

# International Journal of Instruction



## **Abstracting / Indexing**

**ESCI** - Emerging Sources Citation Index

**ERIC** - Education Resources Information Center

## **Scopus**

### **EBSCO:**

The Belt and Road Initiative Reference Source  
Education Research Complete  
Education Source

Index Copernicus™

Cabell's Directory

Academic Journals Database

EdNA Online Database

ERA - Educational Research Abstracts Online

Electronic Journals Library

Genamics JournalSeek

Ulrich's Periodicals Directory

**Note:** International Journal of Instruction has a wide range of abstracting/indexing services. However, the index services have the right of one-sided termination of the contracts and not to publish any of the articles. Therefore, we do not accept any responsibilities caused by indexing problems.



---

**Editor in Chief**

Prof. Asım Arı  
*Eskisehir Osmangazi University, TURKEY*

**Managing Editor**

Asst. Prof. Gökhan Kayır  
*Celal Bayar University, TURKEY*

---

**Assistant Editors**

Dr. Kerim Sarıgül  
*Gazi University TURKEY*

---

**Editorial Assistant**

Dr. Rza Mammadov  
Dr. Eren Akdağ Kurnaz  
*Dumlupınar University, TURKEY*

---

**Technical Assistant**

Dr. Zehra Sümeyye Ertem  
Dr. Özgür Sirem  
*MEB, TURKEY*

---

**Editors**

Prof. Yousif A. Alshumaimeri  
*King Saud University, SAUDI ARABIA,*

Prof. Luis E. Anido Rifon  
*University of Vigo, SPAIN*

Prof. Trevor Bond  
*James Cook University, AUSTRALIA*

Prof. Bronwen Cowie  
*University of Waikato, NEW ZEALAND*

Prof. Do Coyle  
*The University of Edinburgh, UK*

Prof. Angelique Dimitracopoulou  
*University of the Aegean, GREECE*

Prof. William J. Fraser  
*University of Pretoria, SOUTH AFRICA*

Prof. Thomas Gabriel  
*University of Zurich, SWITZERLAND*

Assoc. Prof. Sheng-Wen Hsieh  
*Far East University, TAIWAN*

Prof. Jennifer L. Jolly  
*University of Alabama, USA*

Prof. Piet Kommers  
*University of Twente, NETHERLANDS*

Prof. Christoph Randler  
*University of Tübinge, GERMANY*

Prof. Elsebeth Korsgaard Sorensen  
*University of Aarhus, DENMARK*

Prof. Ken Stevens  
*Memorial University of Newfoundland, CANADA*

Prof. Selehattin Turan  
*Uludağ University, TURKEY*

---

**Language Editorial Board**

Burcu Karafil – English  
*Yalova University, TURKEY*

---

**Contact Details:** <http://www.e-iji.net>  
E-mail: editor.eiji@gmail.com

---

---

The authors are responsible for the errors, if any, in their published articles.

---



---

### Advisory Board

---

- |   |   |
|---|---|
| Assoc. Prof. Fasasi Yunus Adebunmi, <i>NIGERIA</i>  | Asst. Prof. Rula Khzouz, <i>JORDAN</i>              |
| Asst. Prof. Abdelrahman Mohamed Ahmed, <i>OMAN</i>  | Prof. Abdurrahman Kılıç, <i>TURKEY</i>              |
| Assoc. Prof. Orhan Akinoğlu, <i>TURKEY</i>          | Prof. Remzi Y. Kınca, <i>TURKEY</i>                 |
| Dr. Mohammad Akram, <i>SAUDI ARABIA</i>             | Prof. Val Klenowski, <i>AUSTRALIA</i>               |
| Assoc. Prof. Nor A. Alias, <i>MALAYSIA</i>          | Asst. Prof. Yee Lai Kelly KU, <i>HONG KONG</i>      |
| Prof. Akmatali Alimbekov, <i>KYRGYZSTAN</i>         | Prof. Colin Lankshear, <i>AUSTRALIA</i>             |
| Assoc. Prof. Ali Al-Issa, <i>OMAN</i>               | Prof. Kar-Tin Lee, <i>AUSTRALIA</i>                 |
| Prof. Khaled Al-Ajlouni, <i>JORDAN</i>              | Assoc. Prof. Hsin-Chih Lin, <i>TAIWAN</i>           |
| Asst. Prof. Hussain Alkharusi, <i>OMAN</i>          | Dr. Hussain Ahmed Liton, <i>SAUDI ARABIA</i>        |
| Prof. Isela Almaguer, <i>USA</i>                    | Assoc. Prof. Feng-Jung Liu, <i>TAIWAN</i>           |
| Assoc. Prof. Abdu Mohammed Al-Mekhlaf, <i>OMAN</i>  | Assoc. Prof. Manuel Lucero, <i>SPAIN</i>            |
| Prof. Waleed K. A. Ahmed Alzand, <i>KUWAIT</i>      | Assoc. Prof. Zdena Lustigova, <i>CZECH REPUBLIC</i> |
| Prof. Abdullah Ambusaidi, <i>OMAN</i>               | Prof. Ian Macdonald, <i>AUSTRALIA</i>               |
| Prof. Neil J. Anderson, <i>USA</i>                  | Prof. Lazarus Ndiku Makewa, <i>KENYA</i>            |
| Assoc. Prof. Derek L. Anderson, <i>USA</i>          | Asst. Prof. MD. Saiful Malak, <i>BANGLADESH</i>     |
| Prof. Joel B. Babalola, <i>NIGERIA</i>              | Prof. Robin D. Mason, <i>UNITED KINGDOM</i>         |
| Assoc. Prof. Evangelos Bebetos, <i>GREECE</i>       | Assoc. Prof. Mark A. Minott, <i>CAYMAN ISLANDS</i>  |
| Assoc. Prof. Santosh Kumar Behera, <i>INDIA</i>     | Dr. Norma T. Neme, <i>JORDAN</i>                    |
| Assoc. Prof. Thalia Bellali, <i>GREECE</i>          | Prof. Nel Noddings, <i>USA</i>                      |
| Assoc. Prof. Mary Jo Garcia Biggs, <i>USA</i>       | Prof. Yngve Troye Nordkvelle, <i>NORWAY</i>         |
| Prof. Larry Boles, <i>USA</i>                       | Ngboawaji Daniel Nte, <i>NIGERIA</i>                |
| Prof. Dele Braimoh, <i>SOUTH AFRICA</i>             | Eylem Oruç, <i>TURKEY</i>                           |
| Prof. Robert Burden, <i>UNITED KINGDOM</i>          | Dr. Deborah Osberg, <i>UNITED KINGDOM</i>           |
| Prof. Marilyn Campbell, <i>AUSTRALIA</i>            | Serkan Padem, <i>TURKEY</i>                         |
| Assoc. Prof. G. Nathan Carnes, <i>USA</i>           | Prof. Santosh Panda, <i>INDIA</i>                   |
| Dr. Carmencita L. Castolo, <i>PHILIPPINES</i>       | Prof. Hitendra Pillay, <i>AUSTRALIA</i>             |
| Assoc. Prof. Yong-Fu Chang, <i>TAIWAN</i>           | Prof. Reza Pishghadam, <i>IRAN</i>                  |
| Dr. Lockias Chitanana, <i>ZIMBABWE</i>              | Prof. Ken Purnell, <i>AUSTRALIA</i>                 |
| Prof. Che Kum Clement, <i>BANGLADESH</i>            | Prof. Christoph Randler, <i>GERMANY</i>             |
| Prof. Dale Cook, <i>USA</i>                         | Prof. Norman Reid, <i>UNITED KINGDOM</i>            |
| Prof. Valentina Dagiene, <i>LITHUANIA</i>           | Dr. Heri Retnawati, <i>INDONESIA</i>                |
| Assoc. Prof. Patrick Alan Danaher, <i>AUSTRALIA</i> | Prof. Sushanta Kumar Roul, <i>INDIA</i>             |
| Asst. Prof. Jagannath K. Dange, <i>INDIA</i>        | Prof. Peter A. Rubba, <i>USA</i>                    |



- Asst. Prof. Şahin Danişman, *TURKEY*  
Asst. Prof. Ajay Das, *USA*  
Prof. Estella De Los Santos, *USA*  
Asst. Prof. İbrahim Delen, *TURKEY*  
Prof. Ugur Demiray, *TURKEY*  
Assoc. Prof. Esra Dereli, *TURKEY*  
Assoc. Prof. Yannis Dimitriadis, *SPAIN*  
Asst. Prof. Goulimaris Dimitris, *GREECE*  
Asst. Prof. Mohamed Elsaadani, *EGYPT*  
Prof. Noriko Fujioka-Ito, *ABD*  
Prof. M. Jayne Fleener, *USA*  
Assoc. Prof. Kristin A. Gansle, *USA*  
Assoc. Prof. Lynn Kelting-Gibson, *USA*  
Prof. Margarita Victoria Gomez, *BRAZİL*  
Prof. Lena Green, *SOUTH AFRICA*  
Asst. Prof. Semra GÜNGÖR, *TURKEY*  
Prof. Carol Hall, *UNITED KINGDOM*  
Prof. Amani Hamdan, *SAUDI ARABIA*  
Assoc. Prof. Jace Hargis, *USA*  
Prof. Seyed Ahmad Hashemi, *IRAN*  
Dr. Mark van't Hooft, *USA*  
Dr. Ghazi Adib Mustafa Husnieh, *JORDAN*  
Asst. Prof. Irshad Hussain, *PAKISTAN*  
Jaya Nur Iman, *INDONESIA*  
Prof. Majed Abu Jaber, *JORDAN*  
Assoc. Prof. Jason D. Johnson, *UAE*  
Asst. Prof. Troy Jones, *USA*  
Prof. William E. Doll, Jr., *USA*  
Norma A. Juarez Collazo, *BELGIUM*  
Prof. Gregory J. Kelly, *USA*  
Prof. Shahadat Hossain Khan, *BANGLADESH*  
Prof. Abdalla Mohamed Khataybehi, *JORDAN*  
Prof. Despina Sapountzi-Krepia, *CYPRUS*  
Prof. Barbara Seidemann, *SWITZERLAND*  
Assoc. Prof. Yilfashewa Seyoum, *ETHIOPIA*  
Dr. Afsaneh Sharif, *CANADA*  
Nazia Sharif, *PAKISTAN*  
Prof. Ramesh Chander Sharma, *INDIA*  
Asst. Prof. Laurie A. Sharp, *USA*  
Prof. Ju-Ling Shih, *TAIWAN*  
Asst. Prof. Mahesh B. Shinde, *INDIA*  
Assoc. Prof. Hosin Shirvani, *ABD*  
Assoc. Prof. Harison Mohd Sidek, *MALAYSIA*  
Assoc. Prof. Parlindungan Sinaga, *INDONESIA*  
Assoc. Prof. Richard B. Speaker, Jr., *USA*  
Prof. N. Suzanne Standerford, *USA*  
Prof. Howard Stevenson, *UNITED KINGDOM*  
Dr. Simon Stobart, *UNITED KINGDOM*  
Assoc. Prof. Pei-Chen Sun, *TAIWAN*  
Prof. Karen Swan, *USA*  
Prof. Jim Taylor, *AUSTRALIA*  
Prof. Siew Ming Thang, *MALAYSIA*  
Prof. Y. Gürcan Ültanir, *TURKEY*  
Dr. Muhammad A. Wahid Usmani, *SAUDI ARABIA*  
Prof. Erwin Wagner, *GERMANY*  
Assoc. Prof. Michael Whitacre, *USA*  
Asst. Prof. Julia Wilkins, *USA*  
Dr. Kung Teck Wong, *MALAYSIA*  
Asst. Prof. Chia Jung Yeh, *USA*  
Prof. Ali Yildirim, *TURKEY*  
Prof. Allan E. Young, *CAYMAN ISLANDS*  
Asst. Prof. Muhammad Imran Yousuf, *PAKISTAN*  
Dr. Yunisrina Qismullah Yusuf, *INDONESIA*  
Prof. Galip Yüksel, *TURKEY*  
Assoc. Prof. Eleni Zetou, *GREECE*



## Contents

A Good Start to School Life, Switzerland Basel Primary Schools: From the Editor <i>Asim Ari</i> .....	i-v
Exploring Learners' Backchannel Production in Complaint Sequences Across Proficiency Levels Vicent Beltrán-Palanques.....	1-14
Predictors of Chemistry Learning Among First Year University Students Florieza M. Mangubat, Marchee T. Picardal.....	15-30
Exploring Higher Education Students' Perspectives on Factors Affecting Use, Attitudes and Confidence with Learning Technologies Rachel V. Staddon.....	31-52
A Systematic Review and Meta-Analysis Group Contrasts: Learning Model Based on Local Cultural Wisdom and Student Learning Outcomes Joko Pamungkas, Harun, Abdul Manaf.....	53-70
Rewards for Rehabilitation and Special Education Staff and Their Importance in Employee Motivation Noula Alvanoudi, Miltiadis Staboulis, Konstantinos Papadopoulos.....	71-88
Are Saudi Graduate Students Tolerant of Non-Muslims? Essa A. Alibraheim, Kamel D. Al-hussary.....	89-106
Parental Involvement and Student Achievement: A Meta-analysis of Publications in the Scopus Database Sujarwo Sujarwo, Herwin Herwin.....	107-124
Maker Activities and Academic Writing in a Middle School Science Classroom Ashley Stewart, Jiangmei Yuan, Ugur Kale, Keri Valentine, Monica McCartney.....	125-144
Implementation of Open Science Principles in Educational Research: Seen through the Prism of Teachers' Engagement in Data Exchange Olena Zhornova, Olha Zhornova, Kateryna Lut, Anastasiia Romanenko.....	145-160
Total Quality Management (TQM) and Quality of Higher Education: A Meta-Analysis Study Furtasan Ali Yusuf.....	161-178
Effectiveness of a Collaborative Intervention in Self-Regulation and Self-Efficacy of Higher Education Students Aline Guilherme Maciel Santos, Paula Mariza Zedu Alliprandini.....	179-194
Enhancing Argumentative Writing Via Online Peer Feedback-Based Essay: A Quasi-Experiment Study Yeti Mulyati, Daris Hadioanto.....	195-212
The Use of Online Flipped Classrooms during Covid-19 by Gifted Students: A Path Analysis Using UTAUT Model Manar Mohammed Haneefa.....	213-228
Effects of Worked Example on Students' Learning Outcomes in Complex Algebraic Problems Saidat Morenike Adeniji, Penelope Baker.....	229-246



The Impact of Inquiry Collaboration Project Based Learning Model of Indonesian Language Course Achievement Agus Darmuki, Farida Nugrahani, Irfai Fathurohman, Mohammad Kanzunudin, Nur Alfin Hidayati.....	247-266
Effectiveness of Flipped Classroom Pedagogy in Programming Education: A Meta-Analysis Mirvat AH Almassri, Rozniza Zaharudin.....	267-290
The Impact of Metacognitive Instruction on EFL Low-level Learners' Listening Performance and Metacognitive Awareness Cristian Alexander Chiroque Chero.....	291-306
Collaboration-Based Development Model E-Learning on Course Learning Achievements Working Skills Mursid, Muslim, Farihah.....	307-328
Covid-19 Literacy as a Modulator of Emotions Linked to the Pandemic Raquel Romero Fernández, Yolanda González Castanedo, M <sup>a</sup> Ángeles De las Heras Pérez, Rute Rocha.....	329-346
The Effectiveness of a Textbook Based on Multicultural and Contextual Understanding as a Learning Material for Scientific Writing Sujiono, Andayani, Budhi Setiawan, Nugraheni Eko Wardani.....	347-368
The Effect of Technological Skills on Developing Problem Solving Skills: The Moderating Role of Academic Achievement Raghad Shaher Alsarayreh.....	369-388
Approaches to Learning in Elementary Classrooms: Contribution of Mastery Motivation and Executive Functions on Academic Achievement Stephen Amukune, Krisztián Józsa.....	389-412
Development of Evaluation Instruments to Measure the Quality of Spatial Problem Based Learning (SPBL): CIPP Framework Waode Yunia Silviariza, Sumarmi, Sugeng Utaya, Syamsul Bachri, Budi Handoyo.....	413-436
Sex and Grade Issues in Influencing Misconceptions about Force and Laws of Motion: An Application of Cognitively Diagnostic Assessment Kittitas Wancham, Kamonwan Tangdhanakanond, Sirichai Kanjanawasee.....	437-456
Children's Future Adversity: Learning Loss Risk during Online Learning in Covid-19 Pandemic Suyadi, Issaura Dwi Selvi, Sibawaihi, Umy Zahroh, Muassomah.....	457-478
A Netnographic Approach to Investigating Problematic Teenagers' Language Use on Social Media Aliff Naw, Zalmizy Hussin, Masturah Sabri.....	479-492
Effectiveness of Epistemic Beliefs and Scientific Argument to Improve Learning Process Quality Rohayati, Syihabuddin, Dadang Anshori, Andoyo Sastromiharjo.....	493-510
Assessing the Effectiveness of Board Game-based Learning for Enhancing Problem-Solving Competency of Lower Secondary Students Surawit Assapun, Phonraphee Thummaphan.....	511-532
Effectiveness of Virtual Simulations in Improving Secondary Students' Achievement in Physics: A Meta-Analysis Ronilo P. Antonio, Richelle R. Castro.....	533-556



The Influence of Indonesian Instructional Books with a Scientific Approach on Students' Learning Outcomes in Scientific Writing Dewi Suprihatin, Retno Winarni, Kundharu Saddhono, Nugraheni Eko Wardani.....	557-580
The Implementation of RBL-STEM Learning Materials to Improve Students Historical Literacy in Designing the Indonesian Batik Motifs Sumardi, Rully Putri Nirmala Puji, Dafik, Zainur Rasyid Ridlo.....	581-602
Stimulus Appraisal-Based L2 Attitude and Motivation among Indian ESL Learners Sarat K Doley.....	603-622
Implementing Translanguaging with Pedagogical Approach in an English as a Foreign Language (EFL) Listening Classroom Roderick Julian Robillos.....	623-642
Designing Online Learning: Comparative Study between Indonesian Open University and Korea National Open University Benny Agus Pribadi, Kwan Sik Chung.....	643-660
The Motivations, Career Decisions, and Decision-Making Processes of Female PhD Students in Engineering: Experiences and Challenges Luis Miguel Dos Santos.....	661-678
The Comparison Analysis of Teacher's Learning Effectiveness in Realizing Entrepreneurship Skills of Students Sumarno, Gimin, Eddy Noviana.....	679-702
The Effect of Blended Learning on the Primary Stage EFL Students' Reading Comprehension Achievement in Libya Ameen Omran Saleh AlManafi, Siti Zuraidah Md Osman, Ibrahim Suleiman Ibrahim Magableh, Rabha Hassan Hamed Alghatani.....	703-718
The Impact Continuous Adaptation of Augmented Reality After Covid-19 in United Arab Emirates Hani Yousef jarrah, Tareq Alkhasawneh.....	719-734
A Meta-Analysis of the Utilization of Computer Technology in Enhancing Computational Thinking Skills: Direction for Mathematics Learning Yullys Helsa, Suparman, Dadang Juandi, Turmudi, Munirah Binti Ghazali.....	735-758
Integrating a Game-Based App to Enhance Translation Learners' Engagement, Motivation, and Performance Yulin Chen.....	759-782
Relationship between Social Networking Addiction and Academic Performance in Students of University Rakan Alhrahshesh, Salwa Al Majali.....	783-802
Impact of Science Process Skills on Thinking Skills in Rural and Urban Schools Astalini, Darmaji, Dwi Agus Kurniawan, Ricky Purnama Wirayuda, Wita Ardina Putri, Endah Febri Setiya Rini, Agnes Aktapianti Br. Ginting, Tri Ratnawati.....	803-822
Teachers' Attitudes Towards Mathematics Problem-Solving Sandra Mršnik, Mara Cotič, Darjo Felda, Daniel Doz.....	823-836



Academic Performance in Stem Subjects Among Secondary Boarding and Day Students in Lluentse Damcho Gyeltshen, Reeta Rai.....	837-852
EFL Learners' Preference of Grammar Learning Model Amid Covid-19 Pandemic: A Mixed-Methods Study Suswati Hendriani, Na'imah, Wisma Yunita, Yulnetri, Hendra Eka Putra.....	853-870
Computer-Based Formative Assessment Practices of Core Academics Within a One-To-One Computing Environment Juliann Sergi McBrayer, Summer Pannell, Brian Uriegas, Katherine Fallon, Patrick Sullivan.....	871-886
Teacher Perceptions of the Use of a Computer-Adaptive Test for Formative Purposes: Typologies of Practices Oluwaseun Ijiwade, Dennis Alonzo.....	887-908
The Assessment of FIT Data Model Feasibility of the Teachers' Pedagogic Competency Variables Lian Gafar Otaya, Herson Anwar, Kasim Yahiji, Rahmawati.....	909-926
The Impact of Guessing on the Accuracy of Estimating Simple Linear Regression Equation Parameters and the Ability to Predict Habis Saad Al-zboon, Ma'moun I. Y. Alharayzeh.....	927-944
Tenses Choice and Rhetorical Pattern of Unpublished Scientific Articles written by Non-Native English Speaker Student Teachers Katharina Rustipa, Yulistiyanti, Sri Mulatsih, Elisabeth Oseanita Pukan.....	945-964
Relevance of Communicative, Team Effectiveness, and Long-Range Planning Skills in Vessel Crewmembers Rebeca Bouzón, Álvaro Antón-Sancho, Yolanda Amado-Sánchez, Diego Vergara.....	965-984
Exploring the Effectiveness of the Implemented Sufficient Economy Education Curriculum during Covid-19 Pandemic Hareesol Khun-inkeeree, Thachamon Kamlangkuea, Sarinda Puti.....	985-1002
Teacher Creativity Counteracts Radicalism in The World of Education Based on Local Cultural Values Remiswal, Aprizal Ahmad, Arham Junaidi Firman, Nova Asvio, Muhammad Kristiawan.....	1003-1016
Factors Influencing Teachers' Intention to Use Technology: Role of TPACK and Facilitating Conditions Thinley Wangdi, Sonam Dhendup, Ten Gyelmo.....	1017-1036
Acceptability of the Proposed Competency-Based Curriculum and Instruction Model to Further Improve the Quality of Nursing Education Antonieto G. Alaban, Anabelle P. Buran-Omar, Sakura T. Abduraji.....	1037-1058
The Correlation of EFL Graduate Students' Strategies and Attitude Toward Reading English E-Journal Articles Kate Tzu-Ching Chen.....	1059-1076
Character Education Model for High School Students during the Pandemic in terms of Pedagogic Competence and Teacher Personality Hasbiyallah, Muhammad Munadi, Dadan Nurulhaq.....	1077-1094





Assessing the Rigour of the Mathematics Courses Being Used to Prepare Primary School Teachers Avalloy McCarthy-Curvin, Camille Berry.....	1095-1110
The Effects of Teaching Presence on Students' Motivation and Performance in A Long-term Online Gamified EFL Listening Course Suharno, Didi Suherdi, Wawan Gunawan.....	1111-1134
Pedagogical Practice as a Foundation Course for the Development of Professional Skills Jehona Rrustemi, Voglushe Kurteshi.....	1135-1150