

VOLUME 52, 2013



PROBLEMS  
OF EDUCATION  
IN • THE 21<sup>st</sup>  
CENTURY



# RECENT ISSUES IN EDUCATION – 2013

ISSN 1822-7864



9 771822 786007

## RECENT ISSUES IN EDUCATION – 2013

Scientific Methodical Center „Scientia Educologica“, Lithuania,  
*The Associated Member of Lithuanian Scientific Society, European Society for the History of  
Science (ESHS) and ICASE (International Council of Associations for Science Education)*

The articles appearing in this scientific collection are indexed and abstracted in EBSCO: Education Research Complete (<http://search.ebscohost.com>), Copernicus Index (<http://www.indexcopernicus.com>), the Asian Education Index ([http://www.asian-education-index.com/education\\_journals\\_index\\_P.php](http://www.asian-education-index.com/education_journals_index_P.php)), SOCOLAR, China Educational Publications Import & Export Corporation (<http://www.socolar.com/?ver=en>), Cabell Publishing, Inc., Directories of Academic Journals (<http://www.cabells.com/index.aspx>), Contemporary Science Association/AAP databases (<http://www.contemporaryscienceassociation.net/journal/view/1190>), and list of Science Education Journals (<http://homepages.wmich.edu/~rudged/journals.html>), WebQualis (<http://qualis.capes.gov.br/webqualis/>), Excellence in Research for Australia ERA (Australian Research Council ARC - Ranking Journal list) ([http://www.arc.gov.au/era/era\\_2012/era\\_journal\\_list.htm](http://www.arc.gov.au/era/era_2012/era_journal_list.htm)), and Directory of Research Journal Indexing (DRJI) (<http://www.drji.org/SearchDetails.aspx?JID=253>)

## **Publisher**

Scientific Methodical Center „Scientia Educologica“, Lithuania, the Associated Member of Lithuanian Scientific Society, the Association of Lithuanian Serials, European Society for the History of Science (ESHS) and International Council of Associations for Science Education (ICASE)

## **Editor-in-Chief**

Dr., Prof. **Vincentas Lamanauskas**, Scientific Methodical Centre „Scientia Educologica“, Republic of Lithuania

## **Editorial Board**

- Dr., Prof. **Boris Aberšek**, University of Maribor, Slovenia  
Dr. **Saleh A. Alabdulkareem**, King Saud University, Saudi Arabia  
Dr., Prof. **Agnaldo Arroio**, University of São Paulo, Brazil  
Dr., Prof. **Martin Bilek**, Hradec Kralove University, Czechia  
Dr., Prof. **Andris Broks**, University of Latvia, Latvia  
Dr. **Paolo Bussotti**, Commission for the Publication of the National Edition of Federigo Enriques's Works, Italy  
Dr. **Muammer Calik**, Karadeniz Technical University, Turkey  
Dr., Prof. **Janis Gedrovics**, Riga Teacher Training and Educational Management Academy, Latvia  
Dr., **Harun Yilmaz**, Scientific and Technological Research Council of Turkey, Turkey  
Dr., **Angela James**, University of Kwazulu – Natal, South Africa  
Dr., Prof. **Vladimir S. Karapetyan**, Armenian State Pedagogical University named after Kh. Abovyan, Armenia  
Dr. **Kuo-Hung Huang**, National Chiayi University, Taiwan  
Dr. **Milan Kubiato**, Masaryk University, Czech Republic  
Dr., Prof. **Miroslaw Kowalski**, University of Zielona Gora, Poland  
Dr. **Todar T. Lakhvich**, Belarusian State M. Tank Pedagogical University, Republic of Belarus  
Dr. **Eleonora Melnik**, Karelian State Pedagogical University, Republic of Karelia, Russia  
Dr., Prof. **Danuše Nezvalova**, Palacky University, Czechia  
Dr., Prof. **Yuriy Pelekh**, International University of Economics and Humanities named after Academician Stepan Demianchuk, Ukraine  
Dr., **Raffaele Pisano**, University of Lille 1, France  
Dr. **Costin Pribeanu**, National Institute for Research and Development in Informatics - ICI Bucuresti, Romania  
Dr. **Uladzimir K. Slabin**, University of Oregon, USA  
Dr. **Laima Railienė**, Scientific Methodical Centre „Scientia Educologica“, Republic of Lithuania  
Dr., Prof. **Borislav V. Toshev**, Sofia University, Bulgaria  
Dr., Prof. **Milan Turčani**, Constantine the Philosopher University, Slovakia  
Dr., Prof. **Nicos Valanides**, University of Cyprus, Cyprus

*Copyright of this volume entitled **Recent Issues in Education – 2013** is the property of Scientific Methodical Centre “Scientia Educologica”, Lithuania. All rights reserved. No part of this volume may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the copyright holders.*

*Problems of Education in the 21st Century* is an international, periodical, peer reviewed scientific journal, issued by the SMC „Scientia Educologica“ in Cooperation with Scientia Socialis.

**Address:** Scientific Methodical Centre “Scientia Educologica”

Donelaičio Street 29, LT-78115 Siauliai, Lithuania

E-mail: [problemsofeducation@gmail.com](mailto:problemsofeducation@gmail.com)

Phone: +370 687 95668

WEB pages: [http://www.jbse.webinfo.lt/Problems\\_of\\_Education.htm](http://www.jbse.webinfo.lt/Problems_of_Education.htm); <http://www.scientiasocialis.lt/pec/>

**ISSN** 1822-7864

© SMC „Scientia Educologica“, Lithuania, 2013