Education and New Developments 2021

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, 1° D, 1050-225 Lisboa, Portugal

Copyright © 2021 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: 978-989-54815-8-3

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
Special Talk	xii
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 2021), organized by the World Institute for Advanced Research and Science (W.I.A.R.S.), that this year had to be transformed into a fully Virtual Conference as a result of the Coronavirus (COVID 19) pandemic.

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 2021 received 478 submissions, from more than 40 different countries, reviewed by a double-blind process. Submissions were prepared to take form of Oral Presentations, Posters and Workshops. The conference accepted for presentation 160 submissions (34% acceptance rate), from which, 151 submissions are published in full text in this book.

The conference also includes:

- One Keynote presentation by Dr. Hava Vidergor (PhD, senior lecturer of curriculum and instruction in the Graduate School at Gordon Academic College of Education, Israel).
- One Special Talk by Prof. Dr. Nazario Zambaldi (PhD General Pedagogy, Social Pedagogy, General Education and Subject Didactics at the Free University of Bolzano/Bozen, Italy)
 We would like to express our gratitude to our invitees.

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 Counselling; 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 book 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.

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

ORGANIZING AND SCIENTIFIC COMMITTEE

Organizer

World Institute for Advanced Research and Science (WIARS) www.wiars.org

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

Ahmad Oueini, Lebanese American University, Lebanon

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

Ana-Maria Bercu, Alexandru Ioan Cuza University of Iasi, Romania

Anca Draghici, Politehnica University of Timisoara, Romania

Andis Klegeris, University of British Columbia, Canada

Andrea Fiorucci, University of Salento, Italy

Andrea Hathazi, Babes-Bolyai University, Romania

Angela Piu, University of Valle d'Aosta, Italy

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

Antoni Kolek, University of Social Sciences, Poland

Aphrodite Ktena, National and Kapodistrian University of Athens, Greece

Aviva Dan, Ohalo Academic Education College, Israel

Beata Maślanka-Wieczorek, Polish-Japanese Academy of Information Technology, Poland

Beatriz Carrasquer Álvarez, Zaragoza University, Spain

Begoña Sampedro, University of Cordoba, Spain

Belkis Tekmen, Baskent University, Turkey

Binnur Yeşilyaprak, Ankara University, Turkey

Burcu Koc, Sakarya University, Turkey

Cağla Atmaca, Pamukkale University, Turkey

Carla Massoud, Saint-Joseph University Beirut, France

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

Cheng-Hsuan Li, National Taichung University of Education, Taiwan

Christian David Quintero Guerrero, Nueva Granada Militar University, Colombia

Christine Besnard, Glendon College, York University, Canada

Christos Manasis, TEI of Sterea Ellada, Greece

Cory A. Bennett, Idaho State University, USA

Cristiano Luchetti, American University of Sharjah, United Arab Emirates

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

Denise Whitelock, The Open University, United Kingdom

Diane Boothe, Boise State University, USA

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

Donata Puntil, King's College London, United Kingdom

Dorina Anca Talas, Babeş-Bolyai University, Romania

Douglas Baleshta, Thompson Rivers University, Canada

Elena Polyudova, Defense Language Institute, USA

Elizabeth Sandell, Minnesota State University, USA

Ellen Whitford, Georgia Southern University, USA

Emre Erturk, Eastern Institute of Technology, New Zealand

Gilles Sagodira, University of Réunion Island, Reunion

Gina Chianese, University of Trieste, Italy

Giuditta Alessandrini, Università degli Studi Roma TRE, Italy

Gráinne Ní Dhomhnaill, University College Dublin, Ireland

Gyöngyi Bujdosó, University of Debrecen, Hungary

Harvey Oueijan, Notre Dame University, Lebanon

Hava Vidergor, Gordon Academic College of Education, Israel

Héctor Tronchoni, Florida Universitaria in Catarroja, Spain

Helena Skarupská, Tomas Bata University, Czech Republic Helin Puksand, University of Tartu, Estonia

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

Huseyin Bicen, Near East University, Nicosia, Cyprus

Ilijana Čutura, University of Kragujevac, Serbia

Ilona Tandzegolskienė, Vytautas Magnus University, Lithuania

Ioana Velica, Babes-Bolyai University, Romania

Ioana Letiția Șerban, Babeș-Bolyai University, Romania

Iulia Mihalache, Université du Québec en Outaouais, Canada

Jacquelyn Baker-Sennett, Western Washington University, USA

Jana Mazancová, Czech University of Life Sciences Prague, Czech Republic

Janaina Cardoso, Rio de Janeiro State University, Brazil

Jeannette Jones, Texas Lutheran University, USA

Jitka Hloušková, University of Pardubice, Czech Republic

Joanna Paliszkiewicz, Warsaw University of Life Sciences, Poland

Jose Augusto Oliveira Huguenin, Universidade Federal Fluminense, Brazil

Juana Maria Sancho Gil, University of Barcelona, Spain

Judith Szerdahelyi, Western Kentucky University, USA

Julia Haba-Osca, University of Valencia, Spain

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

Karim Moustaghfir, Al Akhawayn University in Ifrane, Morocco

Katarína Slobodová Nováková, University of Ss. Cyril and Methodius in Trnava, Slovakia

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

Kateřina Vitásková, Palacký University in Olomouc, Czech Republic

Khondkar R. Islam, George Mason University, USA

Konstantinos Kalemis, National and Kapodistrian University of Athens / National Centre for Local Government and Public Administration, Hellenic Ministry of Education, Greece

Kyparisia Papanikolaou, School of Pedagogical and Technological Education, Greece

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

Laura Rio, University of Bologna, Italy

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

Lefkothea Kartasidou, University of Macedonia, Greece

Leila Kajee, University of Johannesburg, South Africa

Leona Stašová, University of Hradec Kralove, Czech Republic

Lina Kaminskienė, Vytautas Magnus University, Lithuania

Longzhi Yang, Northumbria University, United Kingdom

Loreta Chodzkiene, Vilnius University, Lithuania

Luis Gonzaga Roger Castillo, Universidad de Granada (UGR) / Centro de Estudios Bizantinos, Neogriegos y Chipriotas, Spain

Łukasz Tomczyk, Pedagogical University of Cracow, Poland

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

Maciej Dębski, University of Social Sciences, Poland

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

Magdolna Chrappán, University of Debrecen, Hungary

Malgorzata Cieciora, Polish-Japanese Academy of Information Technology, Polska

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

Maria Carme Boqué Torremorell, Ramon Llull University, Spain

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

Marko Slavkovic, University of Kragujevac, Serbia

Marta Talavera, University of Valencia, Spain

Maya Wizel, Middlebury College / Kibbutzim College, USA / Israel

Melissa Caspary, Georgia Gwinnett College, USA

Michael Reiner, IMC University of Applied Sciences Krems, Austria

Michele Lemos de Souza, Universidade Federal Fluminense, Brazil

Milan Kubiatko, University of Zilina, Slovakia

Napak-on Sritrakarn, Rajamangala University of Technology Isan, Thailand

Natalie Lavoie, University of Quebec in Rimousk, Canada

Nazario Zambaldi, Free University of Bolzano, Italy

Nella Mlsová, University of Hradec Králové, Czech Republic

Nihal Dogan, University of the Balearic Islands, Spain

Nilza Costa, University of Aveiro, Portugal

Paola Damiani, University of Turin, Italy

Pascal Marquet, University of Strasbourg, France

Paschalia Patsala, Arts and Humanities Research Council, United Kingdom

Pavel Brebera, University of Pardubice, Czech Republic

Paweł Topol, Adam Mickiewicz University in Poznań, Poland

Pedro Perera Méndez, Universidad de La Laguna, Spain

Petros Kefalas, University of York Europe Campus, Greece

Pule Phindane, Central University of Technology, South Africa

Rasa Nedzinskaitė-Mačiūnienė, Vytautas Magnus University, Lithuania

Remigijus Bubnys, Kaunas University of Technology, Lithuania

Rosanna Tammaro, University of Salerno, Italy

Rosemary Papa, Northern Arizona University, and Founder of Educational Leaders Without Borders, USA

Ryuichi Matsuba, Kumamoto University, Japan

Sam Ramaila, University of Johannesburg, South Africa

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

Sharon Jaggernauth, The University of The West Indies, Trinidad & Tobago

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

Soane Joyce Mohapi, University of South Africa, South Africa

Stefania Pinnelli, University of Salento, Italy

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

Stephen Hughes, University of Granada, Spain

Susan Scott, Lakehead University, Canada

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

Syed Ziaur Rahman, College of Applied Sciences-Ibri, Ministry of Higher Education, Sultanate of Oman, Oman

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

Tena Velki, Josip Juraj Strossmayer University of Osijek, Croatia

Théodore Njingang Mbadjoin, University Lumière Lyon 2, France

Todd Brower, Western State College of Law, USA

Vanja Bevanda, Juraj Dobrila University of Pula, Croatia

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

Vicente J. Llorent, University of Cordoba, Spain

Wendy Setlalentoa, Central University

of Technology, South Africa

Wiktor Bolkunow, Warsaw School of Economics, Poland

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

Youngsoon Kim, Inha University, South Korea

Yukiko Sawano, University of The Sacred Heart, Tokyo, Japan

Zoltán Rónay, Eötvös Loránd University, Hungary

INDEX OF CONTENTS

ORAL PRESENTATIONS

Teachers and Students	
The basis for a learning view – Education, experience and practice Joar Sande	3
Designing teachers' training on adopting OERS in their teaching Maria Perifanou, & Anastasios A. Economides	8
The relations between musicianship and core competencies in professional music training—The TUT experience Hua Hui Tseng	13
Early primary school teachers' perceptions about science and science process skills: A case study in South Africa Monde Kazeni	18
A framework to analyse the quality of ECEC services according to the child-centred culture Paolo Sorzio, & Caterina Bembich	23
Life sciences teachers' understanding, perceptions and adoption of inquiry-based science education in selected South African high schools Monde Kazeni, & Nosipho Mkhwanazi	27
Teaching life sciences using second language: How do teachers cope? Amos Motloung, & Lydia Mavuru	32
Cultural translation beyond an interdisciplinary exit, a meeting of knowledge Ana Hernández Espino	37
Life sciences teachers' conceptions about socioscientific issues in the topic evolution Mokgadi Relela, & Lydia Mavuru	39
Spreadsheets and latex – A perfect union for the creation of testbanks for online assessment Azam Beg, Manzoor Ahmed Khan, & Maqsood Sandhu	44
Student mentor's ideal features: Peer choice Madalena Cunha, & Nuno Campos	49
The association between student engagement and creativity of undergraduates in China Yanan Hu, & Xiaotian Han	54
Using everyday language to support learners' access to mathematical content knowledge Azwidowi Emmanuel Libusha	59
Free time and social relationships in a group of students from two high schools in	64

Adriana Albu, Mihaela Vlada, Adina Nechita, & Florin Dima

Teacher training for the prevention, reporting and addressing of violence against children Elisabetta Biffi, & Daniela Bianchi	69
Experiential learning processes using an e-diary in students' internship Ilona Tandzegolskienė, & Asta Lapėnienė	74
A study on using game-based method to improve learning efficiency of junior secondary school students Timothy T.K. Wong, & Yee Wan Kwan	79
Exploring South African preservice teachers' conceptual understanding of light phenomena Sam Ramaila	84
How relationships impact sense of belonging in schools amongst female adolescents from refugee backgrounds Sonja Aicha Van Der Putten	88
Pedagogical practices adopted by teachers when teaching learners taking English as first additional language in life sciences classrooms Portia Seloma, & Sam Ramaila	93
Building bridges: Bringing nonformal pedagogies into the classroom Maya Wizel	97
Technology integration in natural sciences teaching and learning in South African township schools Sam Ramaila	102
Pre-service teachers' preparedness and confidence in teaching life sciences topics: What do they lack? Lydia Mavuru, & Oniccah Koketso Pila	106
A review of papers about block programming from the workshop on computing	111
at school Gilberto Amado de Azevedo Cysneiros Filho, Neiton Carvalho da Silva, & Barbara Silva Morais	
Greek and Portuguese mathematics education and performance, through the Prism of PISA	116
Eleni Nolka, & Chryssa Sofianopoulou	101
Women faculty and scientific productivity in Latin American context: Evidence from Chile Geraldy Sepúlveda-Páez, & Carmen Araneda-Guirriman	121
Identifying the effective teacher: The conceptions of pre-service assistant nurses Katerina Kasimatis, Vasiliki Kontogianni, Andreas Moutsios-Rentzos, & Varvara Rozou	126
Exploring information communications technology (ICT) infused microteaching module at a university of technology in South Africa Paseka Patric Mollo	131
Perceptions and preferences of English student teachers on the assessment practices Pule Phindane	136
Transitioning architectural pedagogy into the virtual era via digital learning methods Tatiana Estrina, Alvin Huang, Vincent Hui, & Kristen Sarmiento	141

Let's talk! Promoting meaningful communication through authentic teacher child dialogue Barbara Shapir, Teresa Lewin, & Samar Aldinah	146
Higher education institutions' need to initiate change to the accounting curriculum during the fourth industrial revolution (4IR) Shaun Peens	150
A reflection on gender achievement in sciences' rural school settings of multicultural South Africa Alice Mokoena, & Gregory Alexander	155
Intercultural partnerships that foster cultural competence Elizabeth J. Sandell, Katie Archer Olson, & Maria-Renee Leonhardt Grigsby	159
The complexity of identity formation of black learners attending historically white schools Anthony Mpisi, & Gregory Alexander	163
The portfolio of evidence in the competency-based educational model of the university of Guanajuato María Guadalupe Arredondo-Hidalgo, & Diana del Consuelo Caldera González	167
Social science student teachers' awareness of the intertwiness of social science and social justice in multicultural school settings Titus Williams, Gregory Alexander, & Wendy Setlalentoa	172
Comparison of the first year learning outcomes of dual and nondual students in the light of the input competence survey Róbert Pap-Szigeti, & Erika Török	177
Ascertaining the use of extracurricular activities in promoting learners' holistic development in multicultural school settings Gregory Alexander, Sheila Matoti, & Pieter Van Zyl	182
Initial and in-service training for secondary school teachers to implement project-based learning (PBL) Ana María Ortiz-Colón, Rafael Castellano-Almagro, Javier Rodríguez-Moreno, & Miriam Agreda Montoro	187
The interdisciplinarity of forensic sciences in the educational sphere: An analysis of this context in secondary school Shirlene Carmo, Luís Souto, & Carlos Silva	192
School-based in-service teacher training in literacy Abha Gupta, & Guang Lea Lee	197
Distance teaching and presence teaching towards a possible and useful integration Andrea Tarantino	201
Burnout prevention with psychoeducation in teachers Mónika Veronika Szigeti	205
Investigating the use action learning approaches in civil engineering and construction studies: A case of skills centre Khojane Geoffrey Mokhothu, Charles S Masoabi, & Alfred H Makura	210
Pedagogical interactions in primary school reintegration processes: A case study in Chile José Manuel Medina, Tatiana Herreros, Pamela De Barca, & Carolina Crovetto	214

Reflective observations on the design and studio art programme at a university of technology Lebogang Nthejane	217
The importance of reflection-based strategies in training professionals working with MDVI children Andrea Hathazi, & Ioana-Letitia Serban	221
<u>Projects and Trends</u>	
Game-based training: An effective method for reducing behavioral-finance biases Francesco Tommasi, Andrea Ceschi, Marija Gostimir, Marco Perini, & Riccardo Sartori	226
Digitally changing teaching practice environments: An exploration of concepts and implications Marloes de Munnik, & Osama Al-Mahdi	231
Distance education and learning processes. A survey at university of Catania during the COVID-19 pandemic Valeria Di Martino, & Raffaella C. Strongoli	236
The plight of first-year teachers in public primary schools Xiaotian Han	241
Instructional design of knowledge nuggets Christian Ploder, Lisa Ehrhardt, Laura Gamper, & Christoph Hazy	245
Change management: Experiences of private TVET college educators regarding virtual learning during COVID-19 Adebunmi Yetunde Aina, & Ayodele Ogegbo	250
Impact of identity-oriented literature education on adolescents' insight into the self and the other Peter Grandits	255
"Mind the gap": The transformative learning process of second language practitioners when becoming scholars Dana Kaplan, & Maya Wizel	260
University students' struggles with online learning during the COVID-19 pandemic lockdown Esther Chiner, Marcos Gómez-Puerta, Victoria E. García-Vera, & M. Cristina Cardona-Moltó	265
Escape room as a motivating tool in the English literature classroom at tertiary education Madalina Armie, José Francisco Fernández Sánchez, & Verónica Membrive Pérez	270
Teaching in digital surroundings – Students opinion on digital tools and digital lectures Marcin Fojcik, Martyna K. Fojcik, Lars Kyte, Bjarte Pollen, & Jan Ove Rogde Mjånes	275
Students experiences on the use of google classroom: Case study of a university in Rwanda Ayodele Ogegbo, & Oyebimpe Adegoke	280
Teachers' attitudes in application of technology and effective teaching planning in primary school Arjana Zhubi	285

Identification of factors affecting elementary teachers' attitudes towards inclusion in Kosovo: The role of demographic variables Donika Koliqi, & Naser Zabeli	290
Verification of affordance effect of HMI in the VR environment Maki Arame, Junko Handa, Yoshiko Goda, Masashi Toda, Ryuichi Matsuba, & Tatsuru Daimon	294
A life-history case study on self-reliance experience of divorced migrant women SooAn Choi, & YoungSoon Kim	299
Digital storytelling and lifelong learning education in informal contexts: The MEMEX project Elisabetta Falchetti, Pascuala Migone, Cristina Da Milano, & Maria Francesca Guida	304
An exploratory study on the research tendency of school counselors in South Korea Sumin Kim, & YoungSoon Kim	309
The impact of online activities on students' health and the importance of time management Carolina Bodea Hategan, Dorina Talaş, & Raluca Trifu	314
Use of social networks for the training of future teachers in early childhood education Mercedes Llorent-Vaquero, África M. Cámara-Estrella, Elena M. Díaz-Pareja, & Juana M. Ortega-Tudela	319
Participation to empower children and strengthen the community Sabina Langer	324
Design thinking in future teachers training Juana M. Ortega-Tudela, Elena M. Diaz-Pareja, África M. Cámara-Estrella, & Mercedes LLorent-Vaquero	329
The impact of COVID-19 on the school world Rosanna Tammaro, Anna D'Alessio, Annamaria Petolicchio, & Anna Iannuzzo	334
Massive open online courses camps: Before and during the pandemic Janaina Cardoso	339
Storytelling and digital art as a means to improve multilingual skills Véronique Delplancq, Ana Maria Costa, Cristina Amaro Costa, Emília Coutinho, Isabel Oliveira, José Pereira, Patricia Lopez Garcia, Romain Gillain, Susana Amante, Susana Fidalgo, & Susana Relvas	344
4TH IR – Implications for higher education by looking at the use of mobile teaching devices Johannes Andreas Gerhardus Beukes	348
Reflections on offers and use of digital media for transferring knowledge in teacher education Susanne Schumacher, & Ulrike Stadler-Altmann	353
Distributed intercultural project-based learning - A novel approach - Experiences from a quadrilateral interdisciplinary collaboration Manfred Meyer, Agung Nugroho, José Ochoa-Luna, Colin Stanley, & Heike Winschiers-Theophilus	358
The effect of a one-on-one dialogue-based mathematical intelligent tutoring system for learning equivalent fraction Shu Chuan Shih, Hao Yu Tsai, & Mei Ling Chen	363

The good, the bad and the future – The challenges, positives and future strategies for higher education blended teaching <i>Monica Ward</i>	366
Assessing the academic writing skills of final year English second language (ESL) educations students to determine their preparedness as language teachers: A practical approach at a university of technology Atrimecia Hass, & Brigitte Lenong	371
Experiment D' – Serious game for the development of intercultural competences. Concept, content, and experiences Gala Rebane, & Maik Arnold	376
Attitudes of grade one educators towards the implementation of inclusive education in classrooms at Botshabelo schools Nomvuyo Joyce Mantshiyane, Wendy Setlalentoa, & Pule Phindane	381
Challenges with the implementation of the admission policy for grades R and 1 in the Motheo district in the Free State province of South Africa $\it Jaysveree\ M\ Louw$	386
The role of communication as the drive for immigration: A case study in Finland Zahra Hosseini, & Sirkku Kotilainen	391
Education and technology during COVID-19 times Daniel Nicolas Dominguez-Perez, & Nicolas Dominguez-Vergara	396
Flipping a 700 student classroom Peter Purgathofer, & Kay Kender	401
Integration of pedagogy into technology: A practical paradigm Zahra Hosseini, & Jani Kinnunen	406
Development of health-promoting behaviour of a child as an educational goal in families of handicapped mothers with mental health disorders Petra Hájková, & Lea Květoňová	411
Online speech and language therapy. Focus-group based study Carolina Bodea Haţegan, Dorina Talaş, & Raluca Trifu	415
Upgrading MOOC students' engagement and participation in humanities-oriented online courses: The example of the MOOC based on the project "DETECt" Jan Baetens, Roberta Pireddu, & Frederik Truyen	420
Digital engineering: Competence acquisition and program development as an open co-creation process Vanessa Mai, Susanne Wolf, Paul Varney, Martin Bonnet, & Anja Richert	424
Analyzing indigeneity in academic and architectural frameworks Tatiana Estrina, Shengnan Gao, Vivian Kinuthia, Sophie Twarog, Liane Werdina, & Gloria Zhou	429
Social skills teaching procedures in ASD-HF Maria Carla Ricci, Francesca Di Carmine, Antonia Bosco, Agnese Lombardi, & Alessandro Frolli	434
Ensuring success in the flipped classroom when teaching on-line Marie J. Myers	439

Virtual learning applying educational strategies in times of COVID-19; case of technology in military sciences Flor Emperatriz Garcés Mancero, Magaly Margarita Narváez Ríos, Luis Germánico Gutiérrez Albán, & Víctor Danilo Lazo Alvarado	44 4
Service learning integrated with foreign languages learning: Promoting transversal competencies Dana Hanesová	447
Teaching and Learning	
View of secondary technical school students on the paths and barriers to their professional development Dana Vicherková, & Josef Malach	452
Exploring the relationships between constructivist learning environment and critical thinking ability of secondary school students Yee Wan Kwan	457
Online learning questionnaires based on renewable energy research equipment F. Javier Maseda Rego, Itziar Martija López, Patxi Alkorta Egiguren, Izaskun Garrido Hernández, & Aitor J. Garrido Hernández	462
Educational initiatives to develop transversal skills in the management subject of master's degree in industrial engineering at Universitat Politécnica de Valéncia Mónica Martínez-Gómez, José Jabaloyes, & Andrea Conchado Peiró	467
Analysing lesson-based interviews using the lesson activities map (LAMAP) as a visual tool Annamaria Savona	472
Pre-service teachers' critical reflection on the knowledge and skills learned in life sciences methodology module Lydia Mavuru	477
Sleep quality and sleep habits in students Beatriz Almeida, Carlos Albuquerque, Madalena Cunha, & Anabela Antunes	482
A questionnaire for evaluating pupils' cognitive path about symmetry at primary school Simone Brasili, & Riccardo Piergallini	486
Teachers experience with introducing programming in different courses for non-computer science students Martyna K. Fojcik, & Marcin Fojcik	491
Quality control tools in the analysis of COVID-19 caused problems Nicolas Dominguez-Vergara, & Daniel Nicolas Dominguez-Perez	496
The factors influencing the pedagogical orientations of the final year physical sciences pre-service teachers Aviwe Sondlo, & Umesh Ramnarain	501
Action research - Approach focused on the development of educational practice Maja Domazet, & Siniša Opić	506
Students' attitudes towards science: Where do we go from here Elena Elliniadou, & Chryssa Sofianopoulou	511

Educational utilization of narrative medicine in Korean medical schools Youngsub Oh	516
Rethinking the other for multicultural education – Focused on the philosophy of Buber and Levinas Seungeun Choi	521
The teacher training during COVID-19 pandemic: An exploratory study about online laboratories quality Rosanna Tammaro, Iolanda Sara Iannotta, & Concetta Ferrantino	525
Theory and practice of storytelling with ScratchJr to develop early maths skills Annarosa Serpe	529
Motivation in foreign language learning: The dynamic interactions of many factors Christine Besnard	534
The development and piloting of an instrument to measure nature of science (NOS) understanding Tarisai Chanetsa, & Umesh Ramnarain	539
Processability approaches to receptive third language acquisition: Implications for multilingual classrooms Helen Forsyth	544
Cognitive and linguistic skills assessment protocol: Adaptation and validation for European Portuguese Inês Martins, Cristiane Lima Nunes, Simone Aparecida Capellini, & Graça S. Carvalho	549
Motivational power of gamification: The effect of playful learning on psychological needs of self-determination theory Bahar Kutun, Alke Martens, & Werner Schmidt	554
Teaching Setswana proverbs at the institution of higher learning in South Africa Bridget Mangwegape	559
Faculty & student retention: Keeping our HBCU-UDC alive during the COVID-19 pandemic Arlene King-Berry, & Carolene Eslyn Charles	563
Student teachers' opinions about using authentic materials and tasks for acquiring Estonian cultural history Kristel Ruutmets, Evi Saluveer, & Mari Niitra	568
Transfer effect of N -Back training: Mathematical implications in school-age children $Selma\ Boz$	573
<u>Organizational Issues</u>	
Smart CV for lifelong qualifications certification based on blockchain Anastasios A. Economides, & Maria Perifanou	578
Knowing to empower: Study of the difficulties of the informal caregiver Rosa Martins, Francisco Almeida, Susana Batista, & Nélia Carvalho	583
Women in engineering, faculty of engineering in Bilbao F. Javier Maseda Rego, Itziar Martija López, Patxi Alkorta Egiguren, Izaskun Garrido Hernández, & Aitor J. Garrido Hernández	588

Creating lovemarks through students of public universities in Ireland Javier Casanoves-Boix, Ana Cruz-García, & Maurice Murphy	593
The impact of COVID-19 on residential care services for children: A call for family-based approach in alternative care Lucia Carriera, Chiara Carla Montà, & Daniela Bianchi	597
Considerations of talent management in retention of academics in the National University of Lesotho Theressa Madzingesu Zengeya, Gregory Alexander, & Desiree Pearl Larey	601
Higher education: Sustaining the future of students during a pandemic Naziema Jappie	605
Enabling transformative inclusive learning pedagogies of preservice teachers in multicultural higher learning contexts June Palmer, Rantsie Kgothule, Gregg Alexander, & Edwin de Klerk	610
Branding in private universities at El Salvador: Brands that the public fall in love with Javier Casanoves-Boix, Ana Cruz-García, Pablo Pinazo-Dallenbach, & José Ricardo Flores-Pérez	615
Transformative leadership in multicultural schooling contexts: A critical reflection of in-service teachers' practices and school managers' roles Rantsie Kgothule, June Palmer, Gregg Alexander, & Edwin De Klerk	620
Enhancing educators' credibility in intelligent learning environments Mario Mallia Milanes, & Matthew Montebello	625
Exploring the implementation of teacher leadership in Lesotho high schools Lieketseng Lethole, June Palmer, & Edwin de Klerk	630

POSTERS

Teachers and Students	625
The learnings of the basic education teacher Joana Paulin Romanowski	637
What does a student of a teaching degree learn apart from subjects? Carolina Falcón Linares	640
Interdisciplinary and intersectoral doctoral education designed to improve graduate employability Tara Cusack, Nicola Mountford, Minna Isomursu, Guido Giunti Garcia, Dimitris Filos, & Ioanna Chouvarda	643
Projects and Trends	
Importance of digital competences and attitudes toward research in Mexican teachers Pedro José Canto Herrera, Hugo Salvador Flores Castro, & Sergio Humberto Quiñonez Pech	646
Self- and peer-assessment to enhance student engagement in undergraduate group projects Dermot Kerr, & Sonya Coleman	649
MOOCS as a tool for virtual university orientation Ilaria Merciai, & Ruth Kerr	652
Heritage and art education through the screen. Filling the space by performative methodologies Alessandra De Nicola	655
Creating a virtual study abroad experience to Russia Jay Woodward, & Michelle Kwok	658
New active methodologies for critical learning in the field of biochemistry of human nutrition Catharina Merchante, David Posé, Fernando Gallardo, Mar Quiñones, Juan Antonio Gálvez, & Beatriz Martínez-Poveda	661
Blueprints for change: What multicultural experience offers instructors of pre-service early education teachers Michelle Henault Morrone, & Yumi Matsuyama	664
School leadership and teachers' implementation of curriculum reform in Taiwan: Mediating effect of teachers' orientation Chun-Hung Cheng, & Mei-Ju Chen	667
Teaching and Learning	
A motor intervention to prepare learning to write Natalie Lavoie, & Émile Lebel	670
Organ donation: An educational pack for high school students Styliani Kapsali, Vasiliki Sapountzi, Alexandra Nestora, & Lefkothea-Vasiliki Andreou	673

HERITAGE AND ART EDUCATION THROUGH THE SCREEN. FILLING THE SPACE BY PERFORMATIVE METHODOLOGIES

Alessandra De Nicola

Interdepartmental research Centre for Cultural and Artistic Heritage Bi-PAC, University of Milano- Bicocca-Universidad Católica de Murcia UCAM (Italy)

Abstract

Long before the pandemic, museums started to invest, experimenting with some performative practices (Bishop 2006; Lista 2006) as a method and tool to foster access and participation of different audiences to their heritage. Since the advent of the #culturequarantine, in which most of the educational activities have taken place through a digital space, care and attention to gesture and space have become a key to respond effectively to the needs of educators and users. After an initial phase of rejection and disorientation, teachers, educators and trainers had to find new answers. The aim of this contribution is to describe some of these answers looking at methodologies coming from the field of choreographic and performance research. The argumentation will pass through the narration of some international proposals, three action research experiences accomplished with museum educators and schoolteachers, through which it was possible to observe how the needs and requirements changed as the lockdown conditions changed. The outcome of the research, which took about one year, is the reconsideration of the body as a mediator of the educational and training experience. On the one hand we see the "body as archive" for new knowledge, on the other hand, the space of digital educational activities is reified, thanks to this new role of the body.

Keywords: Heritage and art education, distance education and elearning, learning space, performance, challenges and transformations in education.

1. Introduction

This contribution is part of a wide-ranging, long-term research project that investigate the practices and methodologies of research in the performing arts for a new approach to heritage education. Over the years we have witnessed numerous research projects that have contributed to a paradigm shift in mediation and, consequently, in the fruition of cultural heritage (De Nicola, 2020). This change consisted of moving from a frontal narration, carried out by an expert who had a passive audience in front of him/her, to put the cultural object at the centre, as the subject from which the experience of fruition is born. Involving the public in a meaningful experience, that sees the cultural object as the source for the acquisition of new knowledge, was the necessary step to initiate the second paradigm shift, i.e., the active participation of the different audiences through the workshop or interpretative techniques and methodologies. In this way, the alliance between school and museum was significantly created; to paraphrase the words of John Dewey (1938), museums became "the alembics of knowledge". A great contribution to these revolutions comes from the relationship that has been created, in contemporary times, between artistic production and the public (Bishop, 2006): starting with the DADA proto performances/happening, the work of art exists and is meaningful only concerning its audience. Museums, exhibition spaces and some landscapes characterised by cultural heritages, have long seen performative actions as a valid response to the growing demand for participation in the creation of meanings by the public (Bal 2011; Jackson, Kidd 2011). The #quarantineculture phenomenon, due to the pandemic accelerated a process of revisiting practices that had already been ongoing in the cultural sector for some decades. More than ever in the uncertainty surrounding the pandemic, museums sought to keep culture alive by producing new contents or offering a safe means for audiences to discover or rediscover, in surrogate digital form, cultural heritage assets from geographically nearby or faraway. This mirrored a pattern that has already been observed during emergencies such as environmental disasters or brutal acts of terrorism, whereby cultural heritage assets serve as key identity markers for communities actively seeking to re-establish their identities. It is at times of crisis such as these that the public perceives the

heritage assets held in museums as a key resource with the power to reinforce the local community. The first point to be made is that access to a computer and a good Internet connection alone were enough to support a wide range of formats, including webinars, performances, distance meetings, podcasts and radio art. Since the advent of the #quarantineculture, in which most of the educational activities, in museums and schools, have taken place through digital space, care and attention to gesture and space have become a key to respond effectively to the needs of educators and users. After an initial phase of rejection and disorientation, teachers, educators and trainers had to find new answers.

2. The educators' point of view, methodological aspects

Some of these responses sought through the management of: a training course with 27 museum educators from the municipality of Milan - May/June 2020 (2 questionnaires); a training course for 22 teachers with Pirelli Hangar Bicocca and performer Marcella Vanzo - November 20/ January 21 (2 questionnaires); a training course with 27 museum operators from all over Italy January 2021 (1 focus group). The observation of the general data to have a broader point of view took place through the collaborative platform Politeaching: dai docenti e per i docenti, consigli per una didattica efficace ai tempi del coronavirus (from teachers and for teachers, tips for effective teaching in the times of coronavirus) created by the Politecnico di Milano, where teachers from all over the world share techniques, methodologies and perplexities. Fundamental was the investigation into the experience of Italian teachers during the COVID-19 health emergency by The Italian Educational Research Society (Lucisano, 2020). All the experiences and data collected show three orders of problems: 1. an increase in working time linked to the need to restructure teaching. 2. The problems related to the management of learning environments and the difficulties in involving students. 3. The evaluation of students' work was one of the most difficult aspects. The present paper worked on point 2. Cooperatively, we searched with teachers and educators for solutions to produce a meaningful relationship beyond the screen. The first point from which we started was the work on the search for feedback, trying to recover some of the structured achievements in educational practice (Ani, 2009; Rowe, 2011). Many teachers saw the almost obsessive search for students' feedback as the only way to achieve a participatory lesson/workshop. Thus, we propose to use the scientific method, starting from the observation of natural objects and their reproduction using different media and techniques, we tried to restore centrality to the experience of art (Dewey, 1938), understood as a dynamic and vital practice, beyond the screen. Only after the experience, in their concrete space, it was possible to create a debate, so, to have significant feedbacks. The other, fundamental step was to restore centrality to the body. It was only possible thanks to the involvement of artistic practice and methodologies deriving from performance. We have tried to close the distance by rethinking the concept of discipline. The path forward has been one of contamination between disciplines and methodologies, drawing heavily on informal learning. Thinking about Jacques Derrida, we implemented a process of deconstruction, a fundamental theoretical element of performance practice.

3. Body and performance

Following Merleau-Ponty, the body is made of the same flesh as the world. The body is the mediator that overcomes the non-objectivity of space and time. A response to the fear of accessing a territory that we are no longer able to dominate, which leads us to a stiffening, incapable of proposing problems and finding solutions, as educational practice provides. According to Gilbert Simondon's thought, regarding the individual concerning the technique, the definition of the individual foresees a subdivision into distinct and closely related phases: physical, vital (biological), psychic and collective. The first sees the body and its boundaries as the first step to get in touch with reality. Paraphrasing Derrida, it is only when boundaries are defined, starting from experience, that the subject becomes aware of one's possibilities and succeeds in overcoming the limits imposed by external subjects to achieve new knowledge. The activities proposed during the different experiences worked in this direction, trying to reactivate all the senses (the voice, no longer the teacher's alone, but everyone's; touch as a tool to rediscover three-dimensionality, the laptop frame as a limit to be broken through the body's movement in space) to fill the digital space and at the same time restore the centrality of the educational experience, in which the body becomes both the mediator of the experience and the archive of newly acquired knowledge (Gamelli, 2006; Hooper-Hill, 2007; Lepecki, 2010). Similarly, in addition to the experienced workshop practice, we would like to point out how many cultural realities have proposed professional performances as a means of keeping the relationship with the public warm. At the Pinacoteca di Siena, the project Capolavori in Ballo (Masterpieces in Dance) by MOTUS: a multimedia work and a performance in which dance combined with art to show some lesser-known aspects, often details, of the masterpieces conserved in the Pinacoteca. At the Gagosian, on the occasion of the exhibition "Anselm Kiefer: Field of the Cloth of Gold, Hugo Marchadand and Hannah O'Neil danced to Florent Melac's choreographies, leading the spectator to ideally walk through the landscape created by Kiefer's works. Movement succeeds in giving a third dimension to wheat fields or threatening skies. Le Grand Palais de Paris, closed to the public for works until 2024, is shown through "La Ronde" the work created by Boris Charmatz. #dancinbo "la danza e danza a Bologna" was a television format in which the city of Bologna is told through dance in places of art, architecture and monuments. During Black lives matter, the Tate Gallery broadcast on its social channels the performance by Enam Gbewonyo set to music by Liz Gre in which the fusion of sounds and movements created "an ode to Blackness and response". It was a work inspired by Lynette Yiadom Boakye's painting "Stillness", exhibited at the time. By the éreale project, on YouTube, the Royal Museums of Turin remained engaged with their audiences through a video in which dancers, acrobats, fencers and opera singers acted in the emptiness and silence of the rooms, describing and interpreting them.

4. Conclusions

The outcome of this paper is the reconsideration of the body as a mediator of the educational (Gamelli, 2006; Hooper-Hill, 2007) and training experience. On the one hand, we see the "body as archive" (Lepecki, 2010) for new knowledge, on the other hand, the space of digital educational activities is reified, thanks to this new role of the body. The instrument of this new relationship with the real is the performative practice, through a process of deconstruction as opposed to the traditional educational practice that sees in the structure and systematization of the contents, one of the central aspects. Distance learning has transformed the educational space into a digital space in which the possibility of temporal displacement between the source of the educational activities and the recipient has made the educational experience less authentic. The possibility of choosing between synchronous and asynchronous modes, the condition of a space mediated through all technological apparatuses have led to a further loosening of the educational relationship. If in pedagogical practice and research, the environment is considered a third educator (Malaguzzi, 1993), and anchoring the topics of the lessons to everyday life, to the search for the so-called reality tasks, is a necessity of didactic and educational activities, the question underlying this article is what definition of reality we can give to this type of educational activities. The answer lies in proposing short activities linked to experience involving all the senses, bringing the body back into the world, into every day of our teaching beyond the screen.

References

- Ani, A. (2019). Positive feedback improves students' psychological and physical outcomes. Indonesian Journal of Educational Studies, 22(2),134-143
- Bal, M. (2011). *Exposing the Public*. In S. Macdonald (ed.) *A Companion to Museum Studies*, Chichester: Blackwell, 525-542.
- De Nicola, A., Garcia Sotile, M.E., & Gomez Lozano, S. (2020). Research and creations between art-architecture to enhance the urban heritage through an educational process. AusArt Journal for Research in Art.8 (2), pp. 25-37.
- Dewey, J. (1938) Experience and education. New York, NY: Kappa Delta Pi
- Frey, B. S., Kirshenblatt-Gimblett.B. (2002) The Dematerialization of culture and the Deaccessioning of Museum Collections. In Museum International 54 (4) 58-63
- Gamelli, I (2006) Pedagogia del corpo. Roma: Universale Meltemi.
- Hooper-Greenhill, E. (2007), Museum and education purpose, pedagogy, performances. New York: Routledge.
- Jackson, A., Kidd, J. (eds) (2013). Performing Heritage: Research, practice and innovation in museum theatre and live interpretation, Manchester: Manchester University Press.
- Lepecki, A. (2010a). "The Body as Archive: Will to Re-enact and the Afterlives of Dances." In *Dance Research Journal* 42(2): 28–48.
- Lucisano, P. (2020) Doing research with teachers. The first results of the national SIRD survey "A comparison of the approaches to distance learning adopted in Italian schools in the period of the COVID-19 emergency". Lifelong Lifewide Learning VOL. 17, N. 36, pp. 3-25
- Rowe, A. (2011). The personal dimension in teaching: Why students value feedback. The International Journal of Educational Management, 25(4), 343-360.
- Simondon, G. (1989). L'individuation psychique et collective, Paris: Aubier.