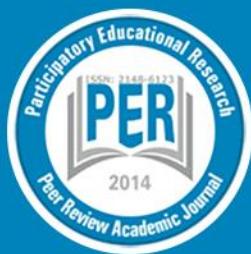


ISSN: 2148-6123 • PERJOURNAL.COM



# PARTICIPATORY EDUCATIONAL RESEARCH

VOLUME 9 • ISSUE 1 • JANUARY 2022





# **Participatory Educational Research (PER)**

**ISSN: 2148-6123**

**Double Blind Peer Review International Academic Journal**

**Volume 9, Issue 1  
January 2022**

**Indexed in Eric, Scopus, Ebsco, Turkish Educational Index, Idealonline, Sicilit,  
Rootindex, Asos Index**

**OWNER & PUBLISHER**

Dr. Özgen KORKMAZ

Amasya University, Technology Faculty, Department of Computer Engineering  
Amasya/Turkey

Dr. Recep ÇAKIR

Amasya University, Education Faculty, Department of Computer Education and Instructional Technology  
Amasya/Turkey

**EDITOR IN CHIEF**

Dr. Özgen KORKMAZ (Amasya University, Instructional Technology, Turkey)

**EDITORS**

Dr. Recep ÇAKIR (Amasya University, Instructional Technology, Turkey)

Dr. Norma NEL (University of South Africa, Educational Psychology, South Africa)

Dr. Norma ROMM (University of South Africa, Adult Basic Education and Youth Development, South Africa)

Dr. Emrah AKMAN (Ordu University, Turkey)

Dr. Pınar AYYILDIZ (Ankara Medipol University, Turkey)

Dr. Volkan KUKUL (Amasya University, Turkey)

**LANGUAGE EDITOR**

Dr. Pınar AYYILDIZ (Ankara Medipol University)

**PUBLICATION EDITOR**

Lec. S. Serkan TAN (Amasya University, Turkey)

**EDITORIAL BOARD**

Dr. Ahmet MAHİROĞLU (Gazi University, Turkey)

Dr. Aykut Emre BOZDOĞAN (Gaziosmanpaşa University, Science Education, Turkey)

Dr. Büket AKKOYUNLU (Hacettepe University, Turkey)

Dr. Chi-Jen HUANG (National Chiayi University, Taiwan)

Dr. Dimiter G. VELEV (University of National and World Economy, Bulgaria)

Dr. Dragana Martinovic (University of Windsor, Canada)

Dr. Deniz DERYAKULU (Ankara University, Turkey)

Dr. Dorian Stoilescu (University of Western Sydney NSW, Australia)

Dr. Ertuğrul USTA (Necmettin Erbakan University, Instructional Technology, Turkey)

Dr. Fok PING-KWAN (Hong Kong Institute of Education, Hong Kong)

Dr. Gail CARUTH (Texas A&M University-Commerce, USA)

Dr. Hafize KESER (Ankara University, Turkey)

Dr. Halil İbrahim YALIN (Gazi University, Turkey)

Dr. Hsueh-hua CHUANG (National Sun Yat-sen University, Taiwan)

Dr. H. Ferhan ODABAŞI (Anatolia University, Turkey)

Dr. Helen R. ABADIANO (Central Connecticut State University, USA)

Dr. Esteban Vazquez Cano (Universidad Nacional de Educación a Distancia, Spain)

Dr. Inés LOZANO-CABEZAS (University of Alicante, Spain)

Dr. Janet MCINTYRE (Flinders University Adelaide Area, Australia)

Dr. Javier Fombona CADAVIECO (Universidad de Oviedo, Spain)

Dr. Jeffrey L. DEREVENSKY (McGill University, Canada)

Dr. Jeonghee NAM (Pusan National University, Korea)

Dr. John HAMMOND (University of Canberra, Australia)

Dr. José GIJON PUERTA (Universidad de Granada, Spain)

Dr. Kristóf FENYVESI (University of Jyväskylä, Finland)

Dr. LDM LEBELOANE (University of South Africa, South Africa)

Dr. LINPU WANG (Zhejiang International Studies University, China)

Dr. María Angeles Pascual Sevillano (Universidad de Oviedo, Spain)

Dr. Marcos Jesús IGLESIAS-MARTINEZ (University of Alicante, Spain)

Dr. Margaret MURUGAMI (Kenyatta University, Kenya)

Dr. Michelle FINESTONE (University of Pretoria, South Africa)

Dr. Mike DIBOLL (University of Sussex, UK) Dr. Mary C. HERRING (University of Northern Iowa, USA)

Dr. Mitchell BECK (Central Connecticut State University, USA)

Dr. Murat GUNEL (TED University, Turkey)

Dr. Oktay AKBAŞ (Kirikkale University, Turkey)

Dr. Oluyemi STEPHENS (University of South Africa, South Africa)



Participatory Educational Research (PER)

Dr. Orhan KARAMUSTAFAOĞLU (Amasya University, Turkey)  
 Dr. Petra ENGELBRECHT (Canterbury Christ Church University, UK).  
 Dr. Pieter Hertzog dU TOIT (University of Pretoria, South Africa).  
 Dr. Raymond LEBLANC (University of Ottawa, Canada)  
 Dr. Rachel OUTHRED (Oxford Policy Management, UK)  
 Dr. Revathy PARAMESWARAN (P.S. Senior Secondary school, India)  
 Dr. Ruth Gannon COOK (DePaul University, USA)  
 Dr. Soner M. ÖZDEMİR (Mersis University, Turkey)  
 Dr. Sofia D. ANASTASIADOU (University of West Macedonia, Greece)  
 Dr. Steve SHARRA (Michigan State University, USA)  
 Dr. Susana Agudo Prado (Universidad de Oviedo, Spain)  
 Dr. Süleyman YAMAN (Ondokuz Mayıs University, Turkey)  
 Dr. Ufuk KARAKUŞ (Gazi University, Tukey)  
 Dr. Uğur DEMİRAY (Anadolu University, Turkey)  
 Dr. Veronica McKay (University of South Africa, South Africa)  
 Dr. Yurdal DİKMENLİ (Ahi Evran University, Kırşehir)  
 Dr. Zeki KAYA (Gazi University, Turkey)  
 Dr. Zsolt LAVICZA (Cambridge University, UK)

#### REVIEWER OF THE ISSUE

---

Abdurrahman Şahin (Pamukkale Un., Turkey)	Kemal Baytemir (Amasya Un., Turkey)
Alper Altuncakic (Gazi Un., Turkey)	Levent Akgün (Atatürk Un., Turkey)
Ayhan Karaman (Sinop Un., Turkey)	Mehmet Özenc (Gaziantep Un., Turkey)
Aykut Emre Bozdoğan (Tokat Gaziosmanpaşa Un., Turkey)	Meltem Huri Baturay (Atilim University, Turkey)
Bayram Bozkurt (Gaziantep Un., Turkey)	Mustafa Uzoğlu (Giresun Un., Turkey)
Bülent Akbaba (Gazi Un., Turkey)	Müge Selçuk (Eskişehir Osmangazi Un., Turkey)
Canan Avci (Ondokuz Mayıs Un., Turkey)	Nergüz Bulut Serin (Lefke Avrupa Un., Northern Cyprus)
Canan Laçın Şimşek (Sakarya Un., Turkey)	Nigar İpek Eğilmez (Muğla Sitki Koçman Un., Turkey)
Cezmi Ünal (Gaziosmanpaşa Un., Turkey)	Nurhan Öztürk (Sinop Un., Turkey)
Cağırı Öztürk Demirbaş (Kırşehir Ahi Evran Un., Turkey)	Oğuz Özdemir (Gazi Un., Turkey)
Demet Seban (Alanya Alaaddin Keykubat Un., Turkey)	Osman Basit (Gazi Un., Turkey)
Ebru Külekçi Akyavuz (Kilis 7 Aralık Un., Turkey)	Rifa Hidayah (The State Islamic University Of Maulana Malik Ibrahim Malang, Indonesia)
Eren Kesim (Anadolu Un., Turkey)	S. Barbaros Yalcin (Necmettin Erbakan Un., Turkey)
Ericka Darmawan (Tidar University, Indonesia)	Sevinç Köseoglu Ulubatlı (Ankara Müzik Ve Güzel Sanatlar Un., Turkey)
Ertuğrul Usta (Necmettin Erbakan Un., Turkey)	Süleyman Yaman (Ondokuz Mayıs Un., Turkey)
Esat Şanlı (Ondokuz Mayıs Un., Turkey)	Sümeyra Akkaya (İnönü Un., Turkey)
Fatma Burcu Topu (Atatürk Un., Turkey)	Sümeyye Aydin Güler (Gaziantep Un., Turkey)
Feray Uğur Erdoğmuş (Amasya Un., Turkey)	Şahin Kesici (Necmettin Erbakan Un., Turkey)
Filiz Elmali (Fırat Un., Turkey)	Şule Tepetas Cengiz (Bolu Abant İzzet Baysal Un., Turkey)
Gülözge Türköz (Pamukkale Un., Turkey)	Tayfun Tutak (Fırat Un., Turkey)
Halük Ünsal (Gazi Un., Turkey)	Türker Kurt (Gazi Un., Turkey)
Hatice Yıldız Durak (Bartın Un., Turkey)	Yalın Kılıç Türel (Fırat Un., Turkey)
Hulya Ercan (Karamanoğlu Mehmetbey Un., Turkey)	Yurdal Dikmenli (Kırşehir Ahi Evran Un., Turkey)
Hülya Çelik (Sakarya Un., Turkey)	Zehra Sedef Korkmaz (Artvin Çoruh Un., Turkey)
İşıl İşler Baykal (Orta Doğu Teknik Un., Turkey)	
İdris Kaya (Gaziantep Un., Turkey)	

---

## TABLE OF CONTENTS

Mixed Method Research on Effective Psychological Counselor Characteristics and Empowerment Needs of Turkish School Counselors <a href="http://dx.doi.org/10.17275/per.22.1.9.1">http://dx.doi.org/10.17275/per.22.1.9.1</a> <i>Süle Baştemur, Semra Uçar</i>	1-21
Investigation of Teachers' Reflections on Countrywide Tablet PC and Interactive White Board Initiative in Turkish Schools <a href="http://dx.doi.org/10.17275/per.22.2.9.1">http://dx.doi.org/10.17275/per.22.2.9.1</a> <i>Sönmez Pamuk</i>	22-40
Examining the Effects of Movement Activities of Coordinated Approach to Child Health (CATCH) Program on Locomotor and Manipulative Skills of 4-5 Years Old Children <a href="http://dx.doi.org/10.17275/per.22.3.9.1">http://dx.doi.org/10.17275/per.22.3.9.1</a> <i>Zeynep KILIÇ, Gülden UYANIK, Saime ÇAĞLAK SARI</i>	41-60
The Mediator Role of Critical Thinking Disposition in the Relationship between Perceived Problem-Solving Skills and Metacognitive Awareness of Gifted and Talented Students <a href="http://dx.doi.org/10.17275/per.22.4.9.1">http://dx.doi.org/10.17275/per.22.4.9.1</a> <i>Murat BORAN, Fazilet KARAKUŞ</i>	61-72
Investigation of the Effect of Web 2.0 Supported 5E Learning Model on Students' Success and Opinion in Teaching Pressure Unit in Distance Education <a href="http://dx.doi.org/10.17275/per.22.5.9.1">http://dx.doi.org/10.17275/per.22.5.9.1</a> <i>Ceyda BALCI ÇÖMEZ, Erkan ÇAVUMİRZA, Mehtap YILDIRIM</i>	73-97
Teachers' attitudes and the challenges they experience concerning individualized education program (IEP): A mixed method study <a href="http://dx.doi.org/10.17275/per.22.6.9.1">http://dx.doi.org/10.17275/per.22.6.9.1</a> <i>İshak KOZİKOĞLU, Ezgi Nur ALBAYRAK</i>	98-115
Review of problem-solving measurement: an assessment developed in the Indonesian context <a href="http://dx.doi.org/10.17275/per.22.7.9.1">http://dx.doi.org/10.17275/per.22.7.9.1</a> <i>Azizul Ghofar Candra WİCAKSONO, Erzsébet KOROM</i>	116-136
The Effect of Using Web 2.0 Tools in the Primary School 4th-Grade Science Course on Various Variables <a href="http://dx.doi.org/10.17275/per.22.8.9.1">http://dx.doi.org/10.17275/per.22.8.9.1</a> <i>Mustafa Ziya UYSAL, Barış ÇAYCI</i>	137-149
Examination of Turkish Middle School Students' National Belonging Levels in Terms of Different Variables <a href="http://dx.doi.org/10.17275/per.22.9.9.1">http://dx.doi.org/10.17275/per.22.9.9.1</a> <i>Nihal BALOGLU UGURLU</i>	150-172
Critical Thinking Skills of Environmental Changes: A Biological Instruction Using Guided Discovery Learning-Argument Mapping (GDL-AM) <a href="http://dx.doi.org/10.17275/per.22.10.9.1">http://dx.doi.org/10.17275/per.22.10.9.1</a> <i>Rizhal RISTANTO, Arin SABRİNA, Ratna KOMALA</i>	173-191
The Relationship between Scientific Inquiry and Communication Skills with Beliefs about the Nature of Science of Pre-Service Science Teachers' <a href="http://dx.doi.org/10.17275/per.22.11.9.1">http://dx.doi.org/10.17275/per.22.11.9.1</a> <i>Barış ÖZDEN, Nilgün YENİCE</i>	192-213
Review of Entrepreneurship Education Literature in Educational Contexts: Bibliometric Analysis <a href="http://dx.doi.org/10.17275/per.22.12.9.1">http://dx.doi.org/10.17275/per.22.12.9.1</a> <i>İsa DEVEÇİ</i>	214-232



Systematic analysis of digital reading studies in the digital age <a href="http://dx.doi.org/10.17275/per.22.13.9.1">http://dx.doi.org/10.17275/per.22.13.9.1</a> <i>Zuhal ÇELİKTÜRK SEZGİN</i>	233-250
Conflict in Schools: A Qualitative Study <a href="http://dx.doi.org/10.17275/per.22.14.9.1">http://dx.doi.org/10.17275/per.22.14.9.1</a> <i>Ramazan ERTÜRK</i>	251-270
Pre-service science teachers' processes of establishing simple electric circuits <a href="http://dx.doi.org/10.17275/per.22.15.9.1">http://dx.doi.org/10.17275/per.22.15.9.1</a> <i>Cezmi ÜNAL</i>	271-284
The Mediating Role of Psychological Flexibility in Explaining Authenticity and Life Satisfaction with Alexithymia <a href="http://dx.doi.org/10.17275/per.22.16.9.1">http://dx.doi.org/10.17275/per.22.16.9.1</a> <i>Sena KARAKUŞ, Sinem Evin AKBAY</i>	285-302
Bibliometric Assessment Based on Web of Science Database: Educational Research Articles on Botanic Gardens, National Parks, and Natural Monuments <a href="http://dx.doi.org/10.17275/per.22.17.9.1">http://dx.doi.org/10.17275/per.22.17.9.1</a> <i>Aykut Emre BOZDOĞAN, Abdulkerim DEMİR, Dilek ŞAHİNPINAR</i>	303-323
An Analysis of the Effect of Writing-to-Learn Activities Regarding Students' Academic Achievement and Self-Regulation Skills in Writing <a href="http://dx.doi.org/10.17275/per.22.18.9.1">http://dx.doi.org/10.17275/per.22.18.9.1</a> <i>Fatih KAYAALP, Elif MERAL, Zeynep BAŞCI NAMLI</i>	324-348
Developing a Distance Education Self-Efficacy Belief Scale: A Validity and Reliability Study <a href="http://dx.doi.org/10.17275/per.22.19.9.1">http://dx.doi.org/10.17275/per.22.19.9.1</a> <i>Alper ALTUNÇEKİÇ</i>	349-361
Developing a guiding model of educational leadership in higher education during the COVID-19 pandemic: A grounded theory study <a href="http://dx.doi.org/10.17275/per.22.20.9.1">http://dx.doi.org/10.17275/per.22.20.9.1</a> <i>Gürol YOKUŞ</i>	362-387
Inclination State on the Philippine Culture and Arts Using the Appraisal Theory: Factors of Progress and Deterioration <a href="http://dx.doi.org/10.17275/per.22.21.9.1">http://dx.doi.org/10.17275/per.22.21.9.1</a> <i>Carrie Danae BRAVO, Feliz Danielle DIMALANTA, Kate Ashley JUSAY, Martina Ysabel VITUG, Almighty TABUENA</i>	388-403
The Learning Trajectory Construction of Elementary School Students in Solving Integer Word Problems <a href="http://dx.doi.org/10.17275/per.22.22.9.1">http://dx.doi.org/10.17275/per.22.22.9.1</a> <i>Andi SAPARUDDİN NUR, Kartono KARTONO, Zaenuri ZAENURİ, Rochmad ROCHMAD</i>	404-424
Preservice Teachers' Material Preparation Knowledge and Points to be considered While Developing the Material <a href="http://dx.doi.org/10.17275/per.22.23.9.1">http://dx.doi.org/10.17275/per.22.23.9.1</a> <i>Selin ÇENBERCİ</i>	425-442
The Montessori Educational Method: Communication and Collaboration of Teachers with the Child <a href="http://dx.doi.org/10.17275/per.22.24.9.1">http://dx.doi.org/10.17275/per.22.24.9.1</a> <i>Hatice USLU KOCABAŞ, Bünyamin BAVLI</i>	443-462
Collaborative Learning with Mind Mapping in the Development of Social Skills of Children <a href="http://dx.doi.org/10.17275/per.22.25.9.1">http://dx.doi.org/10.17275/per.22.25.9.1</a> <i>Özgül POLAT, Türker SEZER, Nevra ATIŞ AKYOL</i>	463-480