Education and New Developments

2019

Volume I

Edited by

Mafalda Carmo

Edited by Mafalda Carmo, World Institute for Advanced Research and Science (WIARS), Portugal

Published by InScience Press, Rua Tomas Ribeiro, 45, 1º D, 1050-225 Lisboa, Portugal

Copyright © 2019 InScience Press

All rights are reserved. Permission is granted for personal and educational use only.
Commercial copying, hiring and lending is prohibited. The whole or part of this publication material cannot be reproduced, reprinted, translated, stored or transmitted, in any form or means, without the written permission of the publisher. The publisher and authors have taken care that the information and recommendations contained herein are accurate and compatible with the generally accepted standards at the time of publication.
The individual essays remain the intellectual properties of the contributors.

ISSN (electronic version): 2184-1489
ISSN (printed version): 2184-044X
ISBN: 978-989-54312-5-0

Legal Deposit: 428062/17
Printed in Lisbon, Portugal by GIMA - Gestão de Imagem Empresarial, Lda.

BRIEF CONTENTS

Foreword v

Organizing and Scientific Committee vii

Keynote Lecture xi

Index of Contents xiii

FOREWORD

This book contains the full text of papers and posters presented at the International Conference on Education and New Developments (END 2019), organized by the World Institute for Advanced Research and Science (WIARS).

Education, in our contemporary world, is a right since we are born. Every experience has a formative effect on the constitution of the human being, in the way one thinks, feels and acts. One of the most important contributions resides in what and how we learn through the improvement of educational processes, both in formal and informal settings. The International Conference seeks to provide some answers and explore the processes, actions, challenges and outcomes of learning, teaching and human development. The goal is to offer a worldwide connection between teachers, students, researchers and lecturers, from a wide range of academic fields, interested in exploring and giving their contribution in educational issues. We take pride in having been able to connect and bring together academics, scholars, practitioners and others interested in a field that is fertile in new perspectives, ideas and knowledge.

We counted on an extensive variety of contributors and presenters, which can supplement our view of the human essence and behavior, showing the impact of their different personal, academic and cultural experiences. This is, certainly, one of the reasons we have many nationalities and cultures represented, inspiring multi-disciplinary collaborative links, fomenting intellectual encounter and development.

END 2019 received 547 submissions, from more than 50 different countries, reviewed by a double-blind process. Submissions were prepared to take form of Oral Presentations, Posters, Virtual Presentations and Workshops. The conference accepted for presentation 135 submissions (25% acceptance rate), from which, 114 submissions are published in full text in these volumes. The conference also includes a keynote presentation from an internationally distinguished researcher, Prof. Dr. Denise Whitelock, Professor of Technology Enhanced Assessment and Learning, Institute of Educational Technology, The Open University, UK, to whom we express our most gratitude.

This conference addressed different categories inside the Education area and papers are expected to fit broadly into one of the named themes and sub-themes. To develop the conference program, we have chosen four main broad-ranging categories, which also covers different interest areas:

• In **TEACHERS AND STUDENTS**: Teachers and Staff training and education; Educational quality and standards; *Curriculum* and Pedagogy; Vocational education and Counseling; Ubiquitous and lifelong learning; Training programs and professional guidance; Teaching and learning relationship; Student affairs (learning, experiences and diversity; Extra-curricular activities; Assessment and measurements in Education.

• In **PROJECTS AND TRENDS**: Pedagogic innovations; Challenges and transformations in Education; Technology in teaching and learning; Distance Education and eLearning; Global and sustainable developments for Education; New learning and teaching models; Multicultural and (inter)cultural communications; Inclusive and Special Education; Rural and indigenous Education; Educational projects.

• In **TEACHING AND LEARNING**: Critical Thinking; Educational foundations; Research and development methodologies; Early childhood and Primary Education; Secondary Education; Higher Education; Science and technology Education; Literacy, languages and Linguistics (TESL/TEFL); Health Education; Religious Education; Sports Education.

• In **ORGANIZATIONAL ISSUES**: Educational policy and leadership; Human Resources development; Educational environment; Business, Administration, and Management in Education; Economics in Education; Institutional accreditations and rankings; International Education and Exchange programs; Equity, social justice and social change; Ethics and values; Organizational learning and change, Corporate Education.

This is the Volume I of the book *Education and New Developments 2019* and it contains the results of the research and developments conducted by authors who focused on what they are passionate about: to promote growth in research methods intimately related to teaching, learning and applications in Education nowadays. It includes an extensive variety of contributors and presenters, who will extend our view in exploring and giving their contribution in educational issues, by sharing with us their different personal, academic and cultural experiences.

This first volume focus in the main areas of TEACHERS AND STUDENTS and PROJECTS AND TRENDS.

We would like to express thanks to all the authors and participants, the members of the academic scientific committee, and of course, to our organizing and administration team for making and putting this conference together.

Hoping to continue the collaboration in the future.

Respectfully,

Mafalda Carmo
World Institute for Advanced Research and Science (WIARS), Portugal
Conference and Program Chair

Porto, Portugal, 22 - 24 June, 2019

SCIENTIFIC COMMITTEE

Conference and Program Chair

Mafalda Carmo
World Institute for Advanced Research and Science (WIARS), Portugal

International Scientific Committee

Aaron R. Deris, Minnesota State University, USA

Abdurrahman Guelbeyaz, Nagasaki University, School of Global Humanities and Social Sciences, Japan

Adrián Ponz Miranda, Zaragoza University, Spain

Ahmet Ok, Middle East Technical University, Turkey

Ahrar Husain, Jamia Millia Islamia, India

Alan Singer, Hofstra University, USA

Ali Baykal, Bahcesehir University, Turkey

Ali Yildirim, University of Gothenburg, Sweden

Alice Stephens, Clark Atlanta University, USA

Amir Dirin, Haaga-Helia University of Applied Science, Finland

Ana Conboy, College of Saint Benedict and Saint John's University, USA

Anca Draghici, Politehnica University Timisoara, Romania

Anca-Olga Andronic, Spiru Haret University, Romania

Andis Klegeris, University of British Columbia, Canada

Andrea Hathazi, Babes-Bolyai University, Romania

Angela Hovey, Lakehead University, Canada

Angela James, University of Kwazulu-Natal, South Africa

Angela Piu, University of Valle d'Aosta, Italy

Anja María Mackeldey, Colegio Alemán Medellín / Universidad de Antioquia, Colombia

Anne Julia Fett, Martin-Luther-Universität Halle-Wittenberg, Germany

Aphrodite Ktena, TEI of Sterea Ellada, Greece

Aviva Dan, Ohalo Academic Education College, Israel

Beatriz Carrasquer Alvarez, Zaragoza University, Spain

Begoña Sampedro, University of Cordoba, Spain

Burcu Koç, Sakarya University, Turkey

Çağla Atmaca, Pamukkale University, Turkey

Carla Massoud, Saint-Joseph University Beirut, Lebanon

Carolina Bodea Hategan, Babes-Bolyai University, Romania

Celia MacDonnell, University of Rhode Island and Brown University, USA

Cezar Scarlat, University "Politehnica" of Bucharest, Romania

Charalampos Karagiannidis, University of Thessaly, Greece

Charles Elkabas, University of Toronto, Canada

Christian David Quintero Guerrero, Nueva Granada Militar University, Colombia

Christine Besnard, Glendon College, York University, Canada

Christopher Fowler, University of Essex, United Kingdom

Christos Manasis, TEI of Sterea Ellada, Greece

Clara Barroso, University of La Laguna, Spain

Cory A. Bennett, Idaho State University, USA

Cristiano Luchetti, American University of Sharjah, United Arab Emirates

Dalia Hanna, Ryerson University, Canada

Daniel Madrid, University of Granada, Spain

Daniela Pasnicu, Spiru Haret University, Romania

David Aparisi, University of Alicante, Spain

David Nocar, Palacký University in Olomouc, Czech Republic

Diane Boothe, Boise State University, USA

Dimitris Dranidis, The University of Sheffield International Faculty, CITY College, Greece

Dorina Anca Talas, Babes-Bolyai University, Romania

Douglas Baleshta, Thompson Rivers University, Canada

Elena Polyudova, Language Institute, USA

Ellen Whitford, Georgia Southern University, USA

Emre Erturk, Eastern Institute of Technology, New Zealand

Eva Hinojosa Pareja, University of Cordoba, Spain

Eva Trnová, Masaryk University, Czech Republic

Francesco Arcidiacono, University of Teacher Education BEJUNE, Switzerland

Francis Stonier, University of West Georgia, USA

Gabriela-Eugenia Iacobescu, University of Craiova, Romania

Gilles Sagodira, University of Réunion Island, Réunion

Gina Chianese, University of Trieste, Italy

Ginette Roberge, Laurentian University, Canada

Giuditta Alessandrini, Università degli Studi Roma TRE, Italy

Grainne M. O' Donnell, University College Dublin, Ireland

Gyöngyi Bujdosó, University of Debrecen, Hungary

Harvey Oueijan, Notre Dame University, Lebanon

Hava Vidergor, Gordon Academic College of Education / Arab Academic College of Education, Israel

Helena Skarupská, Tomas Bata University in Zlín, Czech Republic

Helin Puksand, University of Tartu, Estonia

Henri Jacobs, Central University of Technology, Free State (CUT), South Africa

Ilona Tandzegolskienė, Vytautas Magnus University, Lithuania

Ina Blau, The Open University of Israel, Israel

Ismini Vasileiou, De Montfort University, United Kingdom

Jacquelyn Baker-Sennett, Western Washington University, USA

Jana Kapounová, University of Ostrava, Czech Republic

Janaina Cardoso, Rio de Janeiro State University, Brazil

Jeanne Schreurs, Hasselt University, Belgium

Jeannette Jones, Texas Lutheran University, USA

Joana Paulin Romanowski, PUCPR - Pontifícia Universidade Católica do Paraná, Brazil

Joanna Paliszkiewicz, Warsaw University of Life Sciences, Poland

John P. Egan, The University of Auckland, New Zealand

Jose Augusto Oliveira Huguenin, Universidade Federal Fluminense, Brazil

Juana Maria Sancho Gil, University of Barcelona, Spain

Julia Haba-Osca, Universitat de Valencia, Spain

Karel Němejc, Czech University of Life Sciences Prague, Czech Republic

Karim Moustaghfir, Al Akhawayn University in Ifrane, Morocco

Katerina Kabassi, Technological Educational Institute of the Ionian Islands, Greece

Katja Tschimmel, MINDSHAKE / Guest Lecturer Porto Business School, Portugal

Kyparisia Papanikolaou, School of Pedagogical and Technological Education, Greece

Ladário da Silva, Universidade Federal Fluminense (UFF), Brazil

Laura Rio, University of Bologna, Italy

Laurent Moccozet, University of Geneva, Switzerland

Leela Ramsook, University of Trinidad and Tobago, Trinidad and Tobago

Leona Stašová, University of Hradec Kralove, Czech Republic

Li Jin, University of Westminster, United Kingdom

Lina Kaminskienė, Vytautas Magnus University, Lithuania

Lisa Winstead, California State University, Fullerton, USA

Loredana Terec-Vlad, Stefan cel Mare University from Suceava and Lumen Research Center in Social and Humanistic Sciences, Romania

Loreta Chodzkiene, Vilnius University, Lithuania

Luca Refrigeri, University of Molise, Italy

Luis Gonzaga Roger Castillo, Universidad de Granada (UGR) / Centro de Estudios, Spain

Luminita Cocarta, Al. I. Cuza University of Iasi, Romania

Magdalena Mądra-Sawicka, Warsaw University of Life Sciences, Poland

Magdolna Chrappán, University of Debrecen, Hungary

Mal Leicester, University of Nottingham, United Kingdom

Małgorzata Cieciora, Polish-Japanese Academy of Information Technology, Poland

Maria Moundridou, School of Pedagogical and Technological Education (ASPETE), Greece

Maria Carme Boqué Torremorell, Ramon Llull University, Spain

Maria Isabel Garcia-Planas, Polytechnic University of Catalonia, Spain

Maria Luisa de Natale, Università Cattolica del Sacro Cuore, Italy

Marielle Patronis, Zayed University, United Arab Emirates

Marta Talavera, University of Valencia, Spain

Maya Wizel, Middlebury College, Israel

Melissa Caspary, Georgia Gwinnett College, USA

Metaxia Pavlakou, University College London, United Kingdom

Michele Lemos de Souza, Universidade Federal Fluminense, Brazil

Milan Kubiatko, University of Zilina, Slovakia

Mingming Zhou, University of Macau, China

Mustafa Ozmusul, Harran University, Turkey

Naseer Ahmed, Al Ghurair University, United Arab Emirates

Natalie Lavoie, University of Quebec in Rimousk, Canada

Nazario Zambaldi, Free University of Bolzano, Italy

Ned Ladd, Bucknell University, USA

Nihal Dogan, University of The Balearic Islands, Spain

Nikolaos Marianos, Neuropublic SA / University of the Aegean, Greece

Nina K. Buchanan, University of Hawaii, USA

Olga Chis, Babes-Bolyai University, Romania

Paola Damiani, University of Turin, Italy

Pascal Marquet, University of Strasbourg, France

Paschalia Patsala, Arts and Humanities Research Council, United Kingdom

Patricia E. Reynolds, University of Mary Washington, USA

Pavel Brebera, University of Pardubice, Czech Republic

Paweł Topol, Adam Mickiewicz University in Poznań, Poland

Pedro Perera, Universidad de La Laguna, Spain

Petros Kefalas, University of Sheffield International Faculty, Thessaloniki, Greece

Pule Phindane, Central University of Technology, South Africa

Rasa Nedzinskaite, Lithuanian University of Educational Sciences, Lithuania

Razvan-Lucian Andronic, Spiru Haret University, Romania

Red Mendoza, Nanyang Technological University, Singapore

Rosa Maria Lopes Martins, Polytechnic Institute of Viseu, Portugal

Rosanna Tammaro, University of Salerno, Italy

Sandra Braun, Mount Royal University, Canada

Seppo Sirkemaa, University of Turku, Finland

Serhat Bahadir Kert, Yildiz Technical University, Turkey

Seweryn Spalek, Silesian University of Technology, Poland

Sheryl Williams, Loughborough University, United Kingdom

Silvânia Alves de Carvalho, Universidade Federal Fluminense, Brazil

Silvia Nikolaeva, Sofia University, Bulgaria

Silvia Pokrivčáková, Trnava University, Slovakia

Simon Richir, Arts et Metiers Paristech (ENSAM), France

Sinan Olkun, Final International University, Turkey

Stefania Pinnelli, University of Salento, Italy

Stephanie Linek, ZBW - Leibniz Information Centre for Economics, Germany

Surendra Pathak, Gujarat Vidyapith (deemed University), India

Susan Scott, Lakehead University, Canada

Suzie Savvidou, The University of Sheffield International Faculty, CITY College, Greece

Tatjana Portnova, Russian Center of the University of Granada, Spain

Tetyana Antimirova, Ryerson University, Canada

Todd Brower, Western State College of Law, USA

Vashti Singh, Education Consultant and Independent Researcher, Trinidad and Tobago

Vassilis Chatzibirros, The University of Sheffield International Faculty, CITY College, Greece

Verónica Marín-Díaz, University of Cordoba, Spain

Vicente J. Llorent, University of Cordoba, Spain

Wei-Ni Wang, National Chung Cheng University, Taiwan

Wendy Setlalentoa, Central University of Technology, South Africa

Wida Susanty Haji Suhaili, University of Technology Brunei, Brunei Darussalam

Wiktor Bołkunow, Warsaw School of Economics, Poland

Yogesh Kumar Sharma, Government Shakamdhar PG College, Sambhar Lake, India

Yolanda Castro Robles, Pontificia Universidad Javeriana, Colombia

Youngsoon Kim, Inha University, South Korea

Zoltán Rónay, Eotvos Loránd University, Hungary

KEYNOTE LECTURE

ASSESSMENT FOR LEARNING: WHERE ARE WE ON THE DIGITAL ASSESSMENT SPECTRUM?

Prof. Dr. Denise Whitelock
(B.Sc. M.Ed Ph.D)
Professor of Technology Enhanced Assessment and Learning, Institute of Educational Technology, The Open University (United Kingdom)

Abstract

Digital assessment is an evolving construct used in education to enrich, inform and complement the teaching process. Using automatic feedback however has been under-utilised and under-valued throughout the assessment process. This presentation will take you through a number of projects which have automated some aspects of assessment.

Those selected from my own research have a strong conceptual underpinning, for instance Dweck's work to develop Open Comment which provided feedback to Arts students. With Open Mentor, I used Bale's work on interactive categories to help tutors develop effective and supportive feedback. SafeSea, on the other hand, allows students to trial essay writing before taking the sometimes daunting step of submitting their first essay, using analysis based on Pask's conversational framework.

This presentation will discuss the issues raised by teachers and students in this arena. It will provide examples of how their concerns are currently being addressed by both researchers and software developers in order to support educator feedback to students. Finally, the issue of potential disruptors will be raised which moves us into the realm of crystal ball gazing.

Biography

Professor Denise Whitelock has over twenty years experience in designing, researching and evaluating online and computer-based learning in Higher Education. She is a Professor of Technology Enhanced Assessment and Learning in the Open University's Institute of Educational Technology. She is currently leading the UK's contribution to the Adaptive Trust e-Assessment System for Learning (TeSLA) http://tesla-project.eu/project. She has just completed directing the CODUR http://in3.uoc.edu/opencms_in3/opencms/webs/projectes/codur/en/index.html and SAFeSEA http://www.open.ac.uk/researchprojects/safesea/ projects. The aim of this latter research was to provide an effective automated interactive feedback system that yields an acceptable level of support for university students writing essays in a distance or e-learning context. Her work has received international recognition as she holds visiting chairs at the Autonoma University, Barcelona and the British University in Dubai.

Website: https://iet.open.ac.uk/profiles/denise.whitelock

INDEX OF CONTENTS

ORAL PRESENTATIONS

Teachers and Students

Can a Digital Guided Peer Feedback System Foster Learning **3**
Omid Noroozi, Javad Hatami, & Arash Bayat

A Study on E-Learning in Small Online Discussion Groups and Experimental Design in Advanced Level Biology **8**
Mariella Caruana, & Liberato Camilleri

A CPR Model for Modified Music Standards in Professional Music Training: The Case of TUT **13**
Hua Hui Tseng

Some Demographic, Personal and Class Characteristics as Predictors of School Climate **17**
Maja Brust Nemet, & Tena Velki

(Re)Constructing Personal Teaching Metaphors in a Brazilian Teacher Initiation Project **22**
Ana Carolina de Laurentiis Brandão

Sometimes Students Make the Best Teachers: Developing and Enhancing Graduate Skills **26**
Ann Gow

Sexuality Education and Teacher Training in Portugal **29**
Filomena Teixeira, Ana V. Rodrigues, & Diana Oliveira

Preservice Teachers' Expectations of Professional Conversations on Professional Experience in Schools **34**
Denise Beutel, Donna Tangen, & Rebecca Spooner-Lane

Digital Literacy of Primary Education Teachers in the Area of Digital Safety **39**
Łukasz Tomczyk

AI Classroom Analysis System for Language Teaching Development **44**
Hiroki Ishizuka, & Akio Onishi

The Influence of Differentiated Assignments (Scaffolding Methods) on First-Year Students-Teachers' Academic Progress **49**
Thelma de Jager

Understanding Why Some Future Teachers Find it so Difficult to Follow Written Instructions **54**
Janaina Cardoso

An Introduction to the AEPS-3 and Results of a Field Test Study **59**
JoAnn (JJ) Johnson, & Marisa Macy

Investigating Non-Academic Correlates of Goal Commitment for Academic Achievement at Higher Education Level **64**
Meral Şeker, & Nilgün Tatar

Cultural Models of Disability. An Exploratory Qualitative Study on the Pre-Service Teachers' Attitudes and Social Representations **69**
Andrea Fiorucci

Social Networking for Life-Long-Learning with Quality Management Aspects in Technical Teaching **74**
Sonja Gögele

Oops! The Critical Role of Risk-Taking and Failure in Educational Change and Teacher Education **79**
Maya Wizel

Combining Language and Culture Learning in Teacher Education at Martin Luther University Halle Wittenberg **84**
Peter Grüttner, Anne Julia Fett, & Susanne Schütz

Benefits of Class Tests and Continuous Assessment in Higher Education Mathematics **88**
Carlos Fresneda-Portillo, & Lucía Sagredo-Sánchez

Oral Assessments: Encourage Students' Mathematical and Statistical Talking **93**
Anne D'Arcy-Warmington

Prospective Childhood Pedagogy Specialists' Experiential Learning Trends in Practical Studies at the University **98**
Remigijus Bubnys

Clap Hands, Training Professionals to Promote Disabled People Labor Inclusion in Arts and Culture **103**
Imma Miralles

Using an Assessment Rubric for Feedback and Learning: A Conceptual Study **108**
Vidar Gynnild

ICT Competences for Educational Innovation: A Teacher Training Program in Colombia **112**
David Castro-Garcia, & Fredy Andrés Olarte Dussán

Preventing Spectators in a Group-Work: Civil Technology Student's Perspective **117**
Khojane Geoffrey Mokhothu

Self-Assessment Through the Metacognitive Awareness Process in Reading Comprehension **121**
Katerina Kasimatis, & Theodora Papageorgiou

The Association between Bullying, Maltreatment, and Personality Traits among Adolescents from Armenian Schools in Lebanon **126**
Manoug Ibitian, & Ahmad Oweini

Projects and Trends

The Inclusion of Children with Special Needs in Early Childhood: Challenges and Dilemmas of Kindergarten Teachers **131**
Aviva Dan

The Application of Mobile Devices in Active Learning at the University: A Review of Literature **136**
María del Rocío Carranza Alcántar, Bertha Margarita González Franco, Claudia Islas Torres, Alma Azucena Jiménez Padilla, & Mónica Lizbeth Maciel Gómez

Adjusting School Environment for Children with Profound and Multiple Disabilities **141**
Manuela Sanches-Ferreira, Mónica Silveira-Maia, & Sílvia Alves

Identification of School Depended Factors, which can Affect Students' Performance on Assessments **146**
Marcin Fojcik, Martyna Fojcik, June Audsdotter Stafsnes, & Bjarte Pollen

Representations of the Digital Skills of High School Students: A Qualitative Research **151**
Claudia Islas Torres, Sergio Franco Casillas, María del Rocío Carranza Alcántar, & Alma Azucena Jiménez Padilla

The Use of Interactive Whiteboards in South African Schools **156**
Maryke Mihai

HOMO'POLY: Understanding and Acceptance of Diversity **160**
Oliver Holz, & Lotte Geunis

The Effects of Learning Styles of Pre-Service Teachers on their Skills to Prepare Sketchnotes **165**
Nilgün Tatar, & Meral Şeker

Multilingualism, Intercomprehension and Inclusion: The Lecturio + Project and the Dyslexic Student **169**
Stefania Pinnelli, Andrea Fiorucci, Clarissa Sorrentino, & Marina De Nunzio

Challenge Based Learning: An Educational Proposal for Social Transformation **174**
Mariano Sánchez Cuevas

A Game-Based Model to Enhance Learning at University **178**
Martina Marsano

The Use of the Renzulli-Hartmann Rating Scales (2010) with Italian Teachers. Preliminary Data from a Correlation Analysis **183**
Clarissa Sorrentino

Leveraging Educational Software with Exploration Guides in Higher Arts Education: The Videolab Simulation Case Study **187**
Eduardo Morais, Carla Morais, & João C. Paiva

What do Educational Professionals Think about Giftedness? An Analysis of Attitudes and Representations **192**
Stefania Pinnelli, Andrea Fiorucci, & Clarissa Sorrentino

Teaching CLIL in High School: A Comparative Case Study in Trentino Alto-Adige **197**
Cristina Rebek

Teaching Situated Design Methods: A Case Study **202**
Sarah Lugthart, & Michel van Dartel

Combining Different Subjects from an Industrial Chemical Engineering Bachelor's Degree for Advanced Knowledge Acquisition **207**
Junkal Gutierrez, Zuriñe Gómez de Balugera, Josune Amurrio, Arrate Santaolalla, & Gorka Gallastegui

E-Engineering: Teaching Electrical Engineering at Distance **212**
Manuel Gericota, Guillaume Andrieu, Manuel Castro, Paulo Ferreira, & Andre Fidalgo

Threats and Opportunities on the Current Czech Market with University Education **217**
Jiří Pavelka

School Problems and Teachers' Collaboration: Before a Collaborative Problem Solving Program **222**
Alexandra Ataíde, Isabel Souto, & Anabela Pereira

Rethinking Learning in the Light of Digital Transformation at the Austrian Secondary Colleges for Agriculture and Forestry – Why and How? **227**
Erika Quendler, & Matthew James Lamb

Development of Interdisciplinary Instruction Using Inquiry Based Science Education **232**
Eva Trnova

It Takes a Village: Igniting the Scientist in Lower Track Students Through Partnerships **237**
Sen Kee Peter Seow, Chew Lee Teo, Chin Fen Ho, Kei Xian Tan, Frederick Toralballa Talaue, & Wei Loong David Hung

Educating Designers to Sustainable Innovation. A Reflection on the Contribution of Design in Projects with Social and Environmental Impact **242**
Adriana Fernandes, Barbara Rangel, Jorge Lino Alves, & Belmira Neto

Built Environment Education for Young People: Architects and Urban Planners Using Cultural Heritage as a Learning Resource **247**
Marta Brković Dodig, Sarah Klepp, & Angela Million

Flipped for Critical Thinking: Evaluating the Effectiveness of a Novel Teaching Approach in Postgraduate Law Modules **252**
Margaret Liu

Use of Behavior Management Strategies in Children with and without Disabilities: A Comparative Study of Greek Parents' and Teachers' Opinions **257**
Pagona Leonidou, & Lefkothea Kartasidou

Individual Support for Independent Learning at the Language Center at UNIL: From Teaching to Advising **262**
Marie-Dominique Marcant

Self-Efficacy and Attributional Style in Gifted Students **267**
Elena Abbate, & Stefania Pinnelli

Personal and Educational Values of Pupils from Different Cultural Backgrounds: Compatibility or Conflict? **271**
Iva Staňková, & Lenka Venterová

Enable- ASC: Enabling Collaboration in the ASC Classroom with Young Children and Touchscreen Devices **276**
Chrysoula Mangafa

Design of a Supporting System for Educational Improvement with Active Learning Approaches **281**
Yuriko Ishida, & Ryuichi Matsuba

MOOCs as a Key Strategy for University Orientation **286**
Ilaria Merciai, & Ruth Kerr

Making a Difference: The Tale of Recycling Efforts of an Individual Staff Member at an HBCU **291**
Alice E. Stephens

POSTERS

Teachers and Students

Vocational Teachers' Motives for Improvement their Qualification **297**
Daiva Rimkuvienė, & Sigitas Daukilas

The Employability of Undergraduates in Taiwan: From the View Point of Enterprises and Themselves **300**
Jen-Chia Chang, Hsi-Chi Hsiao, Su-Chang Chen, & Dyi-Cheng Chen

Motivations and Job Representations of Prospective Physical Education Teachers Starting their Vocational Training **303**
Madisson Bodart, Dimitri Cauchie, & Marielle Bruyninckx

The Development of Statistical Literacy Assessment Tool for Senior Students in Elementary Schools **306**
Chien-Ming Cheng

University of the Third Age - University Studies Don't Have to Be Only for the Young **309**
Marcela Göttlichová

Reading Competency and Metacognitive Knowledge in Primary School Children: An Explorative Survey **312**
Antonella Valenti, Lorena Montesano, Sonia Sapia, Pamela Iazzolino, & Orlando De Pietro

Does it Add Up? Professional Development for Elementary Math Teachers **315**
Susan Peet, Deborah Wooldridge, Cynthia Bertelsen, & Ken Newbury

Strategies Used by Physical Education Teachers to Enhance Professional Well-Being **317**
Sacha Stoloff, & Julien Glaude-Roy

Diving into Minority Stress Theory Within the LGBTQ+ Community **320**
Sydney Downing

Projects and Trends

The Perception of School Staff and Parents in Regard to the "Enfant Nature" Approach in a Quebec Preschool **323**
Élisabeth Lavallée, Marie-Claude Rivard, & Claude Dugas

Development of Learning Activity Status Recording System Using the Internet of Things **326**
Atsushi Iwayama, & Yosuke Ito

Formative Assessment of Global Education -Japanese High School Students' Conceptions of a Global Leader- **329**
Hiromi Ishimori, & Masahiro Arimoto

Preparatory Study of 'Love for One's Home' Education Through Learning Traditional Color Names: Knowledge of the Traditional Color Enhances its Attractiveness **332**
Shin'ya Takahashi, & Noriko Aotani

TESI Project – Needs Analysis and New Software for People with Communication Deficiencies **335**
Gabriela-Eugenia Iacobescu

Inclusive Education of SEN Children in Nursery: Anxiety and Self-Efficacy of Childcare Professionals **338**
Marielle Bruyninckx, Dimitri Cauchie, Mélanie Dutrieux, & Maud Regnier

Cognitive Sciences for Academic Success of Middle School Students **341**
Pauline Allix, Amélie Lubin, Céline Lanoë, & Sandrine Rossi

The Impact of the Erasmus+ Program on the Internationalization of Croatian Viticulture and Enology on the Example of the Polytechnic in Požega **344**
Josip Mesić, Tomislav Soldo & Brankica Svitlica

Creating Civic-Minded Graduates Through Community Engagement **347**
Laura Landry-Meyer, Deborah G. Wooldridge, Susan Peet, & Su Yun Bae

Design your Own Lab Experiments: Project-Based Learning Approach to Teaching Chemical Principles of Engineering **350**
Gorka Gallastegui, Juan Jesús López, Jon Alvarez, Arrate Santaolalla, & Junkal Gutierrez

The Effect of Remedial Instruction Using Adaptive-Learning Platform on Mathematical Achievements of Seventh Graders **353**
Shu-Chuan Shih, Jiun-Shian Li, & Bor-Chen Kuo

Educating for Geoethics: Raising Students' Awareness and Public Engagement **355**
Clara Vasconcelos, Tiago Ribeiro, Maria Luísa Vasconcelos, & Alexandra Cardoso

Generation Z: Decision-Making Process of Career Choice **358**
Blandína Šramová

Cross-Cultural Education for International Students Who Interact with Japanese People: Practical Learning Using Role-Plays **361**
Sachiko Nakano

Involvement of Attention and Working Memory of Children with ADHD in School-Age **364**
Bibiana Regueiro, Tania Vieites, Iris Estévez, Carolina Rodríguez-Llorente, Antonio Valle, & Susana Rodríguez

Technological Changes in the Work of Accountants and Changes of Education of Accounting Students **367**
Cyryl Kotyla

VIRTUAL PRESENTATIONS

Teachers and Students

Student Access to Automated Marking Tools as a Way of Improving their Comprehension **373**
David Cutting, Andrew McDowell, Neil Anderson, Angela Allen, & Matthew Collins

Perceptions of English Language Primary School Teachers in Vietnam Towards the Implementation of English as a Medium of Instruction **378**
Duy Truong

The Light and Shadow of Assessment Practices: Focusing on SGH in Japan **383**
Kohei Nishizuka, Baozhu Wang, & Masahiro Arimoto

The Nature of Classroom Discourse in Pre-Service Life Sciences Teachers' Lessons in Johannesburg **388**
Lydia Mavuru

Teachers' Occupational Work Ethic Scale in South Korea **393**
HwaChoon Park

Is it Bad to Provide Negative Feedback to Students? The Role of Regulatory Fit: A Case from a UK University **397**
Zahra Fazeli

Exploring the Impact of the Complexity of Cognitive Demands Associated with Curriculum Content on Student Academic Performance: A Case of Mathematics **402**
Sam Ramaila, Philemon Seloane, & Lydia Mavuru

A Mobile EEG Study on the Neurophysiological Correlates of Oral Reading in Dyslexia **406**
Katherine Ko, Roann Ramos, & Rosalito De Guzman

Extended Curriculum Programs as a Support Mechanism to Enhance South African Undergraduate Science Students' Academic Performance in Mathematics **411**
Sam Ramaila, Philemon Seloane, & Lydia Mavuru

Gender Differences Between the Perceptions of Physics and Science in General Amongst Senior and Junior Students at a South African University **416**
Leelakrishna Reddy

Questions and Science Contents Preferred by Early Childhood Education Teachers in Training **421**
Adrián Ponz Miranda, & Beatriz Carrasquer Álvarez

Gender Differences in Physics Anxiety at a South African University **426**
Leelakrishna Reddy

Teacher Challenges and Choice of Programming Tools for Teaching K-12 Technology and Mathematics **431**
Niklas Humble, Peter Mozelius, & Lisa Sällvin

Projects and Trends

Promoting Learner Engagement: Measuring and Characterizing Learner Engagement Using a Collaborative Online Learning Tool **436**
Andrew McDowell, David Cutting, Angela Allen, Neil Anderson, & Matthew Collins

The Effects of Internet Use by People with and without Intellectual Disability: Student Teachers' Perspectives **440**
Marcos Gómez-Puerta, & Esther Chiner

Integrating New Literacies in an Online Learning Community **445**
Sylvia Harkins

***STRATEGOI*: A *SPOC* to Teach Ancient Greek** **448**
Raquel Fornieles

Children Learning a Foreign Language by Doing and Playing **453**
María Isabel Velasco Moreno

Development of "Content-Focused Accessibility" E-Learning Material for English Learning Targeting Visually Impaired University Students **458**
Chikako Ota

Pre Service Teacher Attitudes and Self Efficacy Toward Inclusion in Kosova **463**
Emirëjeta Kumnova Hoxha, Rajmonda Kurshumlia, & Blerta Perolli Shehu

Selected Aspects in Educational Relationships **468**
Lucie Flekačová, Monika Smolíková, & Dita Finková

The Value and Difficulties of Learning with Digital Technologies among Higher Education Students in Ghana **473**
Justice Kofi Armah, & Duan van der Westhuizen

Bibliometric Review on the Education of People with Autism Spectrum Disorder Without Associated Disability **478**
Paola Melero-Pérez, & Marcos Gómez-Puerta

Robotics in the Teaching of Physics: A Project Based Approach **483**
Galeno José de Sena, Leonardo Mesquita, Marco Aurélio Alvarenga Monteiro, Jorge Muniz Junior, & Alvaro de Freitas Oliveira

Robots and Students with Autism Spectrum Disorder in the Educational Context **488**
Elena Pérez Vázquez, Alba Gilabert Cerdá, Alejandro Lorenzo Lledó, Asunción Lledó Carreres, & Gonzalo Lorenzo Lledó

The Use of Virtual Learning Environments and Achievement in Physics Content Tests **493**
Mafor Penn, & Ramnarain Umesh

Inclusion of Music Therapy as an Intervention Tool in the Therapeutic Pedagogy Classroom **498**
Alba Gilabert Cerdá, Elena Pérez Vázquez, Alejandro Lorenzo Lledó, Asunción Lledó Carreres, & Gonzalo Lorenzo Lledó

Environments of Dynamic Learning Under 3D Interactive Vision: Reconstruction of the Orbit **503**
Beatriz Framiñán Aparicio, Juan Antonio Juanes Méndez, & Andrés Framiñán de Miguel

Creating Moodboards with Digital Tools: A New Educational Approach **507**
Fausto Brevi, Manuela Celi, & Flora Gaetani

5G Technology for Augmented and Virtual Reality in Education **512**
Adriano Baratè, Goffredo Haus, Luca A. Ludovico, Elena Pagani, & Nello Scarabottolo

Comparison of Options for Supporting Socially Disadvantaged Roma Pupils within the Czech and Slovak Republic Education System **517**
Lenka Haburajová Ilavská, Jaroslav Balvín, & Iva Staňková

WORKSHOP PRESENTATIONS

Teachers and Students

Effective Instruction in Virtual Higher Education: Ensuring Cognitive, Social, & Teaching Presence **525**
Sandra M. Rebeor, Michelle L. Rosser-Majors, Christine L. McMahon, Stephanie L. Anderson, Yolanda Harper, & Laura J. Sliwinski

Projects and Trends

Cultivating Self-Belief in Students **528**
Denise Harber, & Gavin Jinks

Smooth Transitions: Assessment and Advancement of Level 2 Writing Students at Houston Community College **531**
Devin McCain, & Claudia Pena

AUTHOR INDEX **535**