

## Assoc. Prof. ÖMER FARUK ÖZDEMİR

### Personal Information

**Email:** ozdemir@metu.edu.tr

**Web:** <https://avesis.metu.edu.tr/ozdemir>

### Education Information

Doctorate, Ohio State University, Teaching & Learning , United States Of America 1999 - 2004

Undergraduate, Selcuk University, Faculty Of Science, Department Of Physics, Turkey 1991 - 1995

### Dissertations

Doctorate, The coexistence of alternative and scientific conceptions in physics, Ohio State University, Teaching & Learning , 2004

### Research Areas

Education in Natural Sciences, Teacher Training, Teacher Training For Secondary School, Teacher Training in Science and Math. at Second. Sch. Lev.

### Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty Of Education, Mathematics And Science Education, 2014 - Continues

Assistant Professor, Middle East Technical University, Faculty Of Education, Mathematics And Science Education, 2008 - 2014

Lecturer PhD, Middle East Technical University, Faculty Of Education, Mathematics And Science Education, 2005 - 2008

Research Assistant, Gebze Yüksek Teknoloji Enstitüsü, Fen Fakültesi, Fizik Bölümü, 1996 - 1998

### Academic and Administrative Experience

Middle East Technical University, Faculty of Education, Ortaöğretim Fen Ve Matematik Alanlar Eğitimi Bölümü, 2007 - Continues

### Advising Theses

ÖZDEMİR Ö. F. , Development of an instrument for science teachers' perceived readiness in STEM education, Postgraduate, A.NİHAN(Student), 2017

ÖZDEMİR Ö. F. , Effects of epistemologically enhanced instruction on ninth grade students' physics related personal epistemology and achievement in physics, Doctorate, K.ÖZMEN(Student), 2017

ÖZDEMİR Ö. F. , Field trips to science centers: Teachers' perspectives, roles, and reflections, Doctorate, E.ŞENTÜRK(Student), 2015

ÖZDEMİR Ö. F. , ERYILMAZ A., The effect of a professional development program on physics teachers' knowledge and their students' achievement in modern physics unit, Doctorate, N.BALTA(Student), 2014

ÖZDEMİR Ö. F. , Field trips to science centers : teachers' perspectives, roles and reflections, Doctorate, E.Şentürk(Student), 2014

ÖZDEMİR Ö. F. , Effects of instructions based on cognitive bridging and cognitive conflict on 9th grade students' understanding of force and motion, epistemological beliefs, and self-efficacy, Doctorate, İ.YAMAN(Student), 2013

ÖZDEMİR Ö. F. , Mode-method interaction: The effects of inquiry vs. expository and blended vs. face-to-face instruction on 9th grade students' achievement in, science process skills in and attitudes towards physics, Doctorate, A.ÇETİN(Student), 2013

ÖZDEMİR Ö. F. , Mode-method interaction: the effects of inquiry vs. expository and blended vs. face-to-face instruction on 9th grade students' achievement in, science process skills in and attitudes towards physics, Doctorate, A.Çetin(Student), 2013

ÖZDEMİR Ö. F. , An investigation of undergraduate students' scientific inquiry processes in a physics laboratory, Doctorate, C.ÜNAL(Student), 2012

YILDIRIM U., ÖZDEMİR Ö. F. , Assessment of high school physics teachers' pedagogical content knowledge related to the teaching of electricity, Doctorate, E.BAĞÇIVAN(Student), 2012

ÖZDEMİR Ö. F. , Method-approach interaction: The effects of learning cycle vs traditional and contextual vs non-contextual instruction on 11th grade students achievement in and attitudes towards physics, Doctorate, H.PEŞMAN(Student), 2012

ÖZDEMİR Ö. F. , Method-approach interaction:the effects of learning cycle vs traditional and contextual vs non-contextual instruction on 11th grade students' achievement in and attitudes towards physics, Doctorate, H.Peşman(Student), 2012

ÖZDEMİR Ö. F. , Role of thought experiments in solving conceptual physics problems, Doctorate, Ş.DÖNERTAŞ(Student), 2011

ÖZDEMİR Ö. F. , ÇAKIROĞLU J., Relation of cognitive and motivational variables with students' human circulatory system achievement in traditional and learning cycle classrooms, Doctorate, Ö.SADİ(Student), 2010

ÖZDEMİR Ö. F. , The effect of science centres on students' attitudes towards science, Postgraduate, E.ŞENTÜRK(Student), 2009

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Conceptualisation and development of the physics related personal epistemology questionnaire (PPEQ)**  
Ozmen K., ÖZDEMİR Ö. F.  
INTERNATIONAL JOURNAL OF SCIENCE EDUCATION, vol.41, no.9, pp.1207-1227, 2019 (Journal Indexed in SSCI)
- II. **Mode-Method Interaction: The Role of Teaching Methods on The Effect of Instructional Modes on Achievements, Science Process Skills, and Attitudes Towards Physics**  
ÇETİN A., ÖZDEMİR Ö. F.  
EURASIA JOURNAL OF MATHEMATICS SCIENCE AND TECHNOLOGY EDUCATION, vol.14, no.5, pp.1815-1826, 2018 (Journal Indexed in SSCI)
- III. **Pre-service Physics Teachers' Metacognitive Knowledge about Their Instructional Practices**  
Yerdelen-Damar S., ÖZDEMİR Ö. F. , Unal C.  
EURASIA JOURNAL OF MATHEMATICS SCIENCE AND TECHNOLOGY EDUCATION, vol.11, no.5, pp.1009-1026, 2015 (Journal Indexed in SSCI)
- IV. **The Nature and Role of Thought Experiments in Solving Conceptual Physics Problems**  
Kosem S. D. , ÖZDEMİR Ö. F.  
SCIENCE & EDUCATION, vol.23, no.4, pp.865-895, 2014 (Journal Indexed in SCI)
- V. **Transfer and conceptual change: the change process from the theoretical perspectives of coordination classes and phenomenological primitives**  
Ozdemir Ö. F.  
INSTRUCTIONAL SCIENCE, vol.41, no.1, pp.81-103, 2013 (Journal Indexed in SSCI)

- VI. **Approach-Method Interaction: The role of teaching method on the effect of context-based approach in physics instruction**  
PEŞMAN H., ÖZDEMİR Ö. F.  
INTERNATIONAL JOURNAL OF SCIENCE EDUCATION, vol.34, no.14, pp.2127-2145, 2012 (Journal Indexed in SSCI)
- VII. **Avoidance from Thought Experiments: Fear of misconception**  
ÖZDEMİR Ö. F.  
INTERNATIONAL JOURNAL OF SCIENCE EDUCATION, vol.31, no.8, pp.1049-1068, 2009 (Journal Indexed in SSCI)

### Articles Published in Other Journals

- I. **HARMANLANMIŞ VE YÜZ-YÜZE ÖĞRENME ORTAMLARINDA KULLANILAN ÖĞRETİM YÖNTEMLERİNİN İNTERNETE YÖNELİK TUTUMA ETKİSİ**  
ÇETİN A., ÖZDEMİR Ö. F.  
Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, vol.18, pp.1378-1403, 2018 (Other Refereed National Journals)
- II. **A Qualitative Inquiry about Students Conceptualizations of Force Concept in terms of Ontological Categories**  
ÖZDEMİR Ö. F.  
Journal of Turkish Science Education, vol.12, pp.29-42, 2015 (Refereed Journals of Other Institutions)
- III. **Using a Force Concept Inventory Test with Visually Impaired and Blind Students**  
Bülbül M. Ş. , Garip B., Özdemir Ö. F.  
European Journal of Physics Education, vol.6, pp.20-31, 2015 (Refereed Journals of Other Institutions)
- IV. **A physics laboratory course designed using problem based learning for prospective physics teachers**  
ÜNAL C., ÖZDEMİR Ö. F.  
European Journal of Science and Mathematics Education, vol.1, pp.29-33, 2013 (Refereed Journals of Other Institutions)
- V. **The Effect of Science Centres on Students Attitudes Towards Science**  
ŞENTÜRK E., ÖZDEMİR Ö. F.  
International Journal of Science Education, Part B, vol.4, pp.1-24, 2012 (Refereed Journals of Other Institutions)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Argumentation with counterintuitive physics questions: participants' views and critics**  
AYDIN ŞENGÜLEÇ Ö., BAHÇIVAN E., ÖZDEMİR Ö. F. , AZAR A.  
Turkish Physical Society 33rd International Physics Congress, 6 - 10 September 2017
- II. **The effect of argumentation-based laboratory implementation on participants' perceptions regarding argumentation**  
AYDIN ŞENGÜLEÇ Ö., BAHÇIVAN E., ÖZDEMİR Ö. F.  
Turkish Physical Society 33rd International Physics Congress, 6 - 10 September 2017
- III. **Fen Bilgisi Öğretmen Adaylarının Sezgiye Ters Fizik Problemleri ve Bilimsel Tartışma (Argümantasyon) Kavramlarına İlişkin Metaforik Algılarının İncelenmesi**  
ÇETİN A., AYDIN ŞENGÜLEÇ Ö., ÖZDEMİR Ö. F. , AZAR A.  
3. Ulusal Fizik Eğitim Kongresi, Ankara, Turkey, 14 - 16 September 2017
- IV. **Argumentation With Counterintuitive Physics Questions:Participants' Views And Critics**  
AYDIN ŞENGÜLEÇ Ö., BAHÇIVAN E., ÖZDEMİR Ö. F. , AZAR A.  
Turkish Physical Society 33rd International Physics Congress, Muğla, Turkey, 06 September 2017 - 10 September 2017, pp.472
- V. **Argumentation with counterintuitive physics questions:Participants' views and critics**  
AYDIN ŞENGÜLEÇ Ö., BAHÇIVAN E., ÖZDEMİR Ö. F. , AZAR A.

Türk Fizik Derneği 33. uluslararası fizik kongresi, 6 - 10 September 2017, pp.472

- VI. **The Effect Of Argumentation-Based Laboratory Implementation On Participants' Perceptions Regarding Argumentation**  
AYDIN ŞENGÜLEÇ Ö., BAHÇIVAN E., ÖZDEMİR Ö. F.  
Turkish Physical Society 33rd Physics Congress, Muğla, Turkey, 6 - 10 September 2017, pp.483
- VII. **Lise Öğrencilerinin Yedi Coğrafik Bölgeye Göre Kavram Yanılgıları Dağılımı Ve Öğrencilerin Kavram Yanılgıları Arasındaki İlişki Analizi**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., Eraslan F., Eryurt K., GARİP B., DEMİRTAŞ D.  
12. ULUSAL FEN BİLİMLERİ VE MATEMATİK EĞİTİMİ KONGRESİ, Turkey, 28 - 30 September 2016
- VIII. **Türkiye'xxde Lise Öğrencilerinin Fizik Konularındaki Kavram Yanılgılarının Coğrafik Bölgelere Göre Haritalanması**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., Eraslan F., Eryurt K., GARİP B., DEMİRTAŞ D.  
12. ULUSAL FEN BİLİMLERİ VE MATEMATİK EĞİTİMİ KONGRESİ, Turkey, 28 - 30 September 2016
- IX. **Lise Öğrencilerinin Kuvvet Ve Hareket Konusundaki Kavram Yanılgıları Ve Kinematik Grafiklerini Anlama Konusunda Yaşadığı Zorluklar**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., Eraslan F., Kübra E., GARİP B., DEMİRTAŞ D.  
12. ULUSAL FEN BİLİMLERİ VE MATEMATİK EĞİTİMİ KONGRESİ, Turkey, 28 - 30 September 2016
- X. **Lise Öğrencilerinin Basit Elektrik Devreleri Ve Geometrik Optik Konusundaki Kavram Yanılgıları**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., eraslan F., Eryurt K., GARİP B., DEMİRTAŞ D.  
12. ULUSAL FEN BİLİMLERİ VE MATEMATİK EĞİTİMİ KONGRESİ, Turkey, 28 - 30 September 2016
- XI. **Türkiye'de Lise Öğrencilerinin Fizik Konularındaki Kavram Yanılgılarının Coğrafik Bölgelere Göre Haritalanması**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., ALPTEKİN F., ÖZMEN K., DEMİRTAŞ D., Garip B.  
12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, 28 September 2016, pp.280
- XII. **Lise Öğrencilerinin Kuvvet ve Hareket Konusundaki Kavram Yanılgıları Ve Kinematik Grafiklerini Anlama Konusunda Yaşadığı Zorluklar**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., ERASLAN F., ÖZMEN K., DEMİRTAŞ D., GARİP B.  
12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, 28 September 2016
- XIII. **Lise Öğrencilerinin Basit Elektrik Devreleri Ve Geometrik Optik Konusundaki Kavram Yanılgıları**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., ERASLAN F., ERYURT K., DEMİRTAŞ D., Garip B.  
12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, 28 September 2016
- XIV. **Lise Öğrencilerinin Yedi Coğrafik Bölgeye Göre Kavram Yanılgıları Dağılımı ve Öğrencilerin Kavram Yanılgıları Arasındaki İlişki Analizi**  
ERYILMAZ A., ÖZDEMİR Ö. F., YILDIRIM U., ERASLAN F., ERYURT K., DEMİRTAŞ D., Garip B.  
12. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, 28 September 2016, pp.282
- XV. **The effect of teaching method on the effect of contextual approach A factorial design**  
PEŞMAN H., ÖZDEMİR Ö. F.  
2010 National Summer Conference – Integrating Science and Mathematics Education Research into Teaching, 20 - 23 June 2010
- XVI. **The Nature Of Thought Experiments Used By Students In Different Levels During Problem Solving In Physics**  
KÖSEM Ş., ÖZDEMİR Ö. F.  
The World Conference on Physics Education, 01 July 2012 - 06 September 2009
- XVII. **Preservice physics teachers knowledge about and use of students pre instructional thinking**  
YILDIRIM U., ÖZDEMİR Ö. F.  
European Science Education Research Association, 31 August - 04 September 2009
- XVIII. **Approaching to transfer from the perspective of actor oriented model**  
YERDELEN DAMAR S., ÖZDEMİR Ö. F.  
European Science Education Research Association, 31 August - 04 September 2009
- XIX. **What is the north star of the teacher s curriculum or national exams**  
ÜNAL C., PEŞMAN H., ÖZDEMİR Ö. F.

European Science Education Research Association, 31 August - 04 September 2009

**XX. University students perceptions about the laboratory environments and their interactions in a physics laboratory**

ÜNAL C., ÖZDEMİR Ö. F.

Frontiers in Science Education Research Conference, 22 - 24 March 2009, pp.119-127

**XXI. The Role of Metacognition in Facilitating Conceptual Change**

YÜRÜK N., beeth m. e. , ÖZDEMİR Ö. F.

National Association for Research in Science Teaching, 23 - 26 March 2003

## Supported Projects

ÖZDEMİR Ö. F. , Project Supported by Higher Education Institutions, ORTAÖĞRETİM FEN ÖĞRETMENLERİNİN STEM EĞİTİMİ HAKKINDAKİ GÖRÜŞLERİ, 2017 - 2017

YILDIRIM U., ERYURT K., ÖZDEMİR Ö. F. , ERYILMAZ A., GARİP B., DEMİRTAŞ D., Project Supported by Higher Education Institutions, Türkiye’de Lise Öğrencilerinin Fizik Konularındaki Kavram Yanılgılarının Coğrafik Bölgelere göre Haritalanması, 2013 - 2013

Özdemir Ö. F. , Akdur T. E. , TUBITAK Project, Geleneksel ve Mikro-Bilgisayar Temelli Laboratuvar Uygulamalarının 9. ve 10. Sınıf Öğrencilerinin Mekanik ve Elektrik Konularındaki Başarılarına, Tutumlarına, Özyeterlilik İnançlarına ve Bilimsel Süreç Becerilerine Etkilerinin Karşılaştırılması, 2010 - 2012

## Citations

Total Citations (WOS):31

h-index (WOS):3