

ÖZGEÇMİŞ

1. Adı Soyadı : Engin Karahan

İletişim Bilgileri

Adres : Eskişehir Osmangazi Üniversitesi Eğitim Fakültesi 403 Meşelik Kampüsü
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2. Doğum Yılı ve Yeri : 1986 - Rize

3. Unvanı : Yrd. Doç. Dr.

4. Öğrenim Durumu :

Derece	Alan	Üniversite	Yıl
Lisans	Fen Bilgisi Eğitimi	Hacettepe Üniversitesi	2008
Yüksek Lisans	Science Education, Curriculum and Instruction	University of Minnesota	2012
Doktora	STEM Education/Learning Technologies, Curriculum and Instruction	University of Minnesota	2015

5. Akademik Unvanlar

Görev Unvanı	Görev Yeri	Yıl
Researcher	STEM Education Center, University of Minnesota	2010-2015
Arş. Gör. Dr.	Eskişehir Osmangazi Üniversitesi, Eğitim Fakültesi	2015-2016
Yrd. Doç. Dr.	Eskişehir Osmangazi Üniversitesi, Eğitim Fakültesi	2016-...

7. Projeler

7.1. Uluslararası Projeler

- 7.1.1.** 2015 RGM: Exploring the relationship between the engineering design and cognition and skills transfer by examining an out-of-school, project-based contest (4-H grant) isimli projede proje yürütücüsü
- 7.1.2.** CYCLES: Teachers Discovering Climate Change from a Native Perspective (#NNX10AT53A): National Aeronautics and Space Administration (NASA) isimli projede arařtırmacı
- 7.1.3.** Reach for the Sky: Integrating technology into STEM outcomes for American Indian Youth (#0737565): National Science Foundation Information Technology Experiences for Students and Teachers (NSF-ITEST) isimli projede arařtırmacı
- 7.1.4.** WSC-Category 2, Collaborative: Climate and human dynamics as amplifiers of natural change: a framework for vulnerability assessment and mitigation planning (#1209402): National Science Foundation (NSF) isimli projede arařtırmacı
- 7.1.5.** AGAPE-Adolescent Girls and Parenting Education isimli projede proje yürütücüsü

7.2. Ulusal Projeler

- 7.2.1.** Fen Bilimleri Öğretmenlerine Yönelik Probleme Dayalı STEM Uygulamaları (116B497): TÜBİTAK-BİDEB isimli projede yürütücü
- 7.2.2.** Fen ve Teknoloji Öğretmenlerine Teknolojik Pedagojik Alan Bilgisi Kazandırma Amaçlı Eğitim Uygulamaları (116B467): TÜBİTAK-BİDEB isimli projede uzman
- 7.2.3.** Fen Bilimleri Öğretmenlerine Yönelik Argümantasyon Uygulamaları (116B437): TÜBİTAK-BİDEB isimli projede eğitimci
- 7.2.4.** Günlerden Bilim (116B086): 4007 TÜBİTAK Bilim Şenlikleri isimli projede eğitimci
- 7.2.5.** Fen ve Teknoloji Öğretmenlerine Teknolojik Pedagojik Alan Bilgisi Kazandırma Amaçlı Eğitim Uygulamaları (113B254): TÜBİTAK-BİDEB isimli projede eğitimci
- 7.2.6.** Fen ve Teknoloji Öğretmenlerine Teknolojik Pedagojik Alan Bilgisi Kazandırma Amaçlı Eğitim Uygulamaları (113B254): TÜBİTAK-BİDEB isimli projede eğitimci
- 7.2.7.** Fen ve Teknoloji Öğretmenlerine Teknolojik Pedagojik Alan Bilgisi Kazandırma Amaçlı Eğitim Uygulamaları II (213B751): TÜBİTAK-BİDEB isimli projede eğitimci
- 7.2.8.** Fen ve Teknoloji Öğretmenlerine Teknolojik Pedagojik Alan Bilgisi Kazandırma Amaçlı Eğitim Uygulamaları III (115B411): TÜBİTAK-BİDEB isimli projede eğitimci
- 7.2.9.** FeTeMM Eğitim Yaklaşımı: Fen Sınıflarının Disiplinlerarası Bağlarla Güçlendirilmesi (115B379): TÜBİTAK-BİDEB isimli projede eğitimci

8. Yayınlar

8.1. Uluslararası hakemli dergilerde yayınlanan makaleler

- 8.1.1. Karahan, E.,** Andzenge, S.T., & Roehrig, G. (2017). Eliciting students' understanding of a local socioscientific issue through the use of critical response pedagogies. *International Journal of Education in Mathematics, Science and Technology*, 5(2), 88-100.
DOI:10.18404/ijemst.93592 <http://www.ijemst.net/article/view/5000148421>
- 8.1.2. Karahan, E.,** & Roehrig, G. (2016). Secondary School Students' Understanding of Science and Their Socioscientific Reasoning. *Research in Science Education*. <http://link.springer.com/article/10.1007%2Fs11165-016-9527-9>
- 8.1.3. Karahan, E.** & Roehrig, G. (2016). Use of web 2.0 technologies to enhance learning experiences in alternative school settings. *International Journal of Education in Mathematics, Science and Technology*, 4(4), 272-283.
DOI:10.18404/ijemst.32930. <http://www.ijemst.net/article/view/5000147695>
- 8.1.4. Nam, Y., Karahan, E.,** & Roehrig, G. (2016). Native American Students' Understanding of Geologic Time Scale: 4th-8th Grade Ojibwe Students' Understanding of Earth's Geologic History. *International Journal of Environmental and Science Education*, 11(4), 485-503. <http://eric.ed.gov/?id=EJ1094590>
- 8.1.5. Karahan, E.,** & Roehrig, G. (2016). Use of socioscientific contexts for promoting student agency in environmental science classrooms. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*. 5(2), 425-442. <http://dx.doi.org/10.14686/buefad.v5i2.5000145998>
- 8.1.6. Karahan, E.,** Canbazoğlu Bilici, S., & Ünal, A. (2015). The integration Media Design Processes in STEM Education. *Eurasia Journal of Educational Research*, 60, 221-240. <http://dergipark.ulakbim.gov.tr/ejer/article/view/5000149170>
- 8.1.7. Karahan, E.,** & Roehrig, G. (2014). Constructing media artifacts in a social constructivist environment to enhance students' environmental awareness and activism. *Journal of Science Education and Technology*, 24(1), 1-16.
<http://link.springer.com/article/10.1007%2Fs10956-014-9525-5>
- 8.1.8. Karahan, E.,** Güzey, S., & Moore, T. (2014). Saving Pelicans: A STEM Integration Unit. *Science Scope*, 38(3),1-7.
https://www.nsta.org/store/product_detail.aspx?id=10.2505/4/ss14_038_03_28

8.2. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (Proceeding) basılan bildiriler.

- 8.2.1.** Bhattacharya, D., Roehrig, G., **Karahan, E.,** Liu, S. (2013). In-Service Secondary School Science Teachers' Conceptions About Global Climate Change. *American Educational Research Association (AERA)*.
- 8.2.2.** Roehrig, G., Bhattacharya, D., **Karahan, E.,** & Canbazoğlu Bilici, S. (2013). Watershed Conceptions of Upper Elementary American Indian Students During a Place Based Inquiry Unit on Watershed Management. *American Educational Research Association (AERA)*.

- 8.2.3. Karahan, E., & Roehrig, G. (2013).** Designing multimedia artifacts to enhance students' conceptual understanding of Climate Change. In *Society for Information Technology & Teacher Education International Conference* (Vol. 2013, No. 1, pp. 4902-4909).
- 8.2.4. Karahan, E., & Roehrig, G. (2013).** Designing Social Networks to Promote Student Motivation and Engagement in Alternative School Environments. In *Society for Information Technology & Teacher Education International Conference* (Vol. 2013, No. 1, pp. 4333-4340).
- 8.2.5. Karahan, E., Nam, Y., Roehrig, G., & Moore, T. (2012).** Native American Students' Understandings of Geologic Time Scale: 4-8. Grade Students' Understandings of Earth's Geologic History. *Procedia-Social and Behavioral Sciences*, 46, 3159-3163.

8.3. Uluslararası bilimsel toplantılarda sözlü olarak sunulan ve özet metin olarak yayımlanan bildiriler

- 8.3.1. Karahan, E., & Roehrig, G. (2016).** Case Studies of Secondary School Science Teachers Designing Technology Rich SSI-Based Instruction. National Association for Research in Science Teaching (NARST), Baltimore, MD.
- 8.3.2. Andzenge, S.T., Karahan, E., & Roehrig, G. (2015).** Digital Natives, Immigrants, and TPACK: An Exploration of Secondary Science Teachers and Technology. *MNeLearning Summit*, Minneapolis, MN.
- 8.3.3. Andzenge, S., Karahan, E., & Ellis, J. (2015).** Towards a Framework of Technological Knowledge as Content Knowledge. *Association for Educational Communications and Technology (AECT)*, Indiana, USA.
- 8.3.4. Bhattacharya, D., Karahan, E., & Roehrig, G. (2015).** Developing and Assessing Conceptual Thinking about Vulnerability towards Global Climate Change in Teachers serving Native American Communities. *American Educational Research Association (AERA)*, Chicago, IL.
- 8.3.5. Wang, H., & Karahan, E. (2015).** Building an RGM: How Youth Use Evidence-Based Argument to Identify the Best Solution to A Problem. *International Conference of Association of Science Teacher Education (ASTE)*, Portland, OR.
- 8.3.6. Bhattacharya, D., Karahan, E., & Roehrig, G. (2015).** In-service Secondary Science Teachers' Knowledge Base for Teaching Climate Change. *International Conference of Association of Science Teacher Education (ASTE)*, Portland, OR.
- 8.3.7. Karahan, E., Andzenge, S., Bhattacharya, D., & Roehrig, G. (2014).** A Technology Rich Professional Development Program and Its Influence on Participant Teachers' Practices. *Association for Educational Communications and Technology (AECT)*, Florida, USA.
- 8.3.8. Andzenge, S., Karahan, E., Bhattacharya, D., & Roehrig, G. (2014).** Technology Integration and Water Sustainability in STEM Education: a Professional Development Experience. *Association for Educational Communications and Technology (AECT)*, Florida, USA.

- 8.3.9.** Bhattacharya, D., **Karahan, E.**, Liu, S., & Roehrig, G.(2014). Using Photo Elicitation Interview to Conceptualize In-Service Secondary School Science Teachers' Knowledge for Climate Change. *National Association for Research in Science Teaching (NARST)*, Pittsburgh, PA.
- 8.3.10.** **Karahan, E.**, Bhattacharya, D., Andzenge, S., & Roehrig, G (2014). Secondary Science Teachers' Understanding of Socioscientific Issues and It's Effects on Their Curriculum Implementation Plans. *International Conference of Association of Science Teacher Education (ASTE)*, San Antonio, TX.
- 8.3.11.** **Karahan, E.**, & Roehrig, G. (2013) Addressing Environmental Issues through Social Networking Technologies and Media Design Projects. *National Association for Research in Science Teaching (NARST)*, Puerto Rico.
- 8.3.12.** Bhattacharya, D., **Karahan, E.**, Roehrig, G., (2013). The Impact of Technology Integrated Curriculum on Student Knowledge and Attitudes about Global Climate Change. *Annual Life Discovery Conference of the Ecological Society of America (ESA)*, St. Paul, MN.
- 8.3.13.** **Karahan, E.**, & Roehrig, G. (2013). Enhancing Student Awareness and Activism in Solving Environmental Problems through Constructionist & Social Constructivist Learning Processes. *International Conference of Association of Science Teacher Education (ASTE)*, Charleston, SC.
- 8.3.14.** Bhattacharya, D., **Karahan, E.**, Roehrig, G. (2013).Implementation of a Place-Based Approach to Enhance Students' Understanding of Watershed Management. *International Conference of Association of Science Teacher Education (ASTE)*, Charleston, SC.
- 8.3.15.** Canbazoglu Bilici, S., Guzey, S. Donna, J., Roehrig, G., **Karahan, E.**, Yamak, H., Kavak, N. (2013). A Technological Pedagogical Content Knowledge (TPACK)-Based Lesson Plan Assessment Instrument. *International Conference of Association of Science Teacher Education (ASTE)*, Charleston, SC.
- 8.3.16.** Nam, Y., **Karahan, E.**, Moore, T., Roehrig, G. (2012). Native American Students' Understanding of Geologic Time Scale: 4-8th Grade Students' Understandings of Earth's History. *International Conference of Association of Science Teacher Education (ASTE)*, Clearwater, FL.
- 8.3.17.** Bhattacharya, D., **Karahan, E.**, Nam,Y., Wang, J., Liu, S., Tierney,B. ,Varma, K., Roehrig, G.H. (2012). Conceptualizing In-service Secondary School Science Teachers' knowledge base for Climate Change Content. *National Association for Research in Science Teaching (NARST)*, Indianapolis, IN.
- 8.3.18.** Bhattacharya, D., **Karahan, E.**, Varma, K., Roehrig, G.H. (2012). Integrating Science and Technology for Enhancing Student Understanding of Global Climate Change. *STEM Colloquium on P-12 STEM Education Research*, Minneapolis, MN.
- 8.3.19.** Roehrig, G.H., Varma,K.,Campbell, K., Dalbotten, D., Bhattacharya, D., **Karahan, E.**, Nam,Y., Wang, J., .& Liu, S (2011) Teachers' Understanding of Climate Change for

Teaching Native American Students (Paper Set). *STEM Colloquium on P-12 STEM Education Research, St. Paul, MN.*

8.3.20. Canbazoğlu Bilici, S., Guzey, S., Donna, J. D., **Karahan, E.**, Roehrig, G., Yamak, H., & Kavak, N. (2012). A TPACK observation protocol to evaluate pre-service science teachers' use of technology (One hour breakout session), *STEM Colloquium on P-12 STEM Education Research, Minneapolis, MN.*

8.4. Uluslararası bilimsel toplantılarda sözlü olarak sunulan ve programda yayımlanan bildiriler

8.4.1. Karahan, E., Kılıç, Z., & Anagün, S. (2016). Fen ve Teknoloji Öğretimi Dersinde Probleme Dayalı STEM Uygulamaları ve Öğretmen Adaylarının Görüşleri. *International Eurasian Educational Research Congress. Muğla, TR.*

8.4.2. Canbazoğlu Bilici, S., Tekin, N., & **Karahan, E.** (2016). Öğretmen Adaylarının Fen Laboratuvarlarında QR Kodlarla Zenginleştirilmiş Poster Kullanımları. *International Eurasian Educational Research Congress. Muğla, TR.*

8.4.3. Karahan, E., & Andzenge, S. (2015). Engaging Students in Community-Based Issues Through Authentic Problem-Based Learning Experiences. *European Science Education Research Association (ESERA), Helsinki, Finland.*

8.4.4. El-Deghaidy, H., Ntow, F., Hassan, A., **Karahan, E.**, & Rizkallah, M. (2015). The Impact of Model-Eliciting Activities on Attitude Towards STEM Education. *European Science Education Research Association (ESERA), Helsinki, Finland.*

8.4.5. Karahan, E., & Wang, H. (2015). Use of an Online Learning Environment to Enhance The Experiences of Youth in Engineering Design Processes. *National Association for Research in Science Teaching (NARST), Chicago, IL.*

8.4.6. Andzenge, S., **Karahan, E.**, Bhattacharya, D., & Roehrig, G. (2015). Eliciting Students' Understanding of River Geography and Socioscientific Issues through a Critical Response Protocol. *National Association for Research in Science Teaching (NARST), Chicago, IL.*

8.4.7. Bhattacharya, D., **Karahan, E.**, Roehrig, G., (2013). The Impact of Technology Integrated Curriculum on Student Knowledge and Attitudes about Global Climate Change. *Annual Life Discovery Conference of the Ecological Society of America (ESA), St. Paul, MN.*

8.4.8. Karahan, E., & Roehrig, G. (2013). Use of Social Media in Diverse Classrooms to Increase Student Performance. *European Educational Research Associations (ECER), Istanbul, TR.*

8.4.9. Karahan, E., Bhattacharya, D., Bilici, S., & Roehrig, G. (2013). Enhancing Native American Students' Cognitive Knowledge and Regulation through the use of KWL Charts in a Place-based Learning Module. *European Educational Research Associations (ECER), Istanbul, TR.*

8.4.10. Karahan, E., Bhattacharya, D., & Roehrig, G. (2013). Understanding GCC: Improving Knowledge and Conceptual Understanding of In-service Secondary School Science Teachers. *European Educational Research Associations (ECER), Istanbul, TR.*

8.5. Ulusal hakemli dergilerde yayınlanan makaleler

- 8.5.1. Özer, I. E., Canbazoğlu Bilici, S., & Karahan, E. (baskıda). Fen bilimleri dersinde Algodoo kullanımına yönelik öğrenci görüşleri. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*.

8.6. Yazılan ulusal kitaplar veya kitaplarda bölümler

- 8.6.1. Karahan, E. & Canbazoğlu Bilici, S. (2015). Fen, Teknoloji, Mühendislik ve Matematik (FeTeMM) Eğitimi. In O. Keles (Ed.) *Uygulamalı etkinliklerle fen eğitiminde yeni yaklaşımlar*. Ankara, TR: Pegem Akademi.
- 8.6.2. Canbazoglu Bilici, S. & Karahan, E. (2015). ASSURE Modele Dayalı Teknoloji İle Zenginleştirilmiş Uygulamalı Etkinlikler. In O. Keles (Ed.) *Uygulamalı etkinliklerle fen eğitiminde yeni yaklaşımlar*. Ankara, TR: Pegem Akademi.

8.7. Ulusal bilimsel toplantılarda sunulan bildiri kitabında basılan bildiriler

- 8.7.1. Canbazoglu Bilici, S., Karahan, E., Yadigaroglu, M., Yamak, H., & Kavak, N. (2016). Teoriden Uygulamaya Teknolojik Pedagojik Alan Bilgisi. *12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Trabzon, TR*.
- 8.7.2. Bozkurt Altan, E., Ercan, S., & Karahan, E. (2016). Tasarım Temelli Fen Eğitime Yönelik Öğrenci Değerlendirmeleri: Bir Durum Çalışması. *12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Trabzon, TR*.
- 8.7.3. Canbazoğlu Bilici, S., Karahan, E., Özer, İ., & Doğan, H. (2016). Algodoo ile Tasarım. *STEM & Makers Fest/Expo Türkiye. Ankara, TR*.
- 8.7.4. Canbazoğlu Bilici, S., Karahan, E., Altıntaş, F., Albayrak, H., & Güder, B. (2016). Mobil Uygulamalar ile Eğlenceli Fen. *STEM & Makers Fest/Expo Türkiye. Ankara, TR*.
- 8.7.5. Canbazoğlu Bilici, S., Karahan, E., Ünal, A., & Özkan, S. (2016). PowToon ile STEM Eğitimi Spotu. *STEM & Makers Fest/Expo Türkiye. Ankara, TR*.
- 8.7.6. Karahan, E., Canbazoğlu Bilici, S., & Ünal, A. (2014). Fen, Teknoloji, Mühendislik ve Matematik (FeTeMM) Eğitime Medya Tasarım Süreçlerinin Entegrasyonu. *I. Avrasya Eğitim Araştırmaları Kongresi. İstanbul, TR*.
- 8.7.7. Karahan, E., Canbazoğlu Bilici, S., & Rizkallah, M. (2014) Fen, Teknoloji, Mühendislik, ve Matematik (FeTeMM) odaklı bir eğitim reformunun analizi: Mısır örneği. *XI. Ulusal Fen Bilimleri ve Matematik Egitimi Kongresi, Adana, TR*.
- 8.7.8. Karahan, E. (2014). Fen Öğretmenlerinin Teknolojik Pedagojik Alan Bilgilerinin Bağlam Faktörü Acısından İncelenmesi: Amerika Birleşik Devletleri (ABD) Örneği, *XI. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Adana, TR*.
- 8.7.9. Canbazoğlu Bilici, S., Karahan, E., Yamak, H. (2014) Teknolojik Pedagojik Alan Bilgisi Oyunu ile Fen Bilimleri Derslerine Teknoloji Entegresyonu, *XI. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Adana, TR*.

8.8. Diğer Yayınlar (Poster Sunumları)

- 8.8.1. Conceptualizing In-service Secondary School Science Teachers' Knowledge Base for Climate Change Content (2012). *American Geophysical Union, San Francisco, CA*.

- 8.8.2. Using Photo Elicitation Interview to Conceptualize In-Service Secondary School Science Teachers? Knowledge Base For Teaching Climate Change (2012). *American Geophysical Union, San Francisco, CA.*
- 8.8.3. Teachers discovering climate change from a native perspective (2012). *Department of Curriculum and Instruction, Graduate Research Day, University of Minnesota, MN.*
- 8.8.4. Teachers discovering climate change from a native perspective, (2012). *Ecological Society of America, Annual Conference, Portland, OR.*
- 8.8.5. Teachers discovering climate change with a Native perspective (2012). *CEHD Research Day, McNamara Alumni Center, University of Minnesota, MN.*
- 8.8.6. Integrating Science and Technology for enhancing student understanding of climate change (2012). *STEM (Science, Technology, Engineering and Mathematics) Center Colloquium, McNamara Alumni Center, University of Minnesota, MN*
- 8.8.7. Understanding Global Climate Change in Geological Time Scales. (2012). *Interactive poster set, "Sharing Efforts Resulting from NASA Faculty Institutes" at the International Conference of Association of Science Teacher Education, Clearwater, FL*
- 8.8.8. Teacher professional development for climate change education in Native communities (2011). *CEHD Research Day, McNamara Alumni Center, University of Minnesota, MN*
- 8.8.9. Enhancing Teachers' understanding of climate change for teaching Native American students, (2011). *Department of Curriculum and Instruction, Graduate Research Day, University of Minnesota, MN.*
- 8.8.10. Enhancing Teachers' understanding of climate change for teaching Native American Students (2011). *National Center of Earth Dynamics, NSF-NCED Science Retreat, Science Museum of Minnesota, St. Paul, MN.*
- 8.8.11. Teachers' understanding of climate change for teaching Native American students (2011) *STEM (Science, Technology, Engineering and Mathematics) Center Colloquium Continuing Education and Conference Center, St. Paul, MN.*
- 8.8.12. Enhancing Teachers' understanding of climate change for teaching Native American Students (2011) *Institute on environment sustainability symposium, University of Minnesota, MN.*

10. Bilimsel Kuruluşlara Üyelikleri

- 10.1. American Educational Research Association (AERA)
- 10.2. National Association for Research in Science Teaching (NARST)
- 10.3. Association of Science Teacher Education (ASTE)
- 10.4. European Science Education Research Associations (ESERA)
- 10.5. Association for Educational Communications and Technology (AECT)