

International Conference
New Perspectives
in Science
Education

Conference Programme

22 - 23 March 2018

Grand Hotel Mediterraneo
Lungarno del Tempio, 44 – Florence – Italy





Thursday 22 March

Room A 9:35 – 10:50	Room B 9:35 – 10:50	Room C 9:35 – 10:50
Science and Environment	Training of Science Teachers	Science Teaching Methods

Coffee Break 10:50 - 11:00

Poster Session: 11:00 – 11:20

Room A 11:20 – 13:00	Room B 11:20 – 13:00	Room C 11:20 – 13:00
Health Education	Enhancing Students' Motivation	Science Education and Special Needs

Lunch 13:00 – 14:30

Room A 14:30 – 16:35	Room B 14:30 – 16:35	Room C 14:30 – 16:35
Science and Society	STEM Education	Science Teaching Methods

Coffee Break 16:35 – 16:45

Poster Session: 16:45 – 17:05

Room A 17:05 – 18:45	Room B 17:05 – 18:45	Room C 17:05 – 18:45
Studies on Science Education	Chemistry Teaching Methods	Biomedical Science Education

Friday 23 March

Room A 9:10 – 10:25	Room B 9:10 – 10:25	Room C 9:10 – 10:25
Robotics Education	Studies on Science Education	Round Table New Perspectives in Science Education

Coffee Break 10:25 – 10:35

Poster Session: 10:35 – 10:55

Room A 10:55 – 13:00	Room B 10:55 – 13:00	Room C 10:55 – 13:00
Science Education - Extra Curricula Activities	Science Teachers Professional Development	Educational Strategies

Lunch 13:00 – 14:30

Room A 14:30 – 16:35	Room B 14:30 – 16:35	Room C 14:30 – 16:35
Science and Nature	Training of Science Teachers	Science Teaching in Primary and Middle School

Coffee Break 16:10 – 16:20

Poster Session: 16:20 – 16:40

Room A 16:40 – 17:55	Room B 16:40 – 17:55	Room C 16:40 – 17:55
Studies on Science Education	Studies on Science Education	Studies on Science Education



Thursday 22 March 2018

Morning Session: 9:00 – 13:00

Room B 9:00 – 9:10

Introductory Speech and Practicalities

Room A: Opening Speech 09:10 – 09:30

Science Education: Facing the Challenges

Natalie Colson, Griffith University Gold Coast (Australia)

Room A 9:35 – 10:50

Science and Environment

Moderator: Jan-Eric Mattsson, Södertörn University (Sweden)

Students' Concepts of Plants

Gertraud Benke, University of Klagenfurt (Austria)

Inquiry Based Learning for Addressing Misconceptions on the Greenhouse Effect

Francesca Ugolini, Institute of Biometeorology - CNR (Italy)

Comparison of the Main Determinants Affecting Environmental Literacy between Singapore, Estonia and Germany

Volkan Hasan Kaya, University of Bremen (Germany)

Room B 9:35 – 10:50

Training of Science Teachers

Moderator: Keri Borzello, Summit View Schools (United States)

A New Paradigm for Implementing Culturally Responsive Pedagogy to Pre-service Science Teachers

Michael Taber, Colorado College (United States)

Training of Science Teachers: the Perspective of Education for Sustainability

Antonella Bachiorri, CIREA - Centro Italiano di Ricerca ed Educazione Ambientale (Italy)

Team-Workshops for Science Teachers in Schools

Ariela Baruch - Aurelie Lachish-Zalait, Davidson Institute of Science Education (Israel)

Room C 9:35 – 10:50

Science Teaching Methods

Moderator: Tobias Schmohl, OWL University & Hamburg University (Germany)

Educational Illusions

Andreas Mueller - Laura Weiss, IUFE - Université de Genève (Switzerland)

Professional Experience of Teacher Students Enhances their Understanding of Evolutionary Concepts.

Ann Mutvei - Jan-Eric Mattsson, Södertörn University (Sweden)

On the Role of Analogies beyond their Didactic Purpose

Nikolaos Fotou, Maynooth University (Ireland)

Coffee Break 10:50 – 11:00

Poster Session: 11:00 – 11:20

Room A 11:20 – 13:00

Health Education

Moderator: Thomas Waitz, Georg-August-University Göttingen (Germany)

Elements of Didactic Innovation about Cellular Oxidative Stress for Health Education

Marina Minoli, High School Marconi, National Biologists Order, Royal Society of Biology (Italy)

"Wake Up" - Sensitization of Students for Stem Cells Donation for Leukemia Patients

Julia Holzer, University of Bremen (Germany)

Comparative Study on the Sources of Information Contributing to The Cancer's Representations on a Public of Pupils and Students

Sebastien Malpel, Laboratoire CIMEOS. Université de Bourgogne (France)

Room B 11:20 – 13:00

Enhancing Students' Motivation

Moderator: Aurelie Lachish-Zalait, Davidson Institute of Science Education (Israel)

Surrealistic Perspectives Useful in Science Education

Jan-Eric Mattsson - Ann Mutvei, Södertörn University (Sweden)

A Pilot Study for Promoting Students' Critical Thinking Through an Upper-Secondary Biology Class in Austria

Susanne Rafolt - Suzanne Kapelari, Department of Subject Specific Education, University of Innsbruck (Austria)

Science Video Activities – a New Science Teaching Resource

Hagit Nissan - Pion Carmit, Davidson Institute of Science Education (Israel)

Thinking through Images: the Varied Roles of Visuals in Undergraduate Learning in the Earth Sciences and Beyond

Anne Marie Ryan, Dalhousie University (Canada)

Room C 11:20 – 13:00

Science Education and Special Needs

Moderator: Gertraud Benke, University of Klagenfurt (Austria)

Factors Affecting Special Education Teachers' Feelings of Burnout and Perceptions of Mindfulness-based Practices to Build Social and Emotional Competence

Carol Anne Cao, Texas Tech University (United States)
Keri Borzello, Summit View Schools (United States)

Total Communication and Technologies to Interact with People with Severe Intellectual Disability Addressed to Train Healthcare, Education and Interpreting Professionals

Encarnación Postigo Pinazo, University of Malaga (Spain)

Teleological Structure of Scientific and Mathematical Education

Juan Antonio Macías-García, Rey Juan Carlos University (Spain)

Science Educators and Grief Counseling: Management of Bereavement in the School Environment

Loucia Demetriou, Frederick University (Cyprus)

Lunch 13:00 - 14:30



Thursday 22 March 2018

Afternoon Session: 14:30 – 18:45

Room A 14:30 – 16:35	Room B 14:30 – 16:35	Room C 14:30 – 16:35
<p>Science and Society Moderator: <i>Tania Todorova, State University of Library Studies and Information Technologies (Bulgaria)</i></p> <p>A Curricular Approach to Develop Autonomies from the Mathematics and Scientific Education <i>Isabel Duarte, Universidad Rey Juan Carlos / Universidad de Almería (Spain)</i> <i>María Teresa Sánchez Compañía, University of Malaga (Spain)</i></p> <p>Community Engagement and Stakeholder Collaboration: Local Experiences and Evaluation of an Irish National Initiative for Promotion of Science <i>Marie Walsh, Limerick Institute of Technology (Ireland)</i></p> <p>Building the Foundational Skills Needed for Success in Work at the Human-Technology Frontier <i>Caroline Parker - Sarita Pillai, Education Development Center (United States)</i></p> <p>The Davidson Institute of Science Education: Building Bridges between Science and People <i>Aurelie Lachish-Zalait, The Davidson Institute of Science Education (Israel)</i></p> <p>The Challenges of Developing Heritage Conservation Studies in Science and Art Faculties <i>Reza Vahidzadeh, Islamic Azad University - Central Tehran Branch (Islamic Republic of Iran)</i></p>	<p>STEM Education Moderator: <i>Ann Mutvei, Södertörn University (Sweden)</i></p> <p>Multiple Benefits of the Cell EXPLORERS Programme – a STEM Public Engagement Model in Ireland <i>Muriel Grenon - Sarah Carroll, National University of Ireland Galway (Ireland)</i></p> <p>Do Single-sex Educational Programmes in STEM Disciplines Reduce Drop-out Rate of Female Students? <i>Karin Ludewig, Hochschule Furtwangen University (Germany)</i></p> <p>Improving Undergraduate Science and Engineering Instruction at a Research University: Challenges and Solutions <i>Angela Kelly, Stony Brook University (United States)</i></p> <p>Learning Astrophysics Using STEM Educational Approach: Coding and Hands-on Activities at INAF - OAS Bologna <i>Maura Sandri, INAF - OAS Bologna (Italy)</i></p> <p>Access to Space for STEM Education Inspiration Through ICE Cubes <i>Manuela Aguzzi, Space Applications Services NV/SA, ICE Cubes (The Netherlands)</i></p>	<p>Science Teaching Methods Moderator: <i>Timm Wilke, University of Braunschweig (Germany)</i></p> <p>Flexibility as a Pedagogical Challenge: “Teaching-Through-Play” or Edutainment Practices for Computer Science Students <i>Alina Vagele, Riga Technical University (Latvia)</i></p> <p>The Benefits of a Multi-Modality Approach to Teaching and Learning <i>Keri Borzello, Summit View Schools (United States)</i></p> <p>Facilitating Science Learning through a Multidisciplinary Approach <i>Michela Tramonti, IMI-Bulgarian Academy of Science (Bulgaria)</i></p> <p>Methodology for the Integration of New Technologies into Education through Learning Based on Design Projects. Case Study. <i>Joseba Koldobika Azcaray Fernández, Polytechnic University of Valencia (Spain)</i></p> <p>Project-based Learning and Assessment Unit Plans <i>Carol Anne Cao - Joseph Isaac - Shannon Wright Sahabi, Texas Tech University (United States)</i></p>

Coffee Break 16:35 – 16:45

Poster Session: 16:45 – 17:05

Room A 17:05 – 18:45	Room B 17:05 – 18:45	Room C 17:05 – 18:45
<p>Studies on Science Education Moderator: <i>Antonella Bachiorri, CIREA - Centro Italiano di Ricerca ed Educazione Ambientale (Italy)</i></p> <p>Towards a New Scholarship of German Science Education <i>Tobias Schmohl, OWL University & Hamburg University (Germany)</i></p> <p>Learning in Student Scientist Partnerships – Do Students Exploit Their Potential <i>Suzanne Kapelari, Department of Subject Specific Education, University of Innsbruck (Austria)</i></p> <p>Copyright Literacy – a Component of Information and Media Literacy <i>Tania Todorova, State University of Library Studies and Information Technologies (Bulgaria)</i></p> <p>Scientific and Practical Achievements for Lifelong Learning Applied in the University of Library Studies and Information Technologies <i>Ivanka Yankova - Silvia Stancheva, State University of Library Studies and Information Technology (ULSIT) (Bulgaria)</i></p>	<p>Chemistry Teaching Methods Moderator: <i>Marie Walsh, Limerick Institute of Technology (Ireland)</i></p> <p>What Makes a Successful Chemistry School? <i>Peter Childs, University of Limerick (Ireland)</i></p> <p>Teach Chemistry Forward: An Innovative Course Concept for Universities and Schools <i>Timm Wilke, Institute of Environmental and Sustainable Chemistry, University of Braunschweig (Germany)</i></p> <p>Teacher Training for the Use of Reading as an Instrument in Chemistry Teaching <i>Marlene Ribeiro Da Silva Graciano, Science and Technology of Goiás (IFG), Federal Institute of Education (Brazil)</i></p> <p>Stoichiometry Teaching: Highlighting Methods of Reasoning to In-Service Teachers Training <i>Ana Flavia Dos Santos, Federal University of Uberlândia (Brazil)</i></p>	<p>Biomedical Science Education Moderator: <i>Muriel Grenon, National University of Ireland Galway (Ireland)</i></p> <p>A Multilevel Approach to Student Empowerment: Examples from Biomedical Science <i>Natalie Colson, Griffith University Gold Coast (Australia)</i></p> <p>Science Outreach Activities on Biomembrane Research in Formal and Non-Formal Settings <i>Elena von Hoff - Thomas Waitz, Georg-August-University Göttingen (Germany)</i></p> <p>Teaching about Medicines under a Historic-Intercultural Approach: Lessons from the Classroom <i>Haira Emanuela Gandolfi, University College London (United Kingdom)</i></p>

End of First Conference Day



Friday 23 March 2018

Morning Session: 9:10 – 13:00

Room A 9:10 – 10:25	Room B 9:10 – 10:25	Room C 9:10 – 10:25
Robotics Education <i>Moderator: Michela Tramonti, IMI-Bulgarian Academy of Science (Bulgaria)</i>	Studies on Science Education <i>Moderator: Natalie Colson, Griffith University Gold Coast (Australia)</i>	Round Table New Perspectives in Science Education
Integrating Robotics across the Primary School Curriculum <i>Maeve Liston, Mary Immaculate College (Ireland)</i>	Choice in the Science Subjects: Trends in Malta <i>Martin Musumeci, Faculty of Education, University of Malta (Malta)</i>	The Round Table session provides the participants with the opportunity to network and share their ideas on new perspectives in science education.
Advances in Umi-Sci-Ed Project: The Teachers' Perspective on Networking and Educational Robotics in Italian High-Schools <i>Antonio Aiello, University of Pisa (Italy)</i>	Online-Teaching of Creative Writing of Scientific Publications and Project Proposals Using Google Apps <i>Andreas Zitek, University of Natural Resources and Life Sciences (Austria)</i>	Introduced by: <i>Michael Taber, Colorado College (United States)</i> <i>Peter Childs, University of Limerick (Ireland)</i>
Educational Robotics and Video: an Experiment of Integration of Languages <i>Lorenzo Denicolai, University of Turin (Italy)</i>	European Funding Programs for Scientific Research and Education <i>Elisabetta Delle Donne, Pixel (Italy)</i>	The specific topics will be identified with reference to the participants' suggestions posted on the conference pinboard available in the poster session area.

Coffee Break 10:25 – 10:35

Poster Session: 10:35 – 10:55

Room A 10:55 – 13:00	Room B 10:55 – 13:00	Room C 10:55 – 13:00
Science Education - Extra Curricula Activities <i>Moderator: Angela Kelly, Stony Brook University (United States)</i>	Science Teachers Professional Development <i>Moderator: Maeve Liston, Mary Immaculate College (Ireland)</i>	Educational Strategies <i>Moderator: Sarita Pillai, Education Development Center (United States)</i>
Steaming up After-School Science: Promoting Girls' Science Identity and Affinity Development <i>Mark Enfield, Elon University (United States)</i>	Scientists and Science Teachers Working Together: the Research Experiences for Teachers as Professional Development <i>Claudia Lupi, Department of Earth and Environmental Sciences, University of Pavia (Italy)</i>	Strategy of Education on Materials for Students <i>Laura Thurn, University of Applied Sciences Aachen (Germany)</i>
Training Impact upon Teachers Field Trips Projects – A Preliminary Evaluation <i>Ana Alexandra Valente Rodrigues, University of Aveiro (Portugal)</i>	Continuous Professional Development in Science Education: A Reconceptualisation <i>Nicola Broderick, Lecturer in Science Education, DCU (Ireland)</i>	Re-making Classroom Borders with TINKERING Approach <i>Alden Dochshyanov, EU-Track (Italy)</i> <i>Michela Tramonti, IMI-Bulgarian Academy of Science (Bulgaria)</i>
iScientists: Bringing Scientists to Class <i>Aurelie Lachish-Zalait - Meirav Bass, The Davidson Institute of Science Education (Israel)</i>	Evolution and Heredity Online Course for Educators <i>Vered Shapiro, The Davidson Institute of Science Education (Israel)</i>	Investigating the Effect of Scientist Demonstrators on Primary Children's Science Self-Efficacy <i>Sarah Carroll - Muriel Grenon, National University of Ireland Galway (Ireland)</i>
Progress of the Italian Summer Students Program at the Fermi National Accelerator Laboratory <i>Carmela Luongo - Simone Donati, INFN-Pisa (Italy)</i>	The Library Resources - a Support for the Senior Teachers: Curriculum, Learning and Teaching <i>Ginta Zalcmāne, The National Library of Latvia (Latvia)</i>	Promoting Teacher Students' System Competence by the Development of a Syndrome Approach in an Interdisciplinary Seminar <i>Nicklas Müller, University of Bremen (Germany)</i>
Engaging Biology Students through Informal Summer Field Experiences <i>Antonios Pappantoniou, Housatonic Community College (United States)</i>	Science Teachers' Perceptions and Opinions Related to Professional Development Needs <i>Davaajav Purevjav, Doctoral School of Education, University of Szeged (Hungary)</i>	Self-Efficacy in Teaching Science and the Level of Teaching Methods and Techniques of Pre-Service Elementary Teachers <i>Neşe Uygun, Hasan Kalyoncu University (Turkey)</i>

Lunch 13:00 – 14:30



Friday 23 March 2018

Afternoon Session: 14:30 – 17:55

Room A 14:30 – 16:10	Room B 14:30 – 16:10	Room C 14:30 – 16:10
Science and Nature <i>Moderator: Peter Childs, University of Limerick (Ireland)</i>	Training of Science Teachers <i>Moderator: Suzanne Kapelari, Department of Subject Specific Education, University of Innsbruck (Austria)</i>	Science Teaching in Primary and Middle School <i>Moderator: Martin Musumeci, University of Malta (Malta)</i>
<p>Concept of Atoms in Future Brazilians Chemistry Teachers <i>Mateus Carneiro Guimarães dos Santos, State University of Maringá (Brazil)</i></p> <p>A Journey inside Atomic Nucleous: Teaching-Learning Sequence Approaching Radioactivity <i>Ana Flavia Dos Santos, Federal University of Uberlândia (Brazil)</i></p> <p>"To Learn from Nature" Teaching Biomimicry for Teacher Training Students in the Kaye Academic College of Education <i>Vered Yeflach-Wiskerman, Kaye Academic College of Education (Israel)</i></p> <p>Preserved Animal Bodies or Images of Living Animals - What Would the Secondary School Pupils Prefer to See in Zoology Classes? <i>Jan Mourek, Faculty of Science, Charles University (Czech Republic)</i></p>	<p>Aesthetic Expression Enhances and Deepens Teacher Students Understanding of Science Subject Matter. <i>Ulrika Tobieson - Ann Mutvei, Södertörn University (Sweden)</i></p> <p>Investigating the Relationship Between 8th Grade Science Teachers' Job Satisfaction, Self-efficacy, Work Conditions, and Goal-related Supports in Finland and the United States Using TIMSS Data <i>Carol Anne Cao - Joseph Isaac - Shannon Wright Sahabi, Texas Tech University (United States)</i></p> <p>An Analysis of Pre-service Teachers' Views Towards the Technological Pedagogical Content Knowledge in Terms of Various Variables <i>Esra Saraç, Faculty of Elementary Education, Kilis University (Turkey)</i></p> <p>Assessment of Doctoral Supervision of International Students <i>Kumiko Kanekawa - Sachio Hirokawa, Kyushu University (Japan)</i></p>	<p>Introducing Science Teaching in Early Years Education: Practical Insights of SciLit Project <i>Ruta Grigaliunaite, CESIE (Italy)</i></p> <p>A Showcase of Projects for Science Education in Primary Classes <i>Neville Dimech, Primary Science - Science Centre (Malta)</i></p> <p>Exploring the Astronomical Knowledge of Italian Students: Surveying Middle Schools and Informal Courses <i>Sandro Bardelli, INAF-Osservatorio di Astrofisica e Scienza dello Spazio - Bologna (Italy)</i></p> <p>Science-Focused Theme Based Learning in Middle School <i>Sawsan Ailabouni - Aurelie Lachish-Zalait, The Davidson Institute of Science Education (Israel)</i></p>

Coffee Break 16:10 – 16:20

Poster Session: 16:20 – 16:40

Room A 16:40 – 17:55	Room B 16:40 – 17:55	Room C 16:40 – 17:55
Studies on Science Education <i>Moderator: Meirav Bass, The Davidson Institute of Science Education (Israel)</i>	Studies on Science Education <i>Moderator: Volkan Hasan Kaya, University of Bremen (Germany)</i>	Studies on Science Education <i>Moderator: Ginta Zalcmāne, The National Library of Latvia (Latvia)</i>
<p>Student Experience of Inquiry in the Context of Socioscientific Issues <i>Ruth Chadwick, CASTeL, Dublin City University (Ireland)</i></p> <p>Inspiring Excellence in Science in Middle School <i>Einat Sprinzak - Aurelie Lachish-Zalait, The Davidson Institute of Science Education (Israel)</i></p>	<p>Nurturing a Broader and Innovative Mindset in Graduate Students and Postdocs <i>Toshiyuki Max Misu, Global Career Design Center, Hiroshima University (Japan)</i></p> <p>Research Based on Design: Elaboration of Experimental Didactic Sequence <i>Karla Amâncio Pinto Field's, Instituto Federal de Goiás - Itumbiara (Brazil)</i></p> <p>The Impact of the Use of Technology as a Platform for Associations-Generating Techniques on Student Science Achievement <i>Sulaiman M. Al-Balushi, Sultan Qaboos University (Oman)</i></p>	<p>Development of Visual Representation Competence Taxonomy (Vrc-T) for Science Teaching and Learning <i>Hye-Gyoung Yoon, Chnucheon National University of Education (Republic of Korea)</i></p> <p>Adaptation and validation of the revised two-factor Study Process Questionnaire (R-SPQ-2F) for tertiary English writing courses in Japan <i>John Maninang, University of Tokyo (Japan)</i></p>

Closing Speech: 18:00 – 18:20

The Emergence of STEM Education: From Science Education to STEM Education

Maeve Liston, Mary Immaculate College (Ireland)

Cocktail 18:20 – 19:00

End of Conference



Virtual Presentations

An Analysis of the Contribution of ICT in Association with Geographical Education for the Formation of the Space Citizenship in Public Schools in Fortaleza / Brazil <i>Emanuella Cruz Barbosa Vieira - Maria Helena Esteves, University of Lisbon (Portugal)</i>	E-Homework with Feedback on the Topic of Momentum in the E-Learning Environment Moodle and its Analysis <i>Aba Teleki - Boris Lacsný - Simona Belicova, Constantine the Philosopher University (Slovakia)</i>
Apples with Science <i>Ana Cruz - Ana Paramés - Sónia Reis, ISEC Lisboa – Instituto Superior de Educação e Ciências (Portugal)</i>	Interdisciplinary Simulation-Based Learning for Improving Practical Skills Acquisition in Vocational Education <i>Anna Siri, University of Genoa (Italy)</i>
Appraisalment of the Language in Spoken and Written Communication <i>Marcel Balici, Free International University of Moldova (Republic of Moldova)</i> <i>Maria Pruteanu, Nadejda Bâlici - State University of Medicine and Pharmacy "Nicolae Testemitanu" (Republic of Moldova)</i>	Score Calibration Method for Assessment Motivation <i>Monika Hanáková, Constantine the Philosopher University (Slovakia)</i>
Biology Teachers' Views on the Importance and Means of Incorporating Field Trips into their Curriculum <i>Dina Tsybulsky - Yulia Ovtracht, The Hebrew University of Jerusalem and Tel Aviv (Israel)</i>	Use of a Course Blog for Critical Thinking Skills Enhancement in Chemistry Graduate Students <i>Mariela Matos Reyes (Peru)</i> <i>Patricia Morales Bueno, Pontificia Universidad Católica del Perú PUCP (Peru)</i>
CoRubric as a Tool to Improve Argumentation Through Peer-Assessment in Pedagogy Students. <i>Daniel Cebrián-Robles - Antonio-Joaquín Franco-Mariscal, University of Malaga (Spain)</i>	The Systematic and Procedural Learning Approach Through Curricular Design <i>Marcel Balici, Free International University of Moldova (Republic of Moldova)</i> <i>Nadejda Bâlici, University of Medicine and Pharmacy "Nicolae Testemitanu" (Republic of Moldova)</i>
Effects of Implementing a Model-Based Inquiry Sequence on In-Service Primary School Teachers' Perceptions <i>Ana Amat González - María Martínez Chico - María Rut Jiménez-Liso, University of Almería (Spain)</i>	If a Reaction is Spontaneous, may it be Endothermic? Perceptions and Creation of an Acceptable Mental Model <i>Hakki Kadayifci, Gazi University (Turkey)</i>
Elementary Pre-Service Teachers' Conceptions on Gamification in Science Education <i>Laura Martin Ferrer, Arnau Amat Vinyoles - University of Vic (Spain)</i> <i>Mariona Espinet Blanch, Universitat Autònoma de Barcelona (Spain)</i>	The Role of Mathematics in Quantum Physics for High School Students: a Case Study <i>Laura Branchetti, University of Parma (Italy)</i> <i>Giulia Tasquier, Alma Mater Studiorum -University of Bologna (Italy)</i>
Fibonacci, Pioneer in Multidisciplinary Mathematics Education <i>Tanja Van Hecke, Ghent University, Faculty of Engineering and Architecture (Belgium)</i>	Video Analysis to Scaffold Collaborative Inquiry Learning <i>José Ferreira-Bautista, Department of General Education and Basic Sciences, Simon Bolívar University (Bolivarian Republic of Venezuela)</i> <i>Manoli Pifarré Turmo, Department of Pedagogy and Psychology, Lleida University (Spain)</i>
Global Immigration, Gender Discrimination, and Role of Education in Western Society: A Sociological Lookup <i>Giusi Antonia Toto - Irene Strazzeri, University of Foggia (Italy)</i>	To Approach Animal Rights in Primary School: a Challenge in Science Education <i>António Almeida - Marta Maia, Instituto Politécnico de Lisboa, Centro interdisciplinar de Estudos Eduacionais (Portugal)</i>
Hybrid Learning Environment in Teaching Chemistry: a Perspective of Pedagogical Innovation in the Era of Mobile Learning. <i>Arlindo Sousa Júnior - Eliete Braga, Federal University of Uberlândia (Brazil)</i>	Using Educational Robotics for Teaching Mathematics for Life for SEN Students <i>Elci Alcione Santos, University of Madeira (Portugal)</i> <i>Teresa Regina Alves, Primary and Secondary School of Santa Cruz (Portugal)</i>
Implementing Participatory Action Research as a Tool to Progress Elementary Teacher Science Instruction <i>Sirinapa Kijkuakul, Naresuan University (Thailand)</i>	Role-Playing as an Activity to Work on Students' Perceptions of Nuclear Energy and Risks <i>Antonio-Joaquín Franco-Mariscal - Daniel Cebrián-Robles - Enrique España-Ramos, University of Malaga (Spain)</i>
Influence of the Illustrations on a STEM Knowledge Diagnostic Test in 4th Grade Primary Education Students <i>Francisco Luis Naranjo - Guadalupe Martínez Borreguero - Milagros Mateos Nuñez, University of Extremadura (Spain)</i>	Using Nature of Science Enriched-PBL in Teacher Education <i>Cristina Sousa, Faculdade de Ciências, Universidade do Porto (Portugal)</i> <i>Isabel Chagas, Instituto de Educação, Universidade de Lisboa (Portugal)</i>
Intellectual Property Awareness at Social Sciences and Communications in Bulgaria: ULSIT's Experience <i>Stoyan Denchev - Tereza Trencheva, State University of Library Studies and Information Technologies (Bulgaria)</i>	Investigating Moroccan English Language Teachers' Awareness and Application of NLP Technologies at the University Level <i>Driss Ridouani - Meryem Aherrahrou University of Moulay Ismail (Morocco)</i> <i>Jamal Koubali, University of Sultan Moulay Slimane (Morocco)</i>
Neuroatelier: Learning Neuroscience in the Early Years <i>Ivana Prlić, Preschool Teacher Training and Business Informatics College of Applied Studies – Sirmium (Serbia)</i> <i>Katarina Prlić, University of Belgrade (Serbia)</i>	Enhancing Students' Motivation to Learn the Chemical Elements Using Map Puzzles in Secondary Education <i>Antonio-Joaquín Franco-Mariscal - Enrique España-Ramos - María - José Cano-Iglesias, University of Malaga (Spain)</i>
On Line Tutorial Modules to Address Students to a Timely Adoption of an Appropriate Method for Studying Key Concepts of General Chemistry in an Undergraduate Course <i>Chiara Schettini - Daniela Amendola - Rossana Galassi - Silvia Zamponi, University of Camerino (Italy)</i>	The Clickers as a Teaching Tool in University Education: Analysis of its Impact on a Dual Degree Program from the Universitat de València <i>Daniel Palací, Universidad Politécnica de Valencia (Spain)</i> <i>Jesús Palací, Universidad Pontificia Comillas ICAI-ICADE (Spain)</i> <i>M^a Isabel López Rodríguez, Universitat de València (Spain)</i>
The Educational and Didactic Enhancement of the Technological Learning Environment <i>Giusi Antonia Toto, University of Foggia (Italy)</i>	The Importance Given by Portuguese Science Teachers to Outdoor Activities <i>António Almeida - Valter Rato, Instituto Politécnico de Lisboa, Centro interdisciplinar de Estudos Eduacionais (Portugal)</i>
Using Learning Analytics to Improve Digital Game-Based Learning <i>Larkin Cunningham, Cork Institute of Technology (Ireland)</i>	The Semantic Structure of the Slovak Physics Textbook <i>Petra Kralikova - Aba Teleki, Constantine the Philosopher University (Slovakia)</i>



Posters

<p>“Officina degli Errori”: A Tinkering Experience in an Informal Environment Matteo Boni – Sara Venturi, INAF - OAS (Italy)</p>	<p>Matlab-Based Interactive Simulation Model of Reed-Solomon Encoders Applied in the Educational Process Adriana Borodzhieva, University of Ruse “Angel Kanchev” (Bulgaria)</p>
<p>“Small Particles – Big Effect?” A Teaching Unit to Foster Students’ Risk Literacy Regarding Nanotechnology Marie Eschweiler, Institute for Science Education, University of Bremen (Germany)</p>	<p>Misconceptions among University Students Regarding Convex Lenses Caused by The Drawing Method at Junior High School Masaru Taga, Ryukoku University (Japan)</p>
<p>Air Subject as a Part of The Whole-School Project High School Students Irena Chlebounová, Faculty of Natural Sciences - Charles University (Czech Republic)</p>	<p>Motives for Choosing an Area of Expertise in Chemistry: Recommendations for Higher Education Nele Milsch - Thomas Waitz, Georg-August-University Göttingen (Germany)</p>
<p>Biological Terminology: an Opportunity for Teaching in Tandem Eliška Chlebounová, Charles University (Czech Republic)</p>	<p>Occurrence and Representation of Evolution in Austrian Biology Textbooks Martin Scheuch, University College for Agricultural and Environmental Education (Austria)</p>
<p>Electrochemical Generated Coin Metal Nanoparticles in School Chemistry Education: Experiments and Models for K-12 Class Elena von Hoff - Stefanie Waitz - Thomas Waitz, Georg-August-University Göttingen (Germany)</p>	<p>Reflection-Stimulating Tasks to Promote a Theory Related Planning of Teaching in Science Education Stephanie Grünbauer, Institute of Science Education, Department of Biology Education, University of Bremen (Germany)</p>
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<p>Investigation of the Short Grit Scale for Use in an English Writing Course in Japanese Higher Education James Ellinger - Diego Tavares Vasques - John Maninang, University of Tokyo (Japan)</p>	



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