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## **EDUCATION**

Ph.D.           **Middle East Technical University, Ankara, TÜRKİYE**  
Elementary Education (with a focus in mathematics education), 2015

M.S.           **Pamukkale University, Denizli, TÜRKİYE**  
Elementary Education, 2008

B.S.           **Pamukkale University, Denizli, TÜRKİYE**  
Elementary Education, 2006  
*Summa Cum Laude*

## **TRAINING**

**YERME Summer School (YESS 7)**, Mathematics Education Research  
University of Kassel, Kassel, GERMANY, Summer 2014

**ERASMUS**, Educational Sciences  
Philipps University, Marburg, GERMANY, Spring 2011

**Summer School**, Mathematics Education  
Utrecht University, Utrecht, NETHERLANDS, Summer 2010

## **PROFESSIONAL EXPERIENCE**

**Research Associate**, 2019–Present  
Learning Research and Development Center, University of Pittsburgh

*Teacher Learning to Enact Productive Discussions in Mathematics and Literacy*. The McDonnell Foundation, 2018–2023. PI: Mary Kay Stein; Co-PIs: Richard Correnti, Christian Schunn, Lindsay Clare Matsumura, and Jennifer Russell (award amount: \$2,499,651)

- Conceptualize theoretical and design conjectures guiding a coaching model for ambitious mathematics instruction
- Facilitate the development of tools and guides for coaches and teachers
- Develop and conduct interviews with coaches of mathematics teachers
- Design and distribute teacher and coach surveys via Qualtrics
- Organize collected data and prepare for analysis
- Train team members and project participants to use Microsoft TEAMS
- Create webinars for participating coaches and teachers
- Coordinate and submit IRB protocol for the project
- Assist recruitment of coaches for the project

This work resulted in a paper presentation at the annual meeting of the *American Educational Research Association*, a research publication that is under review at the *Journal of Mathematics Teacher Education*, and a book that is under contract with *Corwin Press*.

**Postdoctoral Associate, 2016–2019**

Learning Research and Development Center, University of Pittsburgh

*Improvement of Mathematics Teaching At-Scale*. The Spencer Foundation, 2017–2020. PI: Richard Correnti; Co-PI: Mary Kay Stein (award amount: \$1,000,000)

- Create research proposal for a tailored professional development to teach mathematics for conceptual understanding
- Coordinate and submit IRB protocol for the project
- Develop and pilot interview protocols
- Facilitate development and delivery of teacher workshops

*Coaching to Improve Common Core Aligned Mathematics Instruction in Tennessee*, Institute of Education Sciences, 2014–2017. PI: Jennifer Russell; Co-PIs: Mary Kay Stein, Richard Correnti, Victoria Bill, Emily Barton, and Nate Schwartz (award amount: \$2,500,000)

- Develop survey items and interview protocols
- Prepare and analyze qualitative data (i.e., classroom videos, teacher assignments, and student work)
- Facilitate training of graduate student interns for coding teacher assignments and student work

*States as STEM Learning Environments: Building an Indicator System to Guide Instructional Improvement at Scale*. National Science Foundation, 2013–2017. PI: Mary Kay Stein; Co-PIs: Richard Correnti and Jennifer Russell (award amount: \$1,500,000)

- Develop survey items and interview protocols
- Prepare and analyze qualitative (i.e., classroom videos, teacher assignments, and student work) and quantitative data
- Facilitate training of graduate student interns for coding teacher assignments and student work

This work resulted in a publication in *Journal for Research in Mathematics Education* and three paper presentations at the annual meeting of the *American Educational Research Association*.

**Visiting Research Scholar, 2013–2014**

P20 Motivation and Learning Lab, University of Kentucky (lab director: Ellen L. Usher)

- Administer surveys in rural elementary and middle schools
- Assist lab students (both undergraduate and graduate) with research projects and presentations
- Create lab website ([motivation.uky.edu](http://motivation.uky.edu))
- Review literature for various projects (e.g., “Motivation and Achievement in Rural Appalachia”)

This work resulted in a paper presentation at the annual meeting of the *Spring Research Conference*.

**Teaching Assistant, 2012–2017**

Elementary Education, Gazi School of Education, Gazi University, Ankara, TÜRKİYE

- Provide instructional and technical support for department faculty
- Plan course and exam schedules (department-wide)
- Proctor midterm and final exams (school-wide)
- Plan and manage orientation programs for freshmen
- Design academic workshops for research and teaching assistants within the department, including: multi-level statistical analysis, scholarly publishing, studying abroad.
- Advise undergraduate and graduate students

### **Assistant Teacher, 2006–2007**

Denizli PEV Elementary School, Denizli, TÜRKİYE

- Plan and teach mathematics lessons (Grades 4-5)
- Develop and review student assignments (Grades 4-5)
- Tutor individual and small groups of students (Grades 2-5)
- Co-plan and co-teach mathematics lessons (Grades 2–5)

### **AWARDS AND HONORS**

#### **Ph.D. Scholarship, 2008–2015**

Scientific and Technological Research Council of Türkiye (TUBITAK)

#### **M.S. Scholarship, 2006–2008**

Scientific and Technological Research Council of Türkiye (TUBITAK)

### **PUBLICATIONS**

**Yurekli, B.,** & Stein, M. K. (under review). Research-based design of coaching for ambitious mathematics instruction. *Journal of Mathematics Teacher Education*.

**Yurekli, B.,** & Stein, M. K. (under review). Teaching mathematics for conceptual understanding through productive struggle. *Mathematical Thinking and Learning*.

Smith, M. S., Stein, M. K., & **Yurekli, B.** (in progress). *Coaching the 5 Practices: Supporting Mathematics Teachers in Orchestrating Productive Discussions*. Corwin Press.

**Yurekli, B.,** Stein, M. K., & Henry, H. (in progress). *Engaging teachers in challenges with ambitious mathematics instruction through coaching*.

**Yurekli, B.,** & Stein, M. K. (in progress). *Building on teacher thinking: A key process of teacher learning through coaching for ambitious mathematics instruction*.

**Yurekli, B.,** Işıksal Bostan, M., & Çakıroğlu, E. (2020). Sources of preservice teachers' self-efficacy in the context of a mathematics teaching methods course. *Journal of Education for Teaching*, 46(5), 631–645. doi: [10.1080/02607476.2020.1777068](https://doi.org/10.1080/02607476.2020.1777068)

**Yurekli, B.,** Stein, M. K., Correnti, R., & Kisa, Z. (2020). Teaching mathematics for conceptual understanding: Teachers' beliefs and practices and the role of constraints. *Journal for Research in Mathematics Education*, 51(2), 234–247. doi: [10.5951/jresmetheduc-2020-0021](https://doi.org/10.5951/jresmetheduc-2020-0021)

**Yurekli, B.** (2016). Learning to teach mathematics through problem solving: Investigating the effectiveness of a mathematics teaching methods course. Fritzlar, T.; Assmus, D., Bräuning, K., Kuzle A. & B. Rott (Eds.), *Problem Solving in Mathematics Education: Proceedings of the 2015 Joint Conference of ProMath and the GDM Working Group on Problem Solving*. WTM.

**Yurekli, B.,** Işıksal, M., & Çakıroğlu, E. (2015) Investigating sources of pre-service teachers' self-efficacy for preparing and implementing mathematical tasks. In Krainer, K., & N. Vondrová (Eds.), *Proceedings of 9th Congress of European Research in Mathematics Educations (CERME)*, pp. 1301-1317, Prague, Czech Republic. <https://hal.archives-ouvertes.fr/hal-01287361/document>

### **PRESENTATIONS**

**Yurekli, B.,** & Stein, M. K. (under review). *Teaching mathematics for conceptual understanding through productive struggle*. Paper for presentation at the annual meeting of National Council of Teachers of Mathematics (NCTM) Research Conference, Washington, DC.

- Yurekli, B., & Stein, M. K.** (2023 April). *A framework for coaching to promote teacher learning of ambitious mathematics instruction*. Paper presented at the annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Correnti, R. J., Stein, M. K., & **Yurekli, B.** (2022 April). *Examining teaching-learning associations: Theory and measurement for conceptual understanding in Grades 4 through 8 mathematics*. Paper presented at the annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Yurekli, B., & Stein, M. K.** (2020). *Defining productive struggle in mathematics classrooms: Implications of cognitive science research evidence for mathematics education*. Paper accepted for presentation at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA. (Conference cancelled)
- Yurekli, B.** (2018). *Productive struggle in mathematics classrooms*. Invited talk at Discipline-Based Science Education Research Center (db-SERC), University of Pittsburgh, Pittsburgh, PA.
- Yurekli, B.** (2018). *What makes struggle productive in mathematics classrooms?* Paper presented at the 6<sup>th</sup> International Workshop on Advanced Learning Sciences (IWALS), Pittsburgh, PA.
- Yurekli, B., Kisa, Z., Correnti, R., & Stein, M. K.** (2018). *Teachers' beliefs and practices in teaching mathematics for conceptual understanding: The role of constraints*. Paper presented at the annual meeting of the American Educational Research Association (AERA), New York, NY.
- Kisa, Z., **Yurekli, B.**, Correnti, R., & Stein, M. K. (2018). *Teaching mathematics for conceptual understanding: Teachers' vision, practices, and their perceived constraints*. Paper presented at the annual meeting of the American Educational Research Association (AERA), New York, NY.
- Yurekli, B.** (2016). *Qualitative investigation of field experiences in terms of pre-service teachers' self-efficacy for teaching mathematics*. Paper presented at the 13th International Congress on Mathematical Education (ICME), Hamburg, GERMANY.
- Yurekli, B., & Işıksal, M.** (2015). *Prospective teachers' beliefs about teaching mathematics through tasks*. Paper presented at the 3rd International Symposium, New Issues on Teacher Education (ISNITE), Volos, GREECE.
- Yurekli, B.** (2015). *Learning to teach mathematics through problem solving: Investigating the effectiveness of a mathematics teaching methods course*. Paper presented at the 17th Conference of Problem Solving in Mathematics Education (ProMath), Halle, GERMANY.
- Yurekli, B., Işıksal, M., & Çakıroğlu, E.** (2015). *Investigating sources of pre-service teachers' self-efficacy for preparing and implementing mathematical tasks*. Paper presented at the 9th Congress of European Research in Mathematics Educations (CERME), Prague, CZECH REPUBLIC.
- Yurekli, B., Işıksal, M., & Çakıroğlu, E.** (2014). *Preservice teachers' self-efficacy for preparing and implementing mathematical tasks: A case study*. Paper presented at the 2nd international Symposium, New Issues on Teacher Education (ISNITE), Macerata, ITALY.
- Yurekli, B.** (2013). *Effects of a mathematics teaching methods course on preservice elementary teachers' self-efficacy for using manipulatives*. Paper presented at the Spring Research Conference (SRC), Lexington, KY.
- Yurekli, B.** (2012). *Preservice elementary classroom teachers' teaching efficacy about using mathematical manipulatives*. Paper presented at the 11th National Symposium on Elementary Classroom Teacher Education (USOS), Rize, TÜRKİYE.
- Yurekli, B., & Işıksal, M.** (2010). *Effects of methods of teaching mathematics course on preservice elementary mathematics teachers' mathematics teaching efficacy*. Paper presented at the 9th National Congress on Science and Mathematics Education (UFBMEK), Izmir, TÜRKİYE.
- Yurekli, B.** (2008). *The relationship between primary school teachers' multiple intelligences and mathematics self-efficacy*. Paper presented at the 7th National Symposium on Elementary Classroom Teacher Education (USOS), Çanakkale, TÜRKİYE.

## **TEACHING EXPERIENCE**

### **Courses (Instructor)**

Doctoral *EDUC 3005: Policy as a Lever for Educational Change*. Co-Instructors: Mary Kay Stein and Richard Correnti  
Learning Sciences and Policy Program, School of Education, University of Pittsburgh  
Summer, 2020 (online); Summer, 2021 (online)

### **Courses (Teaching Assistant)**

Doctoral *EDUC 3005: Policy as a Lever for Educational Change*. Instructors: Mary Kay Stein and Lindsay Clare Matsumura  
School of Education, University of Pittsburgh  
Summer, 2022 (hybrid)

*IL 3475: Professional Learning in Mathematics and Science Education*. Instructor: Mary Kay Stein  
School of Education, University of Pittsburgh  
Fall, 2020 (online); Fall, 2021 (hybrid)

Undergraduate *SEM 337: Teaching Mathematics in the Elementary School*. Instructor: Cindy Jong  
STEM Education Program, College of Education, University of Kentucky  
Spring, 2013; Fall 2014

*SEO303: Teaching Mathematics I*. Instructor: Nese Tertemiz  
Elementary Education, Gazi School of Education, Gazi University, Ankara, TÜRKİYE  
Fall 2012–2017

*SEO304: Teaching Mathematics II*. Instructor: Nese Tertemiz  
Elementary Education, Gazi School of Education, Gazi University, Ankara, TÜRKİYE  
Spring 2012–2017

### **Professional Development for Teachers (Designer and Facilitator)**

K–5 *Effective Teaching Methods*, Professional Development for Elementary Mathematics Teachers. Co-Facilitators: Nese Tertemiz and Aydan Kaplan  
Department of Education, Çankaya Province Office, Ankara, TÜRKİYE  
February 29–March 4, 2016

*Pi Classrooms: Active Learning Environments*, Professional Development for Elementary Mathematics Teachers. Co-Facilitator: Nese Tertemiz  
Department of Education, Çankaya Province Office, Ankara, TÜRKİYE  
June 20–24, 2016