

ÖZGEÇMİŞ

1. Adı Soyadı : Zelha TUNÇ-PEKKAN

2. Doğum Tarihi :

3. Unvanı : Doç. Dr.

4. Öğrenim

Derece	Alan	Üniversite	Yıl
Lisans	Ortaöğretim Fen ve Matematik Öğretmenliği	ODTÜ	2000
Yüksek Lisans	Ortaöğretim Eğitimi	Indiana Üniversitesi, ABD	2002
Doktora	Matematik Eğitimi	University of Georgia, ABD	2008

5. Akademik Unvanlar

Doçentlik Tarihi: 03/03/2017

İş Deneyimi:

Görev Unvanı	Görev Yeri	Yılı
Doç. Dr.	MEF Üniversitesi. Matematik ve Fen Bilimleri Eğitimi Böl.	2017-
Yrd. Doç. Dr.	MEF Üniversitesi. İlköğretim Matematik Öğretmenliği Blm.	2014- 2017
Ziyaretçi Dr.	University of Pittsburgh. Öğretim Görevlisi.	2013-2014
Yrd.Doç Dr.	Yeditepe Üniversitesi. Matematik Öğretmenliği Blm.	2012-2014
Matematik Öğretmeni	İTÜ Özel Ekrem Elginkan Lisesi.	2011-2012
Doktora Sonrası Araştırmacı	Carnegie Mellon University. Human Computer Interaction Institute.	2009-2011
Yarı Zamanlı Dr.	University of Pittsburgh. School of Education.	2008-2009
Ar. Gör.	University of Georgia. College of Education.	2002-2008
Ar. Gör.	Indiana University. School of Education.	2000-2002

6. Yönetilen Yüksek Lisans ve Doktora Tezleri

6.1. Yüksek Lisans Tezleri

(Eş danışman)

Yıldırım, H. (devam ediyor). How do designing and implementing lessons using a learning theory of fractions (namely Scheme Theory) contribute to instructional use of representations in a 5th grade classroom? Boğaziçi Üniversitesi.

Görk, Z. (devam ediyor). Investigation of Students' Algebraic Thinking through Generalization Activities: A view from Semiotic Perspective. Ortadoğu Teknik Üniversitesi.

6.2. Doktora Tezleri

Özaltun Çelik, A. (devam ediyor). Doktora Tez jüri üyeliği. Pamukkale Üniversitesi.
Çetinkaya, E. (devam ediyor). Doktora Yeterlilik Sınavı jüri üyeliği. Koç Üniversitesi.

7. Yayınlar

7.1. Uluslararası hakemli dergilerde yayınlanan makaleler

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. & **Tunc 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.

7.2. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (Proceedings) basılan bildiriler:

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.

Aydın, 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.

Rau, M., Rummel, N., Alevén, V., Pacilio, L., & **Tunç-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., 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. (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.

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

Tunç-Pekkan, Z., & Sztajn, P. (2004). 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.

Izsák, A., Tillema, E., & **Tunç-Pekkan, Z.** (2004). 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). 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.

Tunç-Pekkan, Z. (2002). 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.

7.3. Uluslararası bilimsel toplantılarda sunulan diğer bildiriler:

Tunç-Pekkan, Z. (2013). Teaching after researching. International Symposium, New Issues on Teacher Education, Hacettepe University, Beytepe, Ankara, Turkey.

Tunç-Pekkan, Z., Kılıç, H. (2013) Mathematics pre-service teachers' listening experience in mathematics New Issues on Teacher Education, Hacettepe University, Beytepe, Ankara, Turkey.

Kılıç, H., **Tunç-Pekkan, Z.** (2013). Using Manipulatives to Enhance Students' Mathematical Understanding. 5th International Congress of Educational Research. Canakkale, Turkey.

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., Alev, 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. (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. (2005). 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). 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.

Tunç-Pekkan, Z., & Izsák, A. (2004). 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.

D'Ambrosio, B., & **Tunç-Pekkan, Z. (2003).** 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.

7.3. Yazılan ulusal/uluslararası kitaplar veya kitaplarda bölümler :

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.

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

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

7.5. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler:

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

Tunç-Pekkan, Z. , Kırathıoğlu, 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 Bilmat 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 sınıfıçi katılma 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 Olusturma Deneyimlerinin Değerlendirilmesi (Evaluation of pre-service mathematics teachers' construction of research questions). Türk Bilgisayar ve Matematik Eğitimi Sempozyumu. Karadeniz Teknik Üniversitesi. Trabzon, Turkey.

7.6. Diğer sunular:

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

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

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

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. Çağrılı konuşmacı, College of Education. University of South Florida, Tampa, FL. Amerika Birleşik Devletleri.

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. Amerika Birleşik Devletleri.

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.

8. Projeler

2017- Koç Üniversitesi, Bağımsız Etki Değerlendirme Laboratuvarı Affiliated Member. (PI: Yasemin Kisbu Sakarya)

2014- MEF Üniversitesi Mütevelli Heyeti Desteği ile:
MEF Üniversitesi Okulda Üniversite Modeli ile Matematik öğretimi çerçevesinde yönetilen 3 proje:
-What is teaching experience and how is it earned? (Most of our group members did not have K-12 teaching experience. We videotaped our weekly meetings to search patterns of discourse and focus on planning and reflecting on classroom practices in 5TH grade mathematics. There is data over 35 weeks of 1.5-2hours meetings)

- How effective a program designed for teaching fractions with University within School Model? (Developed a fraction program based on my research experiences related to most difficult subject in school mathematics. It was a 6-week program. Designed fractions test together. Conducted pre- and post- test at three schools including our own classrooms. Conducted pre- and post- interviews with 18 students, 6 from each research site. We also videotaped and observed each other's classes on a regular basis during this 6 week)

-Teaching 5th grade mathematics class in a low SES Turkish School.

2012-2014 Proje Yöneticisi. İTÜ Özel Ekrem Elginkan Lisesi-Yeditepe Üniversitesi,
9. Ve 11. Sınıf öğrencilerinin matematiksel kavram yanılgılarının araştırılması. Proje

Proje Eş Yöneticisi. Yeditepe Üniversitesi- Celal Yardımcı Ortaokulu Matematik Atölyesi. Materyallerle matematik öğretimi ve öğretmen adayı eğitimi.

Proje Yöneticisi. Darüşşafaka Okulları-Yeditepe Üniversitesi. Eleştirel düşünme ile 5. Sınıf Matematik ders planlanması ve öğretilmesi. 2009-

2011 Post-doctoral research associate. Carnegie Mellon University.

“Learning with Multiple Graphical Representations in a Complex, Real-world domain: Intelligent Software Tutors for Fractions” funded by US National Science Foundation. Investigators: Vincent Aleven and Nikol Rummel (Budget: \$1 million).

2003 - 2006 Project Staff. Conducting research for Coordinating Students and Teachers Algebraic Thinking (CoSTAR) project at middle school level, University of Georgia (UGA). Andrew G. Izsák, PI (Budget: \$1.1million).

2004 - 2005 Project Staff. Conducted research in the project of Ontogenetic Algebraic Knowledge (OAK), teaching algebra to middle school students, UGA. Leslie P. Steffe, PI.

9. İdari Görevler

Bölüm Başkanlığı MEF Üniversitesi İlköğretim Matematik Öğretmenliği 2014-

MEF Üniversitesi Eğitim Fakültesi Dekan Yrd. 2015-

MEF Üniversitesi Senato Üyesi 2014-

MEF Üniversitesi Eğitim Fakültesi Staj Koordinatörü- 2017

Yeditepe Üniversitesini Matematik Öğretmenliği Bölümü Erasmus Kordinatorü 2012-2013

10. Bilimsel Kuruluşlara Üyelikler

Amerikan Milli Matematik Öğretmenliği Konsölü (National Council of Mathematics Teachers)

International Group for Psychology of Mathematics Education.

Türk Matematik Eğitimcileri Derneği

11. Ödüller

2018 Bilim Akademisi BAGEP Ödülü. 2 yıllık toplam 30 000 TL.

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

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

12.Son iki yılda verdiğiniz lisans ve lisansüstü düzeydeki dersleri için aşağıdaki tabloyu doldurunuz.

Akademik Yıl	Dönem	Dersin Adı	Öğrenci Sayısı
2015	Bahar	Okulda Üniversite Modeli ile Matematik öğretimi (İng)	2
2015	Güz	Introduction to Mathematics Teaching	15
2016	Bahar	Abstract Mathematics	19
2016	Güz	- Introduction to Discrete Mathematics - Introduction to Mathematics Teaching - Internship 1	17 21 3
2017	Bahar	-Foundations of Teaching Numbers, Operations and Algebra -Role of Mathematics in Science, Technology, and Engineering. -Internship 2	17 8 4
2017	Güz	-Introduction to Mathematics Teaching -School Internship 2 -School Internship 3	9 4 3

2018	Bahar	-Role of Mathematics in Science, Technology, and Engineering. -School Internship 2 -School Internship 3 -School Internship 4	19 3 1 2
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