

e-ISSN: 2148-7456

a peer-reviewed  
online journal

hosted by DergiPark

# International Journal of Assessment Tools in Education

Volume: 10

Issue: 4

December 2023

<https://dergipark.org.tr/en/pub/ijate>  
<https://ijate.net/index.php/ijate>

**Editor** Dr. Omer KUTLU  
**Address** Ankara University, Faculty of Educational Sciences, Cebeci Yerleşkesi,  
Çankaya, Ankara, Türkiye

**E-mail** [ijate.editor@gmail.com](mailto:ijate.editor@gmail.com)  
[omerkutlu@ankara.edu.tr](mailto:omerkutlu@ankara.edu.tr)

**Publisher** Dr. Izzet KARA  
**Address** Pamukkale University, Education Faculty, Kinikli Campus, 20070 Denizli,  
Türkiye

**Phone** +90 258 296 1036  
**Fax** +90 258 296 1200  
**E-mail** [ikara@pau.edu.tr](mailto:ikara@pau.edu.tr)  
[ijate.editor@gmail.com](mailto:ijate.editor@gmail.com)

**Journal Contact** Dr. Eren Can AYBEK  
**Address** Department of Educational Sciences, Pamukkale University, Faculty of  
Education, Kinikli Yerleşkesi, Denizli, 20070, Türkiye

**Phone** +90 258 296 31050  
**Fax** +90 258 296 1200  
**E-mail** [erencanaybek@gmail.com](mailto:erencanaybek@gmail.com)

**Address** Dr. Anil KANDEMİR  
Department of Educational Sciences, Agri Ibrahim Cecen University,  
Faculty of Education, Agri, Türkiye  
[akandemir@agri.edu.tr](mailto:akandemir@agri.edu.tr)

**Frequency** 4 issues per year (March, June, September, December)

**Online ISSN** 2148-7456

**Website** <https://dergipark.org.tr/en/pub/ijate>  
<https://ijate.net/index.php/ijate>

**Cover Design** Merve SENTURK

International Journal of Assessment Tools in Education (IJATE) is a peer-reviewed and academic online journal. The scientific and legal responsibility for manuscripts published in our journal belongs to the authors(s).

## International Journal of Assessment Tools in Education

*International Journal of Assessment Tools in Education* (IJATE) accepts original research on the design, analysis and use of evaluation along with assessment to enhance comprehension of the performance and quality of stakeholders in educational settings. IJATE is pleased to receive discriminating theoretical and empirical manuscripts (quantitative or qualitative) which could direct significant national and international argumentations in educational policy and practice.

IJATE, as an online journal, is hosted by DergiPark [TUBITAK-ULAKBIM (The Scientific and Technological Research Council of Türkiye)].

In IJATE, there are no charges under any procedure for submitting or publishing an article.

### Indexes and Platforms:

- Emerging Sources Citation Index (ESCI)
- Education Resources Information Center (ERIC)
- TR Index (ULAKBIM),
- EBSCOhost,
- SOBIAD,
- JournalTOCs,
- MIAR (Information Matrix for Analysis of the Journals),
- idealonline,
- CrossRef,
- ResearchBib,
- Index Copernicus International

**Editor**

Dr. Omer KUTLU, *Ankara University, Türkiye*

**Section Editors**

Dr. Safiye BILICAN DEMIR, *Kocaeli University, Türkiye*

Dr. Selma SENEL, *Balikesir University, Türkiye*

Dr. Esin YILMAZ KOGAR, *Nigde Omer Halisdemir University, Türkiye*

Dr. Sumeysra SOYSAL, *Necmettin Erbakan University, Türkiye*

**Editorial Board**

Dr. Beyza AKSU DUNYA, *Bartın University, Türkiye*

Dr. Stanislav AVSEC, *University of Ljubljana, Slovenia*

Dr. Kelly D. BRADLEY, *University of Kentucky, United States*

Dr. Okan BULUT, *University of Alberta, Canada*

Dr. Javier Fombon CADAVIECO, *University of Oviedo, Spain*

Dr. Seockhoon CHUNG, *University of Ulsan, Korea*

Dr. R. Nukhet CIKRIKCI, *İstanbul Aydın University, Türkiye*

Dr. William W. COBERN, *Western Michigan University, United States*

Dr. Nuri DOGAN, *Hacettepe University, Türkiye*

Dr. Selahattin GELBAL, *Hacettepe University, Türkiye*

Dr. Anne Corinne HUGGINS-MANLEY, *University of Florida, United States*

Dr. Francisco Andres JIMENEZ, *Shadow Health, Inc., United States*

Dr. Nicole KAMINSKI-OZTURK, *The University of Illinois at Chicago, United States*

Dr. Tugba KARADAVUT, *Izmir Democracy University, Türkiye*

Dr. Orhan KARAMUSTAFAOGLU, *Amasya University, Türkiye*

Dr. Yasemin KAYA, *Atatürk University, Türkiye*

Dr. Hulya KELECIOGLU, *Hacettepe University, Türkiye*

Dr. Hakan KOGAR, *Akdeniz University, Türkiye*

Dr. Seongyong LEE, *BNU-HKBU United International College, China*

Dr. Sunbok LEE, *University of Houston, United States*

Dr. Froilan D. MOBO, *Ama University, Philippines*

Dr. Hamzeh MORADI, *Sun Yat-sen University, China*

Dr. Nesrin OZTURK, *Izmir Democracy University, Türkiye*

Dr. Turan PAKER, *Pamukkale University, Türkiye*

Dr. Murat Dogan SAHIN, *Anadolu University, Türkiye*

Dr. Hossein SALARIAN, *University of Tehran, Iran*

Dr. Halil İbrahim SARI, *Kilis 7 Aralik University, Türkiye*

Dr. Ragıp TERZİ, *Harran University, Türkiye*

Dr. Turgut TURKDOGAN, *Pamukkale University, Türkiye*

Dr. Ozen YILDIRIM, *Pamukkale University, Türkiye*

**English Language Editors**

Dr. R. Sahin ARSLAN, *Pamukkale University, Türkiye*

Dr. Hatice ALTUN, *Pamukkale University, Türkiye*

Ahmet KUTUK, *Akdeniz University, Türkiye*

**Editorial Assistants**

Dr. Asiye BAHTIYAR, *Pamukkale University, Türkiye*

Dr. Ebru BALTA, *Agri Ibrahim Cecen University, Türkiye*

Dr. Neslihan Tugce OZYETER, *Kocaeli University, Türkiye*

PhDc. Ibrahim Hakki TEZCI, *Akdeniz University, Türkiye*

**Technical Assistant**

Dr. Eren Can AYBEK, *Pamukkale University, Türkiye*

Dr. Anil KANDEMİR, *Agri Ibrahim Cecen University, Türkiye*

## CONTENTS

### Research Articles

[Adaptation of an entrepreneurship education self-assessment scale at the tertiary level into Turkish](#)

**Page: 638-671** [PDF](#)

Ahmet ÇELİK Ebru SOLMAZ

[Determining the psychometric properties of middle school statistical thinking testlet-based assessment tool](#)

**Page: 672-689** [PDF](#)

Lim HOOI LIAN, Wun YEW

[The effect of visual art activities on socialization and stress management of individuals with special needs](#)

**Page: 690-708** [PDF](#)

Kıymet BAYER, Seda LİMAN TURAN

[Comparison of cronbach's alpha and McDonald's omega for ordinal data: Are they different?](#)

**Page: 709-722** [PDF](#)

Fatih ORÇAN

[Development of self-regulation scale for middle school students: Validity and reliability study](#)

**Page: 723-740** [PDF](#)

İsmail SARİKAYA, Mesut ÖZTÜRK, Mustafa ÖZGÖL

[An exemplary application of mathematics teaching based on formative assessment](#)

**Page: 741-764** [PDF](#)

Hilal ÖZCAN, Aytaç KURTULUŞ

[Purification procedures used for the detection of gender DIF: Item bias in a foreign language test](#)

**Page: 765-780** [PDF](#)

Serap BÜYÜKKIDIK

[Type I error and power rates: A comparative analysis of techniques in differential item functioning](#)

**Page: 781-795** [PDF](#)

Ayşe BİLİCİOĞLU GÜNEŞ, Bayram BIÇAK

The complexity of the grading system in Turkish higher education

**Page: 796-812** [PDF](#)

Recep GÜR, Mustafa KÖROĞLU

---

Global competence scale: An adaptation to measure pre-service English teachers' global competences

**Page: 813-838** [PDF](#)

İsmail Emre KÖŞ, Handan ÇELİK

---