

1st International Congress and Exhibition on Current Trends on Science and Technology Education (SCITEED 2014)

**Fethiye-Mugla, Turkey
24-27 April 2014**

Editors:

A. Y. Oral

Z. B. Bahsi

ISBN: 978-1-63266-650-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2014) by SCITEED 2014
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact SCITEED 2014
at the address below.

SCITEED 2014
c/o Dr. A. Yavuz Oral
Tura Turizm
Cumhuriyet Cad Part Apt N 109
Elmadag-Sisli
Istanbul, Turkey

Phone: 90 212 241 2700
Fax: 90 212 241 2989

aoral@gyte.edu.tr

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1: LEARNING: REPORTS OF EMPIRICAL RESEARCH STUDIES AND INTERPRETIVE ARTICLES RELATED TO THE PSYCHOLOGICAL ASPECTS OF THE LEARNING OF SCIENCE.

The Impact of Nanotechnology and ICT Integrated Science Education on Female Vocational High School Learners	1
<i>Zuhal Yilmaz Dogan, Didem Sunbul, Pinar Arpa</i>	
The Effect of Using a Program of Mental Imagination on the Level of Skillful Performance of Crawl Swimming	12
<i>El Shaymae Saad Zaghloul Erfan, Amr Ahmed Fouad Mohammed</i>	

PART 2: ISSUES AND TRENDS: CURRENT EDUCATIONAL, SOCIAL, OR PHILOSOPHICAL ISSUES AND TRENDS RELEVANT TO THE TEACHING SCIENCE.

Studying Physics through MOOC. The Barriers of Openness	20
<i>Rodanthi Tsoni, Athanasios Sypsas, Jenny Pange</i>	
Chemistry and Environmental Research as a Part of Education - An Example from Sweden	27
<i>Lotta Sartz, Mattias Bäckström</i>	
Educational Precursors in the Context of Sustainable Social Development Illustrated in Physics Lessons	33
<i>A. G. Anghel, G. Gorghiu, G. C. Cristea, A. M. Petrescu, L. M. Gorghiu, L. M. Draghicescu</i>	
Learning by Cooperation - An Efficient Didactic Strategy in Physics Lessons	37
<i>L. M. Draghicescu, A. M. Petrescu, G. C. Cristea, L. M. Gorghiu, G. Gorghiu, A. G. Anghel</i>	
Promoting the Education for Democratic Citizenship through an Integrated Module Focused on the Uses of Nuclear Power	41
<i>G. Gorghiu, C. D. Oros, L. M. Gorghiu, C. Antonescu</i>	
Inquiry-Based Instruction and its Use in Engineer Training	45
<i>Jiri Dostal, Martin Havelka, Cestmir Serafin</i>	
Delivery and Assessment Techniques for the subject “Integrated Design” in Civil Engineering	52
<i>U. Johnson Alengaram, Roslan Hashim, Lai Sai Hin</i>	
Inquiry Based Learning in Developing Concepts of Inertia and Inertial and Non-Inertial Frames of Reference	58
<i>I. Rancic, D. Z. Obadovic, S. Cvjeticanin</i>	
The Wavefunctions and Energy Eigenvalues of the Schrödinger Equation for Different Potentials Due to the Virial Theorem	64
<i>Hasan Arslan, Nihan Hulaguhanoglu</i>	
An Initial Approach in Teaching Chaos Theory at School	70
<i>S. G. Stavrinides, M. Haniias, P. Konstantaki</i>	
Modelling the Derivative in Sketchpad: An Instrumental and TPACK Approach	77
<i>Mdutshekelwa Ndlovu</i>	
Using Concept Maps as an Instructional Tool in Numerical Analysis	84
<i>Muhammed Syam, Derar Serhan</i>	
Improving the Learning Process of Calculus Using Modern Technology; The iPad Experiment	91
<i>Mohammed Al-Refai, Qasim Alshannag, Muhammed Syam</i>	
The Sense of Professional Identity and Perception of Teacher’ Ethos Among Students of Selected Medical Schools	97
<i>Mirosława Adamus, Mariusz Jaworski</i>	
Active Learning in Anatomy: Repercussion in Acquiring Knowledge of Some Coherent Disciplines	104
<i>Rumyana Davidova, Stilyanka Yochkova, Nadia Veleva, Emiliyan Ivanov</i>	
Oral Hygiene Support for Patients with Schizophrenia: Review and Instructional Material Development	111
<i>Hatsumi Yoshii, Nobutaka Kitamura, Hidemitsu Saito, Kouhei Akazawa</i>	
Learning Outcomes and Attitudes of Students Participating in Edmodo Social Network	118
<i>Salubsri Charoenwet, Ismail Zurida</i>	

PART 3: SCIENCE STUDIES AND SCIENCE EDUCATION: REPORTS INFORMING AND DERIVING PERSPECTIVES FROM HISTORY, PHILOSOPHY, ANTHROPOLOGY, AND SOCIOLOGY OF SCIENCE AS WELL AS COGNITIVE PSYCHOLOGY AND ARTIFICIAL INTELLIGENCE TO CONTRIBUTE TO THE THEORY, METHODOLOGY, POLICY, AND PRACTICE OF SCIENCE EDUCATION.

Appropriate Education Based on Two Fundamental and Prerequisite Principles P₁ and P₂..... 125
Habib Mino
Author Index