Vol. 7, No. 1, 2008 ISSN 1648-3898

JOURNAL COF BALTIC SCIENCE EDUCATION





The International Journal of the Scientific Methodical Center "Scientia Educologica"

JOURNAL COF BALTIC SCIENCE EDUCATION



The International Journal of the Scientific Methodical Center "Scientia Educologica"

Editorial Board Editor-in-Chief

Prof., Dr. Vincentas Lamanauskas Siauliai University, Lithuania

Deputy Editor-in-Chief

Prof., Dr. Andris Broks University of Latvia, Latvia

Deputy Editor-in-Chief

Prof., Dr. habil. Aarne Tõldsepp Estonian Chemistry Teachers Association, Estonia

Executive Secretary

Dr. Laima Railienė Scientific Methodical Center "Scientia Educologica", Lithuania

Editors:

Prof., Dr. Martin Bilek University of Hradec Králové, Czech Republic

Dr. Hana Čtrnáctová Charles University, Czech Republic
Dr. Peter Demkanin Comenius University, Slovakia

Dr. Prof., Dr. Jānis Gedrovics Riga Teacher Training and Educational Management

Academy, Latvia

Dr. Ryszard M. Janiuk Maria Curie Sklodowska University, Poland Dr. Rita Makarskaitė-Petkevičienė Vilnius Pedagogical University, Lithuania

Prof., Dr. Aadu Ott Göteborg University, Sweden Dr. Paul Pace Malta University, Malta Prof., Dr. Valfrids Paškevičs Daugavpils University, Latvia Dr. Miia Rannikmäe Tartu University, Estonia Dr. Alona Rauckienė Klaipėda University, Lithuania **Dr. Kurt Riquarts** Kiel University, Germany Prof., Dr. Heimo Saarikko Helsinki University, Finland Dr. Uladzimir K. Slabin University of Oregon, USA

Prof., Dr. Valery P. Solomin Herzen State Pedagogical University of Russia, Russia

Prof., Dr. Borislav V. Toshev Sofia University, Bulgaria
Dr. Georgios Tsaparlis University of Ioannina, Greece

A scientific journal JBSE issued by the SMC *Scientia Educologica*, Lithuania, emphasizes theoretical, experimental and methodical studies in the field of science education. JBSE is an international academic journal. In order to maintain the high standards appropriate to such a journal, all contributions received are submitted for anonymous review by two experts, additionally to review by the Editor. The decision of the Editor on the acceptance of articles is final and no correspondence can be entered into on reasons for rejection of a submitted contribution.

Published since 2002

The journal is published three times per year in March, August and October.

Address:

Scientific Methodical Center "Scientia Educologica"

Donelaičio Street 29,

LT-78115 Siauliai, Lithuania

E-mail: mail.jbse@gmail.com Phone: +370 687 95668

Home page: http://www.jbse.webinfo.lt/journal.htm

ISSN 1648-3898

© Scientific Methodical Center "Scientia Educologica", Lithuania; The associated member of Lithuanian

Scientific Society and ICASE

The articles appearing in this journal are indexed/abstracted in British Education Index (http://www.leeds.ac.uk/bei/bei.htm), Copernicus Index (http://journals.indexcopernicus.com) and EBSCO: Academic Search Premier (http://search.ebscohost.com)