Experience

Research Assistant – Instructional Improvement in Algebra Project **2018-2020**

School of Education, University of Delaware, Newark, DE (Supervisor: E. Litke)

- Scored and analyzed data from video-recordings of lessons using the Quality of Instructional Practice in Algebra (QIPA) observation tool
- Selected and edited clips from recordings to use for professional development
- Assisted with preparations of conference proposals and manuscripts of results

Research Assistant – REESE 2 Project **2017-2018**

School of Education, University of Delaware, Newark, DE (Supervisor: J. Hiebert)

- Collected, scored, and analyzed data to determine effect of time spent on topics in teacher preparation coursework with graduate understandings of key concepts underlying K-6 mathematics procedures and algorithms
- Collaborated with research team to design rubrics for assessment measures
- Assisted with preparation of conference proposals and manuscripts of results

Research Assistant – Spline Project **2013-2014**

Mathematics Department, Towson University, Towson, MD (Supervisor: T. Sorokina)

- Collaborated with professors and undergraduate students to investigate bounds on the dimension of spline spaces
- Drafted sections of manuscript submitted for publication

Other Professional Experience

Writer – MKT Item Camp **2019**

Harvard University

- Collaborated with a team of researchers to write and revise new items for the standardized Mathematics Knowledge for Teaching assessment

Project Assistant – Precalculus Unlocked Project **2014**

Mathematics Department, Towson University, Towson, MD (Supervisor: T. Sorokina)

- Designed, filmed, and edited instructional videos explaining precalculus concepts and procedures to be used in supporting students in Calculus I classes

Mathematics Curriculum Writer

2012, 2013

Baltimore City Public School System, Baltimore, MD

- Planned and designed lessons, activities, and assessments for 5th grade Units of Study in Algebra and Geometry aligned to Maryland and Common Core standards

Media Department Intern

2004

Success for All Foundation, Towson, MD

- Conceived and designed classroom video programming for cooperative learning strategies in reading
- Edited teacher professional development video for strategies for teaching reading to English Language Learners
- Assisted with filming and editing of classroom videos for teaching specific reading and language arts strategies

Publications in Peer-Reviewed Research Journals

Corven, J., DiNapoli, J., Willoughby, L., & Hiebert, J. (under revision). A matter of time: Examining the relationship between instructional time during teacher preparation and demonstrated SCK post-graduation.

Colvin, J., DiMatteo, D., & Sorokina, T. (2016). Dimension of trivariate C^1 splines on bipyramid cells. *Computer Aided Geometric Design*, 45, 140-150.

Colvin, J. C., & Tomayko, M. C. (2015). Putting TPACK on the radar: A visual quantitative model for tracking growth of essential teacher knowledge. *Contemporary Issues in Technology and Teacher Education*, 15(1). Retrieved from <https://www.citejournal.org/volume-15/issue-1-15/current-practice/putting-tpack-on-the-radar-a-visual-quantitative-model-for-tracking-growth-of-essential-teacher-knowledge>

Conference Presentations and Publications

Corven, J. (2020, February). *Modeling prospective teachers' SCK development for division of whole numbers*. 24th Annual Conference of the Association of Mathematics Teacher Educators, Phoenix, AZ.

Litke, E., & **Corven, J.** (2019, November). Examining features of algebra instruction in classrooms using a reform-oriented curriculum. In S. Otten, A.G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1728-1732). St. Louis, MO: University of Missouri.

Corven, J. (2019, May). *Modeling prospective teachers' development of specialized content knowledge*. 13th Annual Symposium of the Pennsylvania Association of Mathematics Teacher Educators, Shippensburg, PA.

Corven, J., DiNapoli, J., & Hiebert, J. (2019, February). *Complicated relationships between time spent studying mathematics topics in teacher preparation and graduates' useable knowledge*. 23rd Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Corven, J. (2018, November). Periodic confusion: Examining two contemporary textbook units on trigonometric functions. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International*

Group for the Psychology of Mathematics Education (p. 127). Greenville, SC: University of South Carolina & Clemson University.

Corven, J. (2018, May). *Periodic confusion: Examining two contemporary textbook units on trigonometric functions*. 12th Annual Symposium of the Pennsylvania Association of Mathematics Teacher Educators, Shippensburg, PA.

Corven, J., & Tomayko, M. (2017, March). TPACK radar diagrams: A visual quantitative representation for tracking growth of essential teacher knowledge. *Proceedings of the Society for Information Technology & Teacher Education International Conference 2017* (pp. 2296-2301). Austin, TX: Society for Information Technology and Teacher Education.

Yost, D., & **Colvin, J.** (2014, October). *Flipping instruction without flipping out*. 2014 Conference of the Maryland Council of Teachers of Mathematics, Baltimore, MD.

Professional Service

Graduate Student Representative, Pennsylvania Association of Mathematics Teacher Educators	2019-present
Conference Proposal Reviewer, AMTE	2018-2020
President, Education Graduate Association, University of Delaware	2020
Treasurer, Education Graduate Association, University of Delaware	2019

Honors and Awards

Dean's Scholar Award, University of Delaware	2017
Baltimore City College High School Teacher of the Year	2016
Phi Beta Kappa	2005