

Asst. Prof. Elçin Emre Akdoğan

Personal Information

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Publons / Web Of Science ResearcherID: I-8842-2019

ScopusID: 57193323220

Yoksis Researcher ID: 48462

Biography

Elçin Emre Akdoğan completed her B.A in the department of Mathematics Education at Gazi University, Turkey in 2005, then she completed her M.S. in 2008, and Ph.D in 2015 at the same department. She worked as a research & teaching assistant between 2008 and 2016 in the department of Mathematics Education at Gazi University. She studied as a visiting researcher in the STEM Education Department at the University of Massachusetts Dartmouth and Kaput Center for Research and Innovation in STEM Education, USA between 2012-2013. She worked on data analysis of her Ph.D dissertation and took several Ph.D courses on Mathematics Education during her stay at the University of Massachusetts Dartmouth.

Elçin Emre Akdoğan studied on the development of high school students' mathematical discourses on geometric transformations through the commognitive perspective in her Ph.D dissertation. Her research interests include commognition, mathematical discourse, socio-cultural studies, discourse analysis, problem solving strategies, problem solving and creativity.

Education Information

Doctorate, Gazi University, Turkey 2008 - 2015

University of Massachusetts Dartmouth, United States Of America 2012 - 2013

Postgraduate, Gazi University, Turkey 2005 - 2008

Undergraduate, Gazi University, Turkey 2000 - 2005

Research Areas

Social Sciences and Humanities, Education

Academic Titles / Tasks

Associate Professor, TED University, Faculty Of Education, Dep.Of Mathematics And Science Education, 2024 - Continues

Assistant Professor, TED University, Faculty Of Education, Dep.Of Mathematics And Science Education, 2018 - 2024

Other, Gazi University, Department of Secondary Science and Mathematics Education, 2007 - 2016

Other, University of Massachusetts Dartmouth, STEM Education Department, 2012 - 2013

Academic and Administrative Experience

Rectorate Commissioner, TED University, Faculty Of Education, Dep.Of Mathematics And Science Education, 2022 - Continues

Deputy Head of Department, TED University, Faculty of Education, Dep.of Mathematics and Science Education, 2021 - Continues

Erasmus Program Department Coordinator, TED University, Faculty Of Education, Dep.Of Mathematics And Science Education, 2019 - 2024

Ulusal ve Uluslararası İşbirliği Komisyonu, Eğitim Fakültesi, TED University, Faculty Of Education, Dep.Of Mathematics And Science Education, 2019 - 2024

Courses

Undergraduate

Teaching Practice 2 (MATE), Undergraduate, 2023 - 2024, 2022 - 2023

Logical Reasoning, Undergraduate, 2022 - 2023, 2021 - 2022

Teaching of Geometry and Measurement, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Computer Assisted Mathematics Teaching, Undergraduate, 2022 - 2023

Practicum 1, Undergraduate, 2021 - 2022

History of Mathematics, Undergraduate, 2021 - 2022

Algorithm and Programming, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

History of Mathematics, Undergraduate, 2021 - 2022

Teaching Practice 1 (MATE), Undergraduate, 2022 - 2023

Philosophy of Mathematics, Undergraduate, 2021 - 2022

Calculus 1, Undergraduate, 2021 - 2022

Calculus 1, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Calculus 3, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

Linear Algebra 2, Undergraduate, 2020 - 2021, 2019 - 2020

Field Practice in School Counseling Services, Undergraduate, 2020 - 2021

Calculus 2, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Communication in Mathematics Classrooms, Undergraduate, 2020 - 2021

Linear Algebra 1, Undergraduate, 2019 - 2020

Analytical Geometry, Undergraduate, 2019 - 2020

Technology in Mathematics Education, Undergraduate, 2019 - 2020

Calculus I, Undergraduate, 2018 - 2019

Basic Algebraic Structures, Undergraduate, 2018 - 2019

Calculus II, Undergraduate, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

I. Ancient School Without Walls: Collective Creativity in the Mathematics Village

Emre Akdoğan E., Yazgan-Sag G.

CREATIVITY AND TECHNOLOGY IN MATHEMATICS EDUCATION, vol.10, pp.413-437, 2018 (SCI-Expanded)

II. The Development of Two High School Students' Discourses on Geometric Translation in Relation to the Teacher's Discourse in the Classroom

Emre Akdoğan E., Guecler B., ARGÜN Z.

EURASIA JOURNAL OF MATHEMATICS SCIENCE AND TECHNOLOGY EDUCATION, vol.14, no.5, pp.1605-1619, 2018 (SSCI)

Articles Published in Other Journals

- I. **Kindergarten and Primary Teachers' Noticing Within the Context of Vertical Team of Mathematics Lesson Study**
ÇELEBİ E. G., TOKER Z., ALKAŞ ULUSOY Ç., EMRE AKDOĞAN E., BALCI E., GÜZELLER G.
MATHEMATICS TEACHER EDUCATION AND DEVELOPMENT, vol.26, no.1, pp.1-21, 2024 (Scopus)
- II. **Examining mathematical creativity of prospective mathematics teachers through problem posing**
Emre Akdoğan E.
TEACHING MATHEMATICS AND ITS APPLICATIONS, vol.42, no.2, pp.150-169, 2023 (ESCI)
- III. **Creative Mathematics Experiences: Defining New Geometric Concepts.**
Emre Akdoğan E., Yazgan-Sağ G.
The Australian Mathematics Education Journal, vol.5, no.1, pp.19-24, 2023 (Peer-Reviewed Journal)
- IV. **Genesis of routines: Mathematical discourses on the Equal Sign and Variable**
Emre Akdoğan E.
Electronic Journal for Research in Science and Mathematics Education, vol.27, no.1, pp.77-94, 2023 (Peer-Reviewed Journal)
- V. **Lise öğrencilerinin Yansıma Kavramı üzerine Matematiksel Söylemlerinin Gelişimi**
Emre Akdoğan E., Güçler B., Argün Z.
Journal of Uludag University Faculty of Education., vol.32, no.2, pp.467-496, 2019
- VI. **Transformation of theoretical knowledge into instructional practice: A mathematics teacher's journey**
Emre Akdoğan E., Yazgan-Sag G.
ISSUES IN EDUCATIONAL RESEARCH, vol.29, no.1, pp.55-69, 2019 (ESCI)
- VII. **Lise Matematik Öğretmen Adaylarının Öğretmenlik Deneyimleri: Teoriden Uygulamaya Geçiş**
Emre Akdoğan E., Yazgan-Sağ G.
Kastamonu Education Journal, vol.26, no.1, pp.93-99, 2018
- VIII. **An Investigation on How Prospective Mathematics Teachers Design a Lesson Plan**
Emre Akdoğan E., Yazgan-Sağ G.
Ondokuz Mayıs University Journal of Education Faculty, vol.37, no.1, pp.81-96, 2018 (Peer-Reviewed Journal)
- IX. **Analysis of the Changes in Prospective Secondary Mathematics Teachers' Knowledge of Lesson Plan**
Yazgan-Sag G., Emre Akdoğan E.
JOURNAL OF EDUCATION AND FUTURE-EGITIM VE GELECEK DERGISI, no.12, pp.157-174, 2017 (ESCI)
- X. **Creativity from Two Perspectives: Prospective Mathematics Teachers and Mathematician**
Yazgan-Sag G., Emre Akdoğan E.
AUSTRALIAN JOURNAL OF TEACHER EDUCATION, vol.41, no.12, 2016 (ESCI)
- XI. **Prospective Secondary Mathematics Teachers' Reflections on Teaching after Their First Teaching Experience**
Yazgan-Sağ G., Emre Akdoğan E., Argün Z.
Acta Didactica Napocensia, vol.9, no.3, pp.1-10, 2016 (Peer-Reviewed Journal)
- XII. **Instructional design-based research on Problem Solving Strategies**
Emre Akdoğan E., Argün Z.
Acta Didactica Napocensia, vol.9, no.4, pp.15-24, 2016 (Peer-Reviewed Journal)

Books

- I. **Geometri Öğretiminde Yaratıcılık**
YAZGAN SAĞ G., EMRE AKDOĞAN E.
in: Geometri Öğretiminde Bilişsel Süreçler, Akkuş, R., Toluk-Uçar, Z., Duatepe-Paksu, A., Boz-Yaman, B., E. Bulut, S., Editor, Vizetek Yayıncılık, Ankara, pp.347-369, 2023
- II. **Dönüşüm Geometrisi ve Simetrisinin Öğretimi**

Emre Akdoğan E., Gürbüz F. N.

in: Geometri Öğretim Bilgisi, Boz-Yaman,B.,E. Bulut,S.,Duatetepe-Paksu,A.,Akkuş,R.,Toluk-Uçar,Z, Editor, Pegem A Yayıncılık, Ankara, pp.419-447, 2022

III. **Ancient school without walls: Collective creativity in Mathematics Village**

Emre Akdoğan E., Yazgan Sağ G.

in: Creativity and Technology in Mathematics Education, Freiman Viktor,Tassell Janet Lynee, Editor, Springer, London/Berlin , Berlin, pp.413-437, 2018

IV. **Geometrik Yer ve Çizimler**

Yazgan-Sağ G., Emre Akdoğan E.

in: Temel Matematiksel Kavramlar ve Uygulamaları, Aysun Nüket Elçi, Esra Bukova Güzel, Berna Cantürk Taşdan, Emre Ev Çimen, Editor, pp.581-588, 2016

Papers Published in Refereed Scientific Meetings

I. **Explorative participation in the context of a classroom discourse**

Emre Akdoğan E., Gürbüz F. N.

ETC12-ERME Topic Conference: Language in the Mathematics Classroom, Oxford, England, 7 - 10 September 2022, pp.30-37

II. **Çelebi-İlhan, G.E, Toker, Z., Alkaş-Ulusoy, Ç., Emre-Akdoğan, E., Balcı, E. & Güzeller, G. (2022, August). Improving Teaching by Problem Solving in Lesson Study,**

Çelebi E. G., Toker Z., Alkaş Ulusoy Ç., Emre Akdoğan E., Balcı E., Güzeller G.

Promath 2022 Conference, Thessaloniki, Greece, 22 - 24 August 2022, pp.26-27

III. **An Investigation of the Planning Phase of a Lesson Study Conducted with Teachers Teaching Mathematics at Different Grade Levels (Farklı Sınıf Düzeylerinde Matematik Öğreten Öğretmenler İle Yürütülen Bir Ders Araştırmasının Planlama Aşamasının İncelenmesi)**

Çelebi İlhan E. G., Toker Z., Alkaş Ulusoy Ç., Emre Akdoğan E., Güzeller G., Balcı E.

5. Uluslararası Türk Bilgisayar ve Matematik Eğitimi Sempozyumu, Antalya, Turkey, 28 - 30 October 2021, pp.440

IV. **Discursive development of Eda on the concept of reflection**

Emre Akdoğan E., Güçler B., Argün Z.

ETC7-Seventh ERME Topic Conference: Language in the Mathematics Classroom, 18 - 21 February 2020

V. **Problem Posing in the Context of Photo-MathProject**

Emre Akdoğan E.

21st Conference on Problem Solving in Mathematics Education (ProMath), Ljubljana, Slovenia, 11 - 13 September 2019, pp.1

VI. **High School Students' Mathematical Discourses on the Equal Sign and Variable through Commognitive Perspective**

Emre Akdoğan E.

4. Uluslararası Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (TÜRK BİLMAT-4), İzmir, Turkey, 26 - 28 September 2019, pp.1

VII. **One High School Student's Discursive Development on Reflection in Relation to Instruction from a Commognitive Perspective. The 1st International Commognitive Workshop.**

Emre Akdoğan E., Güçler B., Argün Z.

VIII. **One Student's Discursive Development on Rotation in Relation to Instruction from a Commognitive Perspective.**

Emre Akdoğan E., Güçler B., Argün Z.

42nd Conference of the International Group for the Psychology of Mathematics Education, 23 - 27 July 2018, vol.2, pp.403-410

IX. **Proof Evaluation: Mathematicians and Prospective Mathematics Teachers' Perspectives**

Yakıcı-Topbaş S., Emre Akdoğan E., Aktaş F., Yazgan-Sağ G., Argün Z.

X. **What Makes A Proof, Convincing Proof?**

- Aktaş F., Yazgan-Sağ G., Yakıcı-Topbaş S., Emre Akdoğan E., Argün Z.
- XI. **Is this mathematical proof convincing or not?**
Aktaş F., Yazgan-Sağ G., Yakıcı-Topbaş S., Emre Akdoğan E., Argün Z.
- XII. **Prospective Secondary Mathematics Teachers' Reflections on Teaching after their First Teaching Experience**
Emre Akdoğan E., Yazgan-Sağ G.
- XIII. **An Investigation of Prospective Mathematics Teachers' Pedagogical Content Knowledge in the Beginning of their Profession.**
Emre Akdoğan E., Yazgan-Sağ G.
- XIV. **Prospective Teachers' Views of Creativity in School Mathematics**
Emre Akdoğan E., Yazgan-Sağ G.
The 9th International Mathematical Creativity and Giftedness (MCG-9) Conference, 18 - 19 August 2015
- XV. **Instructional design-based research on Problem Solving Strategies.**
Emre Akdoğan E., Argün Z.
- XVI. **Lise Matematik Öğretmenin Öteleme İle İlgili Matematiksel Söylemleri.**
Emre Akdoğan E., Güçler B., Argün Z.
- XVII. **One High School Student's Development of Mathematical Discourse on Translation**
Emre Akdoğan E., Güçler B., Argün Z.
35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, 11 - 14 November 2013, pp.207-210
- XVIII. **Talking about mathematics: quadratic equations**
Emre Akdoğan E., ARGÜN Z.
4th World Conference on Educational Sciences (WCES), Barcelona, Spain, 2 - 05 February 2012, vol.46, pp.5306-5310
- XIX. **Matematik Öğretmen Adaylarının Matematiksel Problem Durumlarında Kullandıkları Öz düzenleme Stratejileri**
Yazgan-Sağ G., Güllük H., Emre Akdoğan E., Argün Z.
IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, 16 - 19 August 2010
- XX. **Matematik Öğretmen Adaylarının Matematiksel Dil Kullanımları**
Emre Akdoğan E., Yazgan-Sağ G., Güllük H., Argün Z.
IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi
- XXI. **Matematik Öğretmen Adaylarının İspat Yaparken Karşılaştıkları Güçlükler**
Güllük H., Emre Akdoğan E., Yazgan-Sağ G., Argün Z.
IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Türkiye.
- XXII. **Matematiksel Kavramların Öğretiminde Alternatif bir Yaklaşım: Hareketli Matematiksel Modeller.**
Yazgan-Sağ G., Güllük H., Emre Akdoğan E.
- XXIII. **Teacher Sceneries Related to "Length, Area, and Volume Concept": Turkey Case.**
Emre Akdoğan E., Argün Z., Yazgan-Sağ G.
The 5th International Balkan Education and Science Congress, 7 - 10 September 2009
- XXIV. **On Choosing Skills of High School Students at Problem Solving Strategies.**
Emre Akdoğan E., Argün Z.
- XXV. **Teacher sceneries related to "Angle Concept": Turkey case**
Yazgan G., ARGÜN Z., Emre Akdoğan E.
World Conference on Educational Sciences, Nicosia, CYPRUS, 4 - 07 February 2009, vol.1, pp.285-290
- XXVI. **Lise Öğrencilerinin Uygun Matematiksel Problem Çözme Stratejilerini Kullanabilme Becerileri**
Emre Akdoğan E., Argün Z.

Supported Projects

Emre Akdoğan E., Alkaş Ulusoy Ç., TUBITAK Project, Akıl Yürütmeyi Destekleyici Sınıf Ortamındaki Öğrenci Katılım

Biçimlerinin İncelenmesi, 2023 - 2025

Emre Akdoğan E., Ölçer S., Katı B., Akbaba A., Çakır B., Project Supported by Higher Education Institutions, "Co-Design of STEM+A Education Module by Using MBot, Arduino, and Mblock", 2021 - 2022

Gürbüz T., Emre Akdoğan E., Other International Funding Programs, "Design Skills Labs Material and Content Development" (Ref: EDU/TURA/2019-13 (LRPS-2019- 9153504), 2020 - 2021

Argün Z., Emre Akdoğan E., Project Supported by Higher Education Institutions, Lise Öğrencilerinin Geometrik Dönüşümlerle ilgili Matematiksel Söylemlerinin Gelişiminin İncelenmesi, 2012 - 2015

Peer Reviews in Scientific Publications

14th Congress of the European Society for Research in Mathematics Education (CERME-14), Conference Paper (Full Text), October 2024

EDUCATIONAL STUDIES IN MATHEMATICS AN INTERNATIONAL JOURNAL, Journal Indexed in SSCI, October 2024

INTERNATIONAL JOURNAL OF SCIENCE AND MATHEMATICS EDUCATION, Journal Indexed in SSCI, September 2024

TEACHING MATHEMATICS AND ITS APPLICATIONS AN INTERNATIONAL JOURNAL OF I M A, Journal Indexed in ESCI, October 2023

Yükseköğretim ve Bilim Dergisi, National Scientific Refreed Journal, March 2023

Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, August 2022

Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, June 2022

The Proceedings of the ERME Topic Conference, ETC12: Language in the Mathematics Classroom (Oxford University), April 2022

Malaysian Online Journal of Educational Sciences, June 2021

Milli Eğitim Dergisi, June 2021

Eğitim ve Toplum Araştırmaları Dergisi, May 2021

INTERNATIONAL JOURNAL OF MATHEMATICAL EDUCATION IN SCIENCE AND TECHNOLOGY, May 2021

Journal of Educational Research in Mathematics, April 2021

INTERNATIONAL JOURNAL OF MATHEMATICAL EDUCATION IN SCIENCE AND TECHNOLOGY, December 2020

CENTER FOR EDUCATIONAL POLICY STUDIES JOURNAL, September 2020

Milli Eğitim Dergisi, May 2020

CENTER FOR EDUCATIONAL POLICY STUDIES JOURNAL, April 2020

On Dokuz Mayıs University Journal of Educational Faculty, February 2020

Ankara University Journal of Faculty of Educational Sciences, January 2020

III. International Teacher Education and Accreditation Congress, November 2019

The Proceedings of the ERME Topic Conference, ETC7: Language in the Mathematics Classroom, September 2019

On Dokuz Mayıs University Journal of Educational Faculty, April 2019

Journal of Mathematical Behavior, November 2018

The Proceedings of the ERME Topic Conference, Mathematics Education in the Digital Age, September 2018

EURASIA JOURNAL OF MATHEMATICS, SCIENCE AND TECHNOLOGY EDUCATION, May 2018

The Proceedings of the 42nd annual meeting of the International Group for the Psychology of Mathematics Education, March 2018

Eurasian Journal of Physics and Chemistry Education, June 2017

SCHOOL SCIENCE AND MATHEMATICS JOURNAL FOR ALL SCIENCE AND MATHEMATICS TEACHERS, June 2017

Scientific Project Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, June 2024

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, November 2023

Tasks In Event Organizations

Çelikdemir K., Emre Akdoğan E., Genç Ersoy B., Serim Yıldız B., İlgün Dibek M., Onaylı S., Xth International Eurasian Educational Research Congress, Scientific Congress, Ankara, Turkey, Haziran 2023

EMRE AKDOĞAN E., 3. Uluslararası Öğretmen Eğitimi ve Akreditasyon Kongresi, Aralık 2019