

Zelha Tunç-Pekkan

MEF University
Department of Mathematics and Science Education
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EDUCATION

Ph.D.	University of Georgia (UGA). USA. Department of Mathematics and Science Education	May 2008
M. S.	Indiana University, Indianapolis (IUPUI). USA.	August 2000
B. S.	Middle East Technical University, Ankara, Turkey.	June 2000

PROFESSIONAL EXPERIENCES

2017-	Associate Professor. Associate Dean and Department Chair. MEF University, İstanbul, TR.
2014-2017	Assistant Professor. Associate Dean and Department Chair. MEF University, İstanbul, TR. Mathematics Teacher.
2013-2014	Visitor Dr. University of Pittsburgh. USA.
2012- 2014	Assistant Professor. Yeditepe University, İstanbul, TR.
2011- 2012	High School Mathematics Teacher, İstanbul, TR.
2009- 2011	Post-doctoral Research Associate. Carnegie Mellon University. USA.
2007-2009	Part-time Faculty. School of Education. University of Pittsburgh. USA.

PUBLICATIONS

Journal Articles:

Aydın, U., **Tunç-Pekkan, Z.**, Taylan D., Birgili, B. & Özcan, M. (2018). Impacts of a university–school partnership on middle school students' fractional knowledge: A quasiexperimental study, *The Journal of Educational Research*, 111 (2), 151-162, DOI: 10.1080/00220671.2016.1220358*

Kilic, H. & **Tunç-Pekkan, Z.** (2017). University-school collaboration as a tool for promoting pre-service mathematics teachers' professional skills. *International Journal of Research in Education and Science (IJRES)*, 3(2), 383- 394. DOI: 10.21890/ijres.327897

Aydın, U., **Tunç-Pekkan, Z.**, Taylan, R.D., & Birgili, B. (2017), Equity in middle school students' fractional knowledge: Does school type matter in Turkey? *European Journal of Education Studies*, 3(9), 480-496.

Aydın, U., **Tunç-Pekkan, Z.**, Taylan, R. D., Birgili, B., & Özcan, M. (2017). Okulda Üniversite Modeli: Beşinci sınıf öğrencilerinin kesir bilgisi gelişiminden yansımalar [University within School: Reflections from the fifth grade students' fractional knowledge development]. *Kastamonu Eğitim Dergisi [Kastamonu Education Journal]* 25 (5), 1979-1994.

Tunç-Pekkan, Z. (2015). An analysis of elementary school children's fractional knowledge depicted with circle, rectangle, and number line representations. *Educational Studies in Mathematics*. 89, 3, 419-441.*

Kılıç, H., **Tunç-Pekkan, Z.**, & Karatoprak, R. (2013). Materyal kullanımının matematiksel düşünme becerisine etkisi. (Effect of material use on mathematical thinking). *Journal of Theory and Practice in Education*, (9), 4. (EBSCO listed journal).

Tunç-Pekkan, Z. & D' Ambrosio, B. S. (2009). Mathematical communications: Elementary pre-service teachers' e-mail exchanges with sixth grade students. *Mathematics Education Research Journal (Mathematics Education Research Group of Australia)*, 9, 4-14.

Izsák, A., Tillema, E., & **Tunç-Pekkan, Z.** (2008). Teaching and learning fraction addition on number lines. *Journal for Research in Mathematics Education*, 39 (1), 33-63.*

Tunç-Pekkan, Z. (2007). Graduate level mathematics curriculum courses: How are they planned? *The Mathematics Educator*, 17(1), 24-32.

Book Chapters:

Izsák, A., Tillema, E., **Tunç-Pekkan, Z.**, (2016). Chapter 17: Partitioning and iterating when teaching and learning fraction addition on number lines. In E. Silver and P. Kenney (Editors). *More lessons learned from research: Volume 2. Helping all students understand important mathematics*. NCTM.

Tunç-Pekkan, Z., (2016). Introduction to Mathematics Teaching Course. Creating the Flipped Educators of the Future: Leading by Example in the Faculty of Education. M. Şahin and C. Fell Kurban (Editors). *The Flipped Approach to Higher Education: Designing Universities for Today's Knowledge Economies and Societies*. Emerald Group Publishing.

Tunç-Pekkan, Z., (2016). Steffe'nin doğal sayılar ve kesir bilgilerinin yapılandırılmasına yönelik öğrenme modeli. Editörler: E. Bingölbali, I.O. Zembat, S. Aslan, Matematik Eğitimi Teorileri. Pegem.

Sztajn, P., Anthony, H., Chae, J., Erbas, A.K., Hembree, D., Keum, J., Klerlein, J., **Tunç-Pekkan, Z.** (2004) *NAEP, TIMMS and PISA: What can we learn?* In P.

* A+ Journals either in Education or Mathematics Education Field

Kloosterman and F. Lester (Eds.). The 1990-2000 Mathematics Assessment of the National Assessment of Educational Progress: Results and Interpretations. Reston, VA: NCTM.

Full Papers included in Conference Proceedings:

Zelha Tunç-Pekkan, HülyaKılıç. Mathematical opportunities: Noticing and acting. Konrad Krainer; Nad'aVondrová. *CERME 9 - Ninth Congress of the European Society for Research in Mathematics Education*, Feb 2015, Prague, Czech Republic. pp.2923-2929, Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education. [<hal-01289652>](#)

Rau, M., Rummel, N., Alevin, V., Pacilio, L., & **Tunc-Pekkan, Z.** (2012). How to schedule multiple graphical representations? A classroom experiment with an intelligent tutoring system for fractions. In J. van Aalst, K. Thompson, M. J. Jacobson & P. Reimann (Eds.), *The future of learning: Proceedings of the 10th international conference of the learning sciences (ICLS 2012) - Volume 1, Full Papers* (pp. 64-71). Sydney, Australia: ISLS.

Tunç-Pekkan, Z. (2007). Analysis of a learning Case: Jasmine. In J. Woo, H. Lew, K. Park, D. Seo (Eds.) *Proceedings of the 31st Conference of the International Group for the Psychology of Mathematics Education*, Vol 4. (pp.225-232). Seoul, Korea.

Tunç-Pekkan, Z. (2002). What can we know about pre service teachers' mathematics content knowledge through their e-mail discussions with 6th grade students? *Proceedings of the 2nd International Conference on the Teaching of Mathematics (at the undergraduate level)*, Greece: University of Crete.

International Conference Presentations:

Tunç-Pekkan, Z. (2017). Flipped Learning for Teacher Education. The [2nd Annual Higher Education Flipped Learning Conference](#), June 14-16, 2017, University of Northern Greeley, Colorado. USA.

Aydın, U., **Tunç-Pekkan, Z.**, Taylan, R.D., Birgili, B., & Özcan, M. (2017). University-School partnership: A lens for school type differences in fractional knowledge. Paper presented at European Conference on Educational Research [ECER 2017], August 21-25, University College UCC, Copenhagen, Denmark.

Tunç-Pekkan, Z., Taylan, R. D., Birgili, B., Aydın, U., & Ozcan, M. (2016). Academicians as teachers: Nurturing teaching experience. 13th International Congress on Mathematical Education [ICME]. July 24-31, Hamburg, Germany.

Taylan, R. D., **Tunç-Pekkan, Z.**, Birgili, B., Aydın, U., & Ozcan, M. (2016). Investigating fifth-grade students' conceptions of fractions on the number line. National Council of Teachers of Mathematics Research Conference [NCTM]. April 13- 16, San Francisco, USA.

Aydin, U., Birgili, B., **Tunç-Pekkan, Z.**, Taylan, R. D., & Ozcan, M. (2016). The effect of University within School Model-based instruction on 5th grade students' achievement in fractions. The American Educational Research Association Meeting [AERA]. April 8-12, Washington, DC, USA.

Tunç-Pekkan, Z., Kılıç, H., Mathematical opportunities: Noticing and acting. Konrad Krainer; Nad'a Vondrová. *CERME 9 - Ninth Congress of the European Society for Research in Mathematics Education*, Feb 2015, Prague, Czech Republic. pp.2923-2929, Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education. [<hal-01289652>](#)

Tunç-Pekkan, Z. Rau, M., Alevén, V., Rummel, N. (2013) Fractional Knowledge and Graphical Representations. Paper presented to be at the 37th Conference of the International Group for the Psychology of Mathematics Education. Kiel, Germany.

Tunç-Pekkan, Z. (2013). What is really teaching? Invited talk at the National Center for Excellence in Mathematics and Science Teaching and Learning of Ireland. University of Limerick, Ireland.

Tunç-Pekkan, Z. Rau, M., Alevén, V., Rummel, N., (2011) Elementary school children's use of graphical representations and fractional knowledge. Paper presented to be at the 35th Conference of the International Group for the Psychology of Mathematics Education. Ankara, Turkey.

Rau, M., Alevén, V., Rummel, N., **Tunç-Pekkan, Z.**, & Pacilio, L. (2011) Learning math with multiple representations: In search for dimensions of representational flexibility. European Association for Research on Learning and Instruction. Exeter, United Kingdom (EARLI 2011).

Tunç-Pekkan, Z. (2010). *Extending the Discussion of Intensive Quantities: The Case of Fraction Multiplication*. The annual meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, Columbus, Ohio.

Tunç-Pekkan, Z., Alevén, V., Rummel, N., Zeylikman, L. (2010). *Fifth Graders' Conception of Fractions on Numberline Representations*. The annual meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, Columbus, Ohio.

Tunç-Pekkan, Z., Rau, M., Alevén, V., Rummel, N. (2010). *External Representations and Fractional Knowledge*. Third Annual Inter-Science of Learning Center (iSLC) Conference For Students and Postdoctoral Fellows at the Science of Learning Centers, Boston, MA.

Tunç-Pekkan, Z. (2009). Role of perturbations in making-sense of fractions. Poster session presented at the annual meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, Atlanta, GA.

Tunç-Pekkan, Z. (2009). Modeling grade eighth students' construction of fraction multiplying schemes and algebraic operations. Invited talk. College of Education. University of South Florida, Tampa, FL.

Tunç-Pekkan, Z. (2009). *Construction of fraction multiplying schemes and algebraic operations*. Learning Sciences and Policy (LSAP) colloquium series. Learning Policy Center. University of Pittsburgh, Pittsburgh, PA.

Tunç-Pekkan, Z. (2008). *Analysis of an e-mailing project and Teaching mathematics to 8th graders*. Bogazici University- Secondary Science and Mathematics Education Department Colloquium Series. Istanbul, Turkey.

Tunç-Pekkan, Z. (2007). *Analysis of a learning Case: Jasmine*. Paper presented at the 31st Conference of the International Group for the Psychology of Mathematics Education. Seoul, Korea.

Tunç-Pekkan, Z. (2007). *Pros and Cons of a National Curriculum*. UGA Department of Mathematics and Science Education Colloquium Series.

Tunç-Pekkan, Z. (2006, August). *Investigations of 8th grade students' algebraic schemes using their fractional knowledge*. Paper presented at the Third Young European Mathematics Educators Summer School, University of Jyväskylä, Finland.

Tunç-Pekkan, Z. (2005, October). *Understanding teaching and learning of fractions in a sixth-grade classroom*. Poster session presented at the annual meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, Roanoke, VA.

Tunç-Pekkan, Z. (2005, October). *Investigations of how an in-service teacher views herself as a learner*. Poster session presented at the annual meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, Roanoke, VA.

Izsák, A., Orrill, C., & **Tunç-Pekkan, Z.** (2005, April). *Teaching and learning fraction multiplication using drawn representations*. Poster session presented at the National Council of Teachers of Mathematics Research Presession, Anaheim, CA.

Tunç-Pekkan, Z., & Izsák, A. (2004, October). Using Connected Mathematics Project materials when learning fractions: How does a sixth grader estimate fraction sums?
Paper presented at the annual convention of the School Science and Mathematics Association, Atlanta, GA.

Tunç-Pekkan, Z., & Sztajn, P. (2004, July). *How do university professors decide what to teach in graduate level curriculum courses?* Paper presented at the International Psychology of Mathematics Education Association Annual Meeting, Bergen, Norway.

Tunç-Pekkan, Z., & Sztajn, P. (2004, July) *Views of Curriculum, students and teaching goals in a graduate level mathematics education course*. Paper presented at the Mathematics Education Student Association Colloquia series. University of Georgia, Athens, GA.

Izsák, A., Tillema, E., & **Tunç-Pekkan, Z.** (2004, April). *Teaching and learning fraction addition on number lines*. Paper presented at the National Council of Teachers of Mathematics Research Pre-session, Philadelphia, PA.

Izsák, A., Tillema, E., & **Tunç-Pekkan, Z.** (2004, April). *The role of representations in mathematics learning and teaching: The case of fractions*. Paper presented at the American Educational Research Association Meeting, San Diego, CA.

D'Ambrosio, B., & **Tunç-Pekkan, Z.** (2003, January). What can we know about pre-service teachers' mathematics content knowledge through their e-mail discussions with 6th grade students? Paper presented at the American Mathematics Educators Association's Annual Meeting, Atlanta, GA.

Tunç-Pekkan, Z. (2002, July). What can we know about pre service teachers' mathematics content knowledge through their e-mail discussions with 6th grade students? Paper presented at the 2nd International Conference on the Teaching of Mathematics (at the undergraduate level), University of Crete, Greece.

National Conferences:

Tunç-Pekkan, Z., Kıratlıoğlu, S., Sohtorik, S., Engin, A., Esmer, M. Fendi, A., Işık, M. A., Kılıç, Z., (2017). Okulda Üniversite Modeli ile Okul Stajında Yaratılan Farklar: Matematik Öğretmenliği Örneği. Eğitimde Gelecek Konferansı. MEF Üniversitesi, İstanbul, Turkey.

Tunç-Pekkan, Z., Karagöz-Akar, G., Akcan, S. (2017). Boğaziçi Üniversitesi ve MEF Üniversitesi Öğretim Üyeleri ve Öğretmen Adaylarının Okulda Üniversite Modeli Deneyimi. Eğitimde Gelecek Konferansı. MEF Üniversitesi, İstanbul, Turkey.

Tunç-Pekkan, Z., Birgili, B., Taylan, Aydın, U., Birgili, B., (2017). Okulda üniversite modeli'nin İlk yıl uygulamasının değerlendirilmesi. Türk Bilim Konferansı-3. Afyonkarahisar. Turkey.

Aydın, U., **Tunç-Pekkan, Z.**, Taylan, D., Birgili, B., Özcan, M. (2016). Okulda Üniversite Modeli-Temelli Öğretimin 5. Sınıf Öğrencilerinin Kesir Bilgisini Geliştirme Üzerine Etkisi. 12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi. Karadeniz Teknik Üniversitesi, Trabzon.

Taylan, D., **Tunç-Pekkan, Z.**, Aydın, U., Birgili, B., Özcan, M. (2016). Beşinci Sınıf Öğrencilerinin Kesir Bilgisinin Sayı Doğrusu Üzerinde Gösterimi İle İlgili Düşünüş Biçimlerinin Araştırılması. 12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi. Karadeniz Teknik Üniversitesi, Trabzon.

Tunç-Pekkan, Z. Birgili, B., Özcan, M., (2016). Okulda üniversite modeli ile kesir öğretiminin sınıfı katılıma etkisi. 12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi. Karadeniz Teknik Üniversitesi, Trabzon.

Tunç-Pekkan, Z., Taylan, D., Aydın, U., Birgili, B., Özcan, M., Akbal, K., Mermer, A. (2015). Okulda Üniversite Modeli Çerçevesinde Matematik Öğretimi:

Öğrencilerin Derse Katılımının Artırılması. Eğitimde İyi Örnekler Konferansı. Eğitim Reformu Girişimi: Sabancı Üniversitesi.

Tunç-Pekkan, Z., Kilic H. (2014). Matematik Öğretmeni Adaylarının Öğrenci Düşünüşlerinin Farkına Varması Ve Bu Düşünüşleri Öğretme Amaçlı Kullanması. 11. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Adana, Türkiye.

Ayancı, Ç., **Tunç-Pekkan Z.**, Karatemiz M., (2013) 11. Sınıf Öğrencilerinin Olasılık İle İlgili Matematiksel Hatalar ve Nedenleri, (11th grade students' errors about probability and their thinking). 22. Ulusal Eğitim Bilimleri Kongresi, Eskişehir Osmangazi Üniversitesi, Turkey.

Pehlivan Z., **Tunç-Pekkan Z.**, Kadioğlu S., (2013) 9. Sınıf Öğrencilerinin Fonksiyonlar ve Üslü Sayılar Konularında Sahip Oldukları Matematiksel Hatalar ve Nedenleri (9th grade students' errors (and their thinking behind) about functions and exponential numbers). 22. Ulusal Eğitim Bilimleri Kongresi, Eskişehir Osmangazi Üniversitesi, Turkey.

Tunç-Pekkan, Z. (2013). Matematik Öğretmen Adaylarının Eğitiminde Araştırma Sorusu Oluşturma Deneyimlerinin Değerlendirilmesi (Evaluation of pre-service mathematics teachers' construction of research questions). Türk Bilgisayar ve Matematik Eğitimi Sempozyumu. Karadeniz Teknik Üniversitesi. Trabzon, Turkey.

Invited Seminars, Workshops, Lectures

Tunç-Pekkan, Z. (2017). Doğal Sayılardan Kesirlere: Öğrenme Teorisine Dayalı Kesir Öğretimi. 14. Eğitimde İyi Örnekler Konferansı. Sabancı Üniversitesi. (Workshop)

Tunç-Pekkan, Z. (2016). Mathematics Teacher Education with University within School model and Flipped Classroom Technique. TED Üniversitesi, Invited Talk.

Tunç-Pekkan, Z. (2016). Teaching Math in a Flipped Classroom Mode. Atılım Üniversitesi, Invited Talk.

Tunç-Pekkan, Z. Aydın, U., Taylan, D., Birgili, B., (2015). Okulda üniversite modeli çerçevesinde matematik öğretimi. VI. Uluslararası Eğitim Yönetimi Forumu. Cyprus International University, Cyprus.

Tunç-Pekkan, Z. (2014). Fractions, children, pre-service teachers. Çağrılı konuşmacı, Duquesne University, Pittsburgh, PA. Amerika Birleşik Devletleri.

Tunç-Pekkan, Z. (2013). What is really teaching? Çağrılı konuşmacı, the National Center for Excellence in Mathematics and Science Teaching and Learning of Ireland. University of Limerick, Ireland.

Tunç-Pekkan, Z. (2009). Modeling grade eighth students' construction of fraction multiplying schemes and algebraic operations. College of Education. University of South Florida, Tampa, FL. Invited Talk.

Tunç-Pekkan, Z. (2009). Construction of fraction multiplying schemes and algebraic operations. Learning Sciences and Policy (LSAP) colloquium series. Learning Policy Center. University of Pittsburgh, Pittsburgh, PA.

Tunç-Pekkan, Z. (2008). Analysis of an e-mailing project and Teaching mathematics to 8th graders. Çağrılı konuşmacı, Bogazici University- Secondary Science and Mathematics Education Department Colloquium Series. Istanbul, Turkey.

TEACHING FOR 2015-2017

2015	Spring	Teaching Mathematics with University within School Framework
2015	Fall	Introduction to Mathematics Teaching
2016	Spring	Abstract Mathematics
2016	Fall	Introduction to Mathematics Teaching Introduction to Discrete Mathematics School Internship 1
2017	Spring	Role of Mathematics in Science, Technology and Engineering Foundations of Teaching Numbers, operations, fractions and Algebra School Internship 2
2017	Fall	Introductions the Mathematics Teaching School Internship 2 School Internship 3
2018	Spring	Role of Mathematics in Science, Technology, and Engineering. -School Internship 2 -School Internship 3 -School Internship 4

AWARDS:

2018 Science Academy Award for Young Scientists. BAGEP Ödülü.

2006-2007 University of Georgia Graduate School Dissertation Completion Assistantship Award. \$15,600 ve out-of-state tuition.

2002 Indiana University Global Education Award. \$10,000 scholarship during master's program.

OTHER PROFESSIONAL EXPERIENCES

Member of MEF University Senate

Associate Dean and Faculty Internship Coordinatore of MEF University Faculty of Education

Chair of Mathematics and Science Education Dept.

Reviewer for Journal of Mathematical Behaviour, Hacettepe University Journal of Education, Turk Bilmät, International Group for Psychology of Education, Teaching Children Mathematics.

Certified Mathematics Teacher for grades 6-12 in State of Georgia, Pennsylvania (7-12 grades), USA and Turkey.

Member of the international program committee of the 3rd International Conference on the Teaching of Mathematics at the Undergraduate level, organized every four years. I also presided over three sessions. This conference was held in Istanbul, Turkey. July 2006.

Member of Scientific Committee of BİLMAT Conferences, Eğitimde Değişim Konferansları 2016, 12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi.

Past President of the *Mathematics Education Student Association (MESA)*, 2004-2005. MESA was established in 1980 as a student organization affiliate of *National Council of Teachers of Mathematics (NCTM)*. The organization has 75 members, including graduate and undergraduate students, and faculty. MESA promotes discussions of mathematics teaching and learning among the UGA community. Organization hosts biweekly colloquia, publishes a biannual journal, *The Mathematics Educator*.

Associate Editor of *The Mathematics Educator*, 2003 - 2004.

Colloquium Chair for the Mathematics Education Student Association during 2003-2004 academic year. MESA colloquia are biweekly seminars about issues that promote insight into mathematics teaching, learning, and research. Organized over 20 colloquia for the UGA Mathematics Education Department including presenters from different countries (e.g., South Africa, Iceland, Chile, Sweden) and from different US universities.