14th International Multi-Conference on Society, Cybernetics and Informatics (IMSCI'20)

Online
13 – 16 September 2020

Editors:
Nagib Callaos  Belkis Sanchez
Bill Muirhead  Michael Savoie
Lorayne Robertson

TABLE OF CONTENTS

Table of Contents i

Application of Education Technologies

Banerjee, Madhumita; Wolf, Joy; Chalasani, Suresh (USA): "Enhancing Cognitive Presence through Videos in Online Courses" 1

Lazarte, Gustavo; Cruz, Kouichi Julian Andres; Perez Lucero, Alejandra Lucia; Chautemps, Norma Adriana; Keil, Walter Miguel (Argentina): "Educational Technology for Laboratory Experiments in Nuclear Physics and Related Sciences" 7

Applications of Information and Communication Technologies in Education and Training

Chavez, Alexa; Acevedo, Elena; Acevedo, Antonio (Mexico): "Management Library System Based on NFC Technology" 12

Kopishynska, Olena; Utkin, Yurii; Sliusar, Ihor; Slyusar, Vadyym; Protas, Nadiia; Barabolia, Olha (Ukraine): "Professional-Oriented Training of Specialists Under Implementation of Cloud Computing Information Systems in Cooperation Between Universities and IT Companies" 17

Kourova, Alla (USA): "Technology and Cross-Cultural Communication in Teaching English as a Second or Foreign Language" 23

Oppong, Rexford Assasie; Owusu, Emmanuel Banahene; Haruna, Ayisha Ida (Ghana): "The Paradox of Cloudlessness Stymied Information Systems, Technologies and Application in Architectural Education in the Global South: The Case of Ghana" 29

Yadav, Prem; Billava, Roopa; Bora, Loni; Ngaihte, S K (India): "An Effective Model for Large Scale Implementation in the Field of Education" 35

Education and Training Systems and Technologies

Budnik, Mark M. (USA): "Four Years and 25,000 Students Later: Lessons Learned From a Lab-Intensive, Embedded Microcontrollers MOOC" 41

Kim, Min; Park, Donghyun; Kang, Sungwoo (South Korea): "Semi-Automatic Ergonomic Posture Assessment with Deep Convolutional Neural Network" 43

Education in Science, Technology, Engineering and Mathematics

Ilyas, Mohammad (USA): "Curricular Aspects for Global Competencies in Engineering Education"

**Educational Research, Theories, Practice and Methodologies**

Consolo, Letteria; Pasquot, Loredana; Alfieri, Sara; Gilli, Laura; Destrebecq, Anne Lucia Leona; Lusignani, Maura (Italy): "TBL Supported by Moodle: A Questionnaire for Surveying Students' Perceptions"

Creaner, Gerard; Creaner, Sinead (Ireland): "Plagiarism in an Online Learning Environment: Reflections on Best Practice Using the Analytical Lens of Behavioural Science"

Ehrlick, Steven; Schwartz, Noah; Slotta, James (Canada): "Authentic Experiences: How Active Learning and User-Generated Content Can Immerse University Students in Real Life Situations"

Hendel, Russell Jay (USA): "Goal Setting and Executive Function Using Matrix Graphic Organizers"

Khan, Salar; Alshikhabobakr, Hanan; Razak, Saquib; Mahmoud, Huda; Hussein, Nehal (Qatar): "Trends of "Computational Thinking" in Educational Research"

Moquin, F. Kevin (USA): "Teachers' Varied and Uneven Experiences with Japanese Lesson (Research) Study in the U.S."

Stavrou, Eliana; Polycarpou, Irene (Cyprus): "Cybersecurity-Related Curriculum for Diverse Postgraduate Cohorts: A Case Study"

Serra, Luigi (Italy): "Preservation of Mediterranean Intangible Cultural Heritage Through Virtual Gaming and Informatics: The Case of Sardinian Mùrra"

Thysiadou, Anna (Greece): "Facilitating the Work of the Educator While Escaping the Classical Teaching Routine With the Use of Demonstration Videos for the Teaching of 'Water Hardness'"

**e-Health**

Carreño, Christian; Landman, Michael; Villalta, Rosario (Peru): "Roadmap of Technological Solutions for Remote Monitoring in Ambulatory Care"

Chuchon, Leonardo; Orellana, Sebastian; Villalta, Rosario (Peru): "Mobile Digital Learning Solution for Children with Attention Deficit Hyperactivity Disorder"

Cortez, Diego; Manrique, Miguel; Villalta, Rosario (Peru): "Preventive Depression Diagnosis System for School Students Using Emotion Detection Tools"

**Informatics, Voting and Political Parties**

Wyroldick, Bradley; Laurenceau, Isabel; Gilbert, Juan E. (USA): "An Application for Absentee Voter Verification"
Information Society Technologies

Orantes-Jiménez, Sandra-Dinora *; Letelier-Torres, Patricio Orlando **; Pérez-Castillo, Yadira Jazmín * (* Mexico, ** Spain): "Importance of Support in the Implementation of Agile Practices in Work Teams"

Integrating Research, Education, and Problem Solving

Bogdanovic, Jelena; Di Reda, Tina (Croatia): "Possibilities of Application of Multi-Spectral Imaging in Research Works and for Paleographic and Codicological Analysis of Dalmatian Beneventana from the Collection of the Research Library of Dubrovnik Libraries"

Interdependencies between Society and Information and Communication Technologies

Fabian, Karol; Mintal, Jozef Michal (Slovakia): "Cognitive Analysis of Security Threats on Social Networking Services"

Pivoting during a Pandemic: Researching changes to Educational Contexts - Invited Session

Organizers: Bill Muirhead and Lorayne Robertson (Canada)

Cancelliere, Carolina; Dubrowski, Adam; Kapralos, Bill; Mior, Silvano; Côte, Pierre; Muirhead, Bill; Dubrowski, Raluca (Canada): "Tele-Sim MSK for Musculoskeletal Rehabilitation Professionals"

Corrigan, Laurie (Canada): "Pivots from the Void – How School Leaders Enact the Catholic Competencies They Teach Their Students"

Craig, Chris D. (Canada): "2020 Pandemic: Resilient Canadian Higher Education Institutions Will Integrate OER"

Girard, Joannie; Robertson, Lorayne (Canada): "Ready Teacher One: A Journey into the Future of Technology and Pedagogy Through Virtual Reality"

Hector-Alexander, Allison (Canada): "A Gendered Analysis of COVID-19 and the Implications for Online Learning"

Holowka, Peter (Canada): "From Concern to Validation: Educational Technology in Western Canadian K-12 During COVID-19"

McTavish, Heather; Robertson, Lorayne (Canada): "Canadian Academic Librarians as Online Teachers"

Robertson, Lorayne; Muirhead, Bill (Canada): "Manage the Present or Focus on the Future? Leveraging New Technologies in Post-pandemic Education"
Stokes, Joseph M. (Canada): "Strategic Enrolment Management in a Time of Disruption: How the Global Pandemic Will Force a Re-evaluation of Traditional Strategy"

Zigelman, Ilana (USA): "Global Pandemic Contorts Traditional Classroom Teaching for Private School"

Relations between Society/Organizations and Cybernetics/Cyber-Technologies

Maran, Stefano; Stella, Giuseppe (Italy): "A Participatory Web GIS for Stakeholders' Engagement in the Development of the Electricity Grid"

Thinking-Doing Integration - Special Session

Cheo, Rui Ming (Singapore): "Inferring Dominant Human Activity Locales for an Integrated Commuter-Centric Transportation System: The Importance of Finding the Home and Work Places"

Henriques, Mariana; Fernandes, Jesualdo (Portugal): "Environmental Sustainability: A Study on the Impact of Information Systems on Game-Based Learning and Gamification"

Khan, Concepcion L.; Mariano, Jeyneth Ann R.; Constantino Jr., Emmanuel B.; Hao, Aldrin Joseph J. (Philippines): "Multiplatform Data Interchange System for Climate-Smart Agriculture in the Philippines"

Matias, Cátia; Fernandes, Jesualdo (Portugal): "Design Science: Gamification for Environmental Sustainability"

Haase, Tina; Termath, Wilhelm; Berndt, Dirk; Dick, Michael (Germany): "Learning in the Process of Work - Wish or Reality? An Interdisciplinary Approach to Designing Technology-Based Learning and Assistance Systems to Promote Learning"

Woody, Carol; Chick, Timothy A.; Reffett, Aaron; Pavetti, Scott; Laughlin, Richard; Frye, Brent; Bandor, Michael (USA): "DevSecOps Pipeline for Complex Software-Intensive Systems: Addressing Cybersecurity Challenges"

Education and Training Systems and Technologies

Czakóová, Krisztina; Stoffová, Veronika (Slovakia): "Training Teachers of Computer Science for Teaching Algorithmization and Programming"

Authors Index