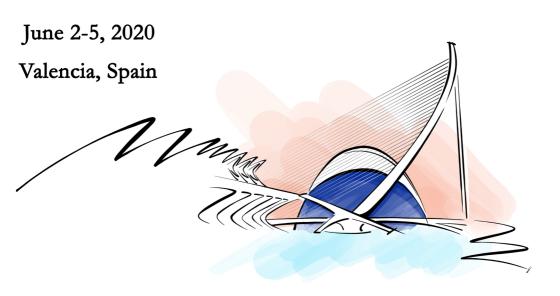




6thInternational Conference on Higher Education Advances















6th International Conference on Higher Education Advances

June 2-5, 2020 Valencia, Spain





PREFACE	4
COMMITTEES	6
KEYNOTES	12
BRIEF PROGRAM	14
WEDNESDAY 3 rd	15
THURSDAY 4 th	23
FRIDAY 5 th	34





Josep Domenech

Welcome to the Sixth International Conference on Higher Education Advances (HEAd'20) hosted virtually by the Universitat Politècnica de València, Spain during 2-5 June 2020. Despite the COVID-19 outbreak, this Sixth edition consolidates the series of HEAd conferences as a leading forum for researchers and practitioners to exchange ideas, experiences and research results relating to the preparation of students and the organization of higher educational systems.

The selection of the scientific program was directed by Paloma Merello, who led a team of 229 program committee members representing 50 countries in all five continents. Following the call for papers, the conference received 280 full paper submissions from 47 different countries. All the submitted papers were reviewed by at least two program committee members under a double-blind review process. Finally, 121 papers were accepted as full papers for oral presentation during regular sessions. Additionally, 42 submissions were accepted for presentation in the innovative non-linear sessions, which allow for increased interaction and participation. The program committee chair congratulates all the authors for having their papers accepted in the proceedings of such a competitive conference.

HEAd'20 also features two keynote speakers that overview important and actual topics: Dr. César Ortega-Sánchez (Curtin University, Australia) talks about understanding students' needs in the age of the Internet, relating this to the change in the learning process due to the mobility restrictions approved after the coronavirus outbreak. The second keynote speech is delivered by Dr. Janet Lord (Manchester Metropolitan University, United Kingdom) dealing with the transformative leadership for equity, social justice and change in higher education.

This year, the second PHELC workshop is celebrated virtually together with HEAd'20.

The symposium, led by Ann Marie Farrell and Anna Logan, focuses on giving insights into assessing large classes in higher education.

The organizing committee would like to thank all those who made this year's HEAd a great success. Specifically, thanks are indebted to the invited speakers, authors, program committee members, reviewers, session chairs, presenters, sponsors, supporters and all the attendees.

Our final words of gratitude must go to the Faculty of Business Administration and Management of the Universitat Politècnica de València for supporting, once again, the HEAd conference, making it possible to become a great event.

> June 2020 Josep Domènech

J. Domenech.

ORGANIZING COMMITTEE

General chair Josep Domènech, Universitat Politècnica de València

Vice-chair Local organization chair Elena de la Poza, Universitat Politècnica de València

Program committee chair Paloma Merello, Universitat de València

Publicity chairs Gareth Bramley, University of Sheffield Daniela Zehetmeier, Lufthansa Aviation Training GmbH

Workshops chair Raúl Peña-Ortiz, Universitat de València

Local organization

Eduardo Cebrián Mónica Costa Alcaina Eduardo Torán

Sponsors and Supporters

Universitat Politècnica de València European Social Fund Facultad de Administración y Dirección de Empresas Departamento de Economía y Ciencias Sociales Instituto de Ciencias de la Educación Centro de Ingeniería Económica

PROGRAM COMMITTEE

Lukman Ab. Rahim, Universiti Teknologi PETRONAS, Malaysia Samuel Abramovich, University at Buffalo, USA Mifrah Ahmad, Deakin University, Australia Gokce Akcayir, University of Alberta, Canada M. Ángeles Alcaide, Universitat Politècnica de València, Spain Gabriella Aleandri, Roma Tre University, Italy Filomena Almeida, ISCTE IUL - BRU, Portugal Daniel Alonso-Martinez, Universidad de León, Spain Francisco Alvarez, Universidad Autónoma de Aguascalientes, Mexico Asier Aranzabal Maiztegi, University of the Basque Country, Spain Azucena Arias-Correa, Universidade de Vigo, Spain Jose Luis Arquero, Universidad de Sevilla, Spain Linda Austin, RMIT, Vietnam/Australia Josefa Badía, Universitat de València, Spain Mariasole Banno, University of Brescia, Italy Alice Barana, University of Turin, Italy Virginia Barba-Sanchez, University of Castilla-La Mancha, Spain Elena Bárcena, UNED, Spain Elvira Barrios Espinosa, Universidad de Málaga, Spain Victoria Beck, University of Wisconsin Oshkosh, USA Immaculata Bel, Universitat de Valencia, Spain Evgeniia Beliauskene/Moldovanova, Tomsk Polytechnic University, Russia

José V. Benlloch-Dualde, Universitat Politècnica de València, Spain Naiara Berasategui Sacho, University of the Basque Country, Spain Maria Eliza Mattosinho Bernardes, Universidade de São Paulo, Brazil Marnie Binder, California State University, USA Nikolai Bolshakov, Peter the Great Saint Petersburg Polytechnic University, Russia Ignacio Bosch Roig, Universitat Politècnica de València, Spain Domenico Brunetto, Politecnico di Milano, Italy Eliseo Bustamante, Universitat Politècnica de València, Spain Marina Buzzi, IIT-CNR, Italy María Caballer Tarazona, Universitat de València, Spain Laura Cabeza-García, University of León, Spain Marisol Calabor, University of Valencia, Spain Sabrina B. Caldwell, The Australian National University, Australia Javier Calvo Saiz, Universitat de Valencia, Spain Lourdes Canós-Darós, Universitat Politècnica de València, Spain Carlos Carbonell Alcaina, Universitat Politècnica de València, Spain Adolfo Carrillo Cabello, University of Minnesota, USA Javier Casanoves-Boix, Valencian International University, Spain Alberto Celani, Politecnico di Milano, Italy Roberto Cervelló-Royo, Universitat Politècnica de València, Spain Dimitris Chassapis, National & Kapodistrian University of Athens, Greece Alberto Ciolfi, ANVUR, Italy Elena Comino, Politecnico Torino, Italy

Erika Corradini, University of Southampton, UK Tània Costa, EINA-UAB, Spain Jami Cotler, Siena College, USA John Cowan, Edinburgh Napier University, UK Daniela-Maria Cretu, Lucian Blaga University of Sibiu, Romania Jose Cruz Muñoz, University of Valencia, Spain Michel Cukier, University of Maryland -College Park, USA Diego Víctor de Mingo-López, University of Valencia, Spain Annalinda De Rosa, Politecnico di Milano, Spain Wietse de Vries, Benemérita Universidad Autónoma de Puebla, Mexico Marilyn Dono-Koulouris, St. John University, USA Pablo Durán Santomil, USC, Spain Ilona Dzenite, Riga Technical University, Latvia Steve Eager, University of the West of Scotland, UK Martin Ebner, Graz University of Technology, Austria Baba El-Yakubu Jibril, Ahmadu Bello University, Nigeria Yessica Espinosa Díaz, Universidad Autónoma de Baja California, Mexico Alexander Fedotov, Peter the Great St.Petersburg Polytechnic University, Russia Luís Fernandes, Universidade Nova de Lisboa, Portugal Joaquim Filipe Ferraz Esteves Araujo, Universidade do Minho, Portugal Sandro Nuno Ferreira Serpa, University of the Azores, Portugal Margarida Figueiredo, University of Évora, Portugal Sylwia Izabela Filipczuk-Rosińska, Polish Air Force University, Poland Björn Fisseler, FernUniversität in Hagen,

Björn Fisseler, FernUniversität in Hagen, Germany Silvia Florea, Lucian Blaga University of Sibiu, Romania Nuno Flores, University of Porto, Portugal Francesco Floris, University of Turin, Italy Patrick Flynn, TU Dublin, Ireland Thomas Fuhrmann, OTH Regensburg, Germany Mohammed Sani Galadima, Ahmadu Bello University Zaria, Nigeria Josep Gallifa, FPCEE Blanquerna, Ramon Llull University, Spain Jorge García Ivars, AINIA Centro Tecnológico, Spain Gonzalo García-Ros, Universidad Politécnica de Cartagena, Spain Suzanne Gatt, University of Malta, Malta Javier Gil-Quintana, Nathional University of Distance Education (UNED), Spain Daniela Gil-Salom, Universitat Politècnica de València, Spain José Luis Godos-Díez, Universidad de León, Spain Beth L Goldstein, University of Kentucky, USA Nuria González-Álvarez, Universidad de León, Spain Mª de Fátima Goulão, Aberta University, Portugal Işıl Güney, Hacettepe University Turkey, Turkey Hamin Hamin, Australian National Institute of Management and Commerce, Australia Shuangmiao Han, Zhejiang University, China Maruša Hauptman Komotar, Alma Mater Europaea, Slovenia Paul Held, FAU, Germany Katrin Herget, University of Aveiro, Portugal Peter Hockicko, University of Zilina, Slovakia

Hugo Horta, The University of Hong Kong, HK Marcelo da Silva Hounsell, UDESC, Brazil Sarka Hubackova, University of Hradec Kralove, Czech Republic Mirjana Ivanovic, University of Novi Sad, Serbia Juan Carlos Jiménez Muñoz, University of Valencia, Spain Beatriz Jiménez Parra, Universidad de León, Spain Srećko Joksimović, University of South Australia, Australia Jisun Jung, The University of Hong Kong, HK Md. Saifuddin Khalid, Technical University of Denmark, Kgs. Lyngby, Denmark Olga Yuryevna Khatsrinova, KNRTU, Russia Shakeel Ahmed Khoja, IBA Karachi, Pakistan Aleksandra Klašnja-Milićević, University of Novi Sad, Serbia Sofya Kopelyan, University of Twente, The Netherlands Hasso Kukemelk, University of Tartu, Estonia Aleksandra Kulpa-Puczyńska, Cardinal Stefan Wyszyński, University in Warsaw, Poland Rangith Baby Kuriakose, Central University of Technology, South Africa Natalia Lajara Camilleri, Universitat Politècnica de València, Spain Marc Laperrouza, EPFL, Switzerland André Leblanc, Dalarna University, Serbia Clotilde Lechuga, University of Malaga, Spain Ho Keat Leng, Nanyang Technological University, Singapore Carlos Lerma, Universitat Politècnica de València, Spain Maria Limniou, University of Liverpool, UK

Elisabet Llauradó, Universitat Rovira i Virgili, Spain Carmen Llorente Cejudo, University of Sevilla, Spain Ernesto López-Gómez, UNED, Spain Guadalupe López-Íñiguez, University of the Arts Helsinki, Finland Cherie Lucas, University of Technology Sydney, Australia Nicolaas Luwes, Central University of technology, South Africa Elsa María Macías López, Universidad de Las Palmas de Gran Canaria, Spain Cristina Maciel de Oliveira, Consejo de Formación en Educación, Uruguay Brenda Mallinson, Rhodes University, South Africa Sathiamoorthy Manoharan, University of Auckland, New Zealand Marina Marchisio, University of Turin, Italy Célio Gonçalo Marques, Polytechnic Institute of Tomar, Portugal Mónica Martínez Gómez, Universitat Politècnica de València, Spain Konstantina Martzoukou, Robert Gordon University, UK David Menendez Alvarez-Hevia, Manchester Metropolitan University, UK Mohammad I. Merhi, Indiana University South Bend, USA Marina Milić Babić, University of Zagreb, Croatia María del Mar Miralles Quirós, University of Extremadura, Spain Ulisses Miranda Azeiteiro, University of Aveiro, Portugal Sylvia Mittler, University of Toronto, Canada Matthew Montebello, University of Malta, Malta Darlinda Moreira, Universidade Aberta, Portugal Michelle Morgan, Expert in pedagogy, UK

Estefanía Mourelle, Universidade da Coruña, Spain Heba Moustafa Mohamed, Cairo University, Egypt Ana Isabel Muñoz Alcón, Catholic University of Avila, Spain Mihaela Muresan, Dimitrie Cantemir Christian University, Romania Kylie Murphy, Charles Sturt University, Australia Fabio Nascimbeni, Universidad Internacional de la Rioja, Spain Clare Newstead, Nottingham Trent University, United Kingdom Ricky Ngandu, Walter Sisulu University, South Africa Raquel Niclòs Corts, University of Valencia, Spain Rosella Nicolini, Universitat Autonoma de Barcelona, Spain Michael Niemetz, OTH Regensburg, Germany Stavros A. Nikou, University of Strathclyde, United Kingdom Sarah Nisly, Wingate University, USA Luis Nobre Pereira, University of Algarve, Portugal Omid Noroozi, Wageningen University, The Netherlands Maria Isabel Nuñez-Peña, University of Barcelona, Spain Cesar Ortega-Sanchez, Curtin University, Australia Kateryna Osadcha, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine Viacheslav Osadchyi, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine Julieth E. Ospina-Delgado, Pontificia Universidad Javeriana Cali, Colombia Miriam Ossevoort, University of Groningen, The Netherlands Antonio Pantoja, University of Jaén, Spain

Cristina Pardo-Ballester, Iowa State University, USA Cristina Pardo-García, Universitat de València, Spain Afroza Parvin, Khulna University, Bangladesh Elena Paunova-Hubenova, Bulgarian Academy of Science, Bulgaria Dieter Pawelczak, University of Bundeswehr Munich, Germany Luís Pedro, University of Aveiro, Portugal Cleber Augusto Pereira, Federal University of Maranhão, Brazil Maria Rosario Perello-Marín, Universitat Politècnica de València, Spain Anja Pfennig, HTW Berlin, Germany Robert A Phillips, University of Manchester, UK Pablo Pinazo-Dallenbach, Universidad Internacional de Valencia, Spain Soner Polat, Kocaeli University, Turkey Yurgos Politis, Independent Researcher, Ireland Jenny Pomino, Carl Duisberg Centren Cologne, Germany Luis Porcuna, Universitat Politècnica de València, Spain Rubén Porcuna, Universitat de València, Spain Dimitri Prandner, Johannes Kepler University, Austria Sarah Prestridge, Griffith University, Australia Sergio Rabellino, University of Turin, Italy Martin Ramirez-Urquidy, Universidad Autónoma de Baja California, Mexico Timothy Read, Universidad Nacional de Educación a Distancia (UNED), Spain Genaro Rebolledo-Mendez, Tec de Monterrey, Mexico Arantzazu Rodríguez Fernández, University of The Basque Country, Spain José Rafael Rojano-Cáceres, Universidad Veracruzana, Mexico

Carlos Romá-Mateo, University of Valencia, Spain Gorka Roman Etxebarrieta, University of the Basque Country, Spain Charly Ryan, The University of Winchester, UK Prathyusha Sanagavarapu, Western Sydney University, Australia Susanna Sancassani, Politecnico di Milano, Italy Juan Francisco Sánchez Pérez, Universidad Politécnica de Cartagena, Spain Pablo Sancho Gil, Generalitat Valenciana, Spain Dario Sansone, Vanderbilt University, USA Larissa Sbitneva, Universidad Autónoma del Estado de Morelos, Mexico Kristina Schulz, University of Applied Sciences and Arts Coburg, Germany Yvonne Sedelmaier, Coburg University of Applied Sciences, Germany Elies Seguí-Mas, Universitat Politècnica de València, Spain Henrik Køhler Simonsen, Copenhagen **Business School**, Denmark Álvaro Suárez Sarmiento, ULPGC, Spain Fátima Suleman, Instituto Universitário de Lisboa (ISCTE-IUL), Portugal Odette Swart, Unisa, South Africa Ying Tang, Indiana University Bloomington. USA Andreia Teles Vieira, Universidade NOVA de Lisboa, Portugal Iman Tohidian, Allameh Tabataba University, Iran Łukasz Tomczyk, Pedagogical University of Cracow, Poland José Torrecilla, Universidad Complutense de Madrid, Spain Paloma Úbeda, Universidad Politécnica de Madrid, Spain Jani Ursin, University of Jyväskylä, Finland Merel Van Goch, Utrecht University, The Netherlands

Leanri Van Heerden, Central University of Technology, Free State, South Africa Marta Varo-Martínez, Universidad de Córdoba, Spain Rosa M. Vasconcelos, Universidade do Minho, Portugal Jesus Vazquez Abad, Université de Montréal, Canada Ana Isabel Veloso, University of Aveiro -DigiMedia, Portugal Ilaria Venturini, Sapienza Università di Roma, Italy Henrique Vicente, University of Évora, Portugal Camilo Vieira, Universidad del Norte, Colombia Ruth Vilà Baños, University of Barcelona, Spain María Cinta Vincent Vela, Universitat Politècnica de València, Spain Maarit Virolainen, University of Jyväskylä, Finland Nur Bahiyah Abdul Wahab, Teacher Education Institute of Temenggong Ibrahim, Malaysia Denise Whitelock, Open University, UK Veit Wohlgemuth, HTW Berlin, Germany Martin Wolf, University of Applied Sciences Aachen, Germany Denise Wood, Charles Sturt University, Australia Jorge Agustín Zapatero Ayuso, Universidad Complutense de Madrid, Spain Katerina Zdravkova, University Ss. Cyril and Methodius, N. Macedonia Roza Zhussupova, Eurasian National University, Russia Ana Zorio-Grima, Universitat de Valencia, Spain



WEDNESDAY 3rd 9:30 - 10:40

Plenary Room

UNDERSTANDING STUDENTS' NEEDS IN THE AGE OF THE INTERNET



Cesar Ortega-Sanchez Curtin University

Associate Professor Cesar Ortega-Sanchez is a Computer Systems Engineer from the Metropolitan Autonomous University in Mexico City. He obtained the degree of Master of Science in Digital Systems from Brunel University in London, and the degree of Doctor of Philosophy in Electronics from the University of York. He joined Curtin University in 2005 as Senior Lecturer of the Electrical and Computer Engineering Department where he taught courses in digital design and embedded systems. In recent years he has taken leading roles in teaching and learning at School and Faculty levels.

He is currently Academic Lead of the Engineering Foundation Year, the common first year of engineering serving 800+ student engineers every year.

He has supervised over 100 undergraduate and postgraduate theses and has published over 60 papers on Electronics and Engineering Education.

His research interests are in embedded systems, bio-inspired architectures, intelligent systems and engineering education.

He is a consultant in curriculum design, capstone projects, and first year experience. In 2015 he won a national citation from the Australian Office of Learning and Teaching for his outstanding work facilitating activities to improve students' employability skills.



THURSDAY 4th 14:45 - 15:45

Plenary Room

TRANSFORMATIVE LEADERSHIP FOR EQUITY, SOCIAL JUSTICE AND CHANGE IN HE



Janet Lord Manchester Metropolitan University

Janet Lord is Head of Education for the faculty of Education at Manchester Metropolitan University, UK. Janet has worked as a social sciences teacher and a lecturer in higher education for many years, specialising in education studies, teacher education and the social sciences.

She has a doctorate in education from the University of Manchester; her thesis concerned the development of identity in teachers. She also has experience in school governance and educational consultancy.

Janet's research and writing concerns pedagogy, leadership, school funding, student experience and the nature of critical spaces in education.



(CEST)	Wednesday 3 rd	Thursday 4 th	Friday 5 th	(AEST)	(EST)
9:00- 10:40	Opening Keynote I Cesar Ortega-Sanchez	4a. Innovative learning experiences II 4b. Assessment and evaluation I 4c. Interactive tools in classroom 4d. Mobility and out of class learning	8a. Competency-based learning 8b. Innovative tools for teaching II 8c. Entrepreneurship and employment 8d. Innovative learning experiences IV	17:00- 18:40	
10:40- 11:15	Cottee break			18:40- 19:15	4:40- 5:15
11:15- 12:15	1a. Education accreditation and quality 1b. Teacher education I 1c. Technology in education I 1d. Student competencies and skills	5. Non-linear session II	9. Non-linear session III	19:15- 20:15	5:15- 6:15
12:15- 13:15		6a. Assessment and evaluation II 6b. STEM education 6c. Technology in education III 6d. Learning and educational models I	10a. Student attitudes 10b. Internationalization 10c. Strategies and experiences in HE	20:15- 21:15	6:15- 7:15
13:15- 14:45		Lunch break		21:15- 22:45	7:15- 8:45
14:45- 15:45	2a. Innovative tools for teaching I 2b. Technology in education II 2c. Innovative learning experiences I 2d. Humanities Education	Keynote II Janet Lord	11a. Learning and educational models II 11b. Organizational aspects 11c. E-learning	22:45- 23:45	
15:45- 16:30	Coffee break		Closing	23:45- 0:30	9:45- 10:30
16:30- 18:00	3. Non-linear session l	7a. Assessment and evaluation III 7b. Innovative learning experiences III 7c. Teacher education II 7d. Policies on Higher Education		0:30- 2:00	10:30- 12:00

WEDNESDAY 3rd

REGULAR SESSIONS: SESSION 1 AND 2 Papers in regular sessions: 15 min presentation plus 5 min Q&A

NON-LINEAR-SESSION: SESSION 3

Papers in non-linear session: iterative 5 min presentations plus Q&A

Session 1a. Education accreditation and quality

Wednesday 3, 11:15 – 13:15 Chair: Humberto Manuel Oraison

Virtual room 1

International attractiveness of undergraduate and postgraduate studies: is scientific production a determining factor? Ana Blanco Mendialdua, Virginia Rincón-Díez, Jon Barrutia-Güenaga

A Systematic Assessment Framework for Higher-Education Institutions Munikrishnappa Anilkumar, Chetan Singai, Arkalgud Ramaprasad

Evaluation and Accreditation System of External Internship Tutors – SEATPE Yolanda Montoro Sánchez, María Adela Valero Aleixandre, Alfredo Pérez Boullosa, Miguel Ángel Barberá Gregori, María Ridocci Quiles

Curriculum development in South Africa: the role of professional bodies Musimuni Dowelani, Faith Dowelani

Reforming Higher Education in India: In Pursuit of Excellence Chetan Singai, T R Kumaraswamy, Ajay Chandra

Development of an Academic Risk Model to support Higher Education Quality Assurance Paul O'Leary, T.J. Mcdonald, Derek O'Byrne, Chris O'Riordan



Session 1b. Teacher education I

Wednesday 3, 11:15 – 13:15 Chair: Yonca Toker Virtual room 2

Coercive isomorphism in higher education: Direct pressures from the state to the Turkish universities Inci Ozturk

Methodology based on collaborative problem solving implemented in a high academic achievement group Miguel Ferrando-Rocher, Stephan Marini, Juan José Galiana-Merino, Jesús Carbajo

A decade of TeachMeet: an Interpretive Phenomenological Analysis of participants' tales of impact Mags Amond, Keith Johnston, Richard Millwood, Ewan Mcintosh

The faculty development model of University of Milan-Bicocca: towards an integration of general and disciplinary didactics Franco Passalacqua, Elisabetta Nigris

How to Motivate Students in Large-enrollment Courses for Active-learning Radka High, Karolina Duschinska



Session 1c. Technology in education I

Wednesday 3, 11:15 – 13:15 Chair: Kim Bryceson Virtual room 3

A transversal methodology for the implementation of virtual reality in Architecture learning Carlos Rosa-Jimenez, Ferrán Ventura-Blanch

Blended Support of Undergraduate Interdisciplinary Research Rianne Van Lambalgen

Augmented reality to aid retention in an African university of technology engineering program Nicolaas Johannes Luwes, Leanri Van Heerden

The digitalization of universities from a students' perspective Henning Brink, Sven Packmohr, Kristin Vogelsang

Helping tomorrow's social professionals to learn about social robotics Perry Share, John Pender

Applying Test-driven Development in Evaluating Student Projects Cuong Huy Tran, Dragos Truscan, Tanwir Ahmad



Session 1d. Student competencies and skills

Wednesday 3, 11:15 – 13:15 Chair: José S. Torrecilla Virtual room 4

Effectiveness of delivery methods in the transfer of soft skills Monique Keevy

Students' experiences with learning mergers and acquisition skills in a multi-disciplinary learning community Miriam Ossevoort, Daan Tavenier, Jan Riezebos

Creativity and Innovation Skills in University STEM Education: The CHET Project Approach César García-Aranda, Agustin Molina-García, María Del Carmen Morillo Balsera, Sandra Martínez-Cuevas, Encarnación Rodríguez Hurtado, Javier Pérez Rodríguez, Jorge Rodríguez- Chueca, Yago Torroja Fungairiño, Manuel Rodríguez Hernández, María González Miquel, Francisco Ismael Díaz Moreno, Emilio José González Gómez, María Del Mar De La Fuente García-So

Sustainable Practices in research-integrated Education in HE: towards an accepted Development Pedagogy Erika Corradini

Do text discussions improve the academic skills of students of HE? Andorra University case Helena Prieto Sanz

Integrated disciplines and future competencies: A blueprint for ethically aligned curriculum for IT, CS, ITC & beyond Alexander V. Libin



Session 2a. Innovative tools for teaching I

Wednesday 3, 14:45 – 15:45 Chair: Mairéad Hogan Virtual room 1

Disruptive Pedagogy: Guerrilla Tactics in Large Classes Viola Manokore, Doug Mcrae

Adoption of evidenced-based teaching strategies in STEM and non-STEM courses after a common faculty development experience Susan Carson, Jennifer Stanigar

Developing Effective Instructional Skills: The Master Educator Program at SUNY Buffalo State Lorena D. Mathien

Session 2b. Technology in education II

Wednesday 3, 14:45 – 15:45 Chair: Gareth Bramley Virtual room 2

International Collaboration on a Sustainable Forestry Management OER Online Program – A Case Study Min Qian (Michelle) Zeng, Hailan Chen, Anil Shrestha, Chris Crowley, Emma Ng, Guangyu Wang

Critical Thinking on Technology Use: Higher Education Course Design to Promote Personal, Professional and Societal Change Susan K Walker, Rebecca Leaf Brown

Self-Contained Jupyter Notebook Labs Promote Scalable Signal Processing Education Dominic Carrano, Ilya Chugunov, Jonathan Lee, Babak Ayazifar



Session 2c. Innovative learning experiences I

Wednesday 3, 14:45 – 15:45 Chair: Marnel Mouton Virtual room 3

U-Behavior: Visual-Form Learning Analytics to Enhance Teaching and Learning Kelly Mckenna, James Folkestad, Marcia Moraes

Lessons learnt – The role of peer-to-peer lecture films in a first year material science laboratory course Anja Pfennig

Building a Student Success Model at GMIT: student centred learning opportunities, employability and the professional development of teaching Carina Ginty, Bridie Killoran, Annette Cosgrove, Duffy Jessica

Session 2d. Humanities Education

Wednesday 3, 14:45 – 15:45 Chair: Dieter Pawelczak Virtual room 4

Design for Cultural Heritage at the University of Ferrara Marina Contarini, Anna Bernabè, Marco Manfra, Davide Turrini

The Lecture-Performance: Implementing Performative Pedagogy in Literature Class Ana Gimenez Calpe

Enhancing the practice of feedback through arts: an integrated open strategy Daniela Casiraghi, Bianca Santolini

WEDNESDAY 3rd

Session 3. Non-linear session I

Wednesday 3, 16:30 - 18:00

Virtual rooms: from 1 to 15

(VR1) Practicing 21st Century Skills in the Classroom Meghan Perdue

(VR2) Shared learning between health sciences university students. Teaching-learning process of hand hygiene Montserrat Sánchez-Lorente, Enrique Sanchis-Sánchez, Ángela Olmedo-Salas, Nicole Victoria Zurita-Round, Pablo García-Molina, Evelyn Balaguer-López, José María Blasco-Igual

(VR3) Don't feedback in anger: enhacing student experience of feedback Gareth Bramley, Kate Campbell-Pilling, Carl Simmons

(VR4) Interactive Classroom Methods for Science classes Izan Catalán Gallach, Rodolfo Viveros Contreras, Juan Pedro Catalán Catalán, María José Gallach Vela

(VR5) The Digital Learning Laboratory Model to Catalyze Change in University Teaching and Learning Jessica Sandland, Mary Ellen Wiltrout

(VR6) Effects of course coordination and part-time precalculus instructor support on student academic performance Amir H. Golnabi, Eileen Murray, Haiyan Su

(VR7) Virtual Technologies possibilities for improving background knowledge of Civil Engineering Education Olga Ovtšarenko, Daiva Makuteniene, Edgaras Timinskas

WEDNESDAY 3rd

(VR8) A concept of a mainly digitalized course on control theory including problembased practical units and digital supported exams Birgit Rösel

(VR9) Correlation between students' workload and attendance as related towards final grades: A case of study on Statistics for first-year Engineering students Carlos De La Calle-Arroyo, Licesio Rodríguez-Aragón

(VR10) Design of a gamified tool for the development of citizenship competencies Maira Camila Paba Medina, Julieth Katherin Acosta Medina, Martha Liliana Torres Barreto

(VR11) Beyond Degree Programs: How a Major University Immersed Itself in the Educational Landscape of New York City Anita Vazquez Batisti, Michael E Pizzingrillo

(VR12) ICT and Accounting Education. An innovative teaching method: the Practice Enterprise Daniele Gualdi

(VR13) Design and Evaluation of Gamification Experiences in Computer Science Studies Inmaculada Rodríguez, Maria Salamó, Anna Puig

(VR14) Exploring the use of Plickers for conducting assessments in higher education Moretlo Tlale-Mkhize

(VR15) Dropout and Engineering undergraduate programs at the Universidad Nacional de Colombia between 2012-2019 Mónica Natalí Sánchez-Nítola, Diana Grijalba, Manuel Embus, Andrés Suarez, Juan Esteban Guevara Montoya

THURSDAY 4th

REGULAR SESSIONS: SESSION 4, 6 AND 7 Papers in regular sessions: 15 min presentation plus 5 min Q&A

NON-LINEAR-SESSION: SESSION 5

Papers in non-linear session: iterative 5 min presentations plus Q&A

Session 4a. Innovative learning experiences II

Thursday 4, 9:00 – 10:40 Chair: Inmaculada Rodríguez Virtual room 1

Occupational safety and health education and training: an innovative format and experience Emma Pietrafesa, Sergio Iavicoli, Agnese Martini, Rosalba Simeone, Antonella Polimeni

Challenges in Higher Education Teaching Collaborations – a CAGE distance framework analysis Tine Lehmann, Veit Wohlgemuth, Annette Ammeraal

Experiential and Integrated Learning Environments – Teaching Urban Design Studio at Curtin University Francesco Maria Mancini, Tanja Glusac

Peer actions for a service learning project to prevent drug-facilitated sexual assaults Gemma Montalvo, Gloria Quintanilla, Fernando E. Ortega-Ojeda, Carmen García-Ruiz, Pablo Prego-Meleiro, Carmen Figueroa Navarro, Begoña Bravo-Serrano, María Ruth García-Pernía, Felix Zapata, María José González-Muñoz, Carmen J. Mateos-Vega

Innovation2: Innovative Course on Innovation Takes on the Lebanese Revolution Marina Apaydin, Christopher Bouri



Session 4b. Assessment and evaluation I

Virtual room 2

Thursday 4, 9:00 – 10:40 Chair: Eleonora Mattarelli

Transnational Higher Education and International Branch Campuses in the Gulf Cooperation Council Countries: The Case of the United Arab Emirates Robert Michael Bridi

Educational System Assessment: Italy And Finland, Comparative Case Study Eleonora Mattarelli, Cristiana De Santis

Improving vocational interest assessments: data complexity levels are important for social and enterprising areas Yonca Toker, Aysu Gökalp, Yalçın Açıkgöz

"Because, as a teacher, giving feedback and assessment is actually really difficult": using self- and peer-assessment to develop Higher Education teachers' skills in assessment and feedback Laura Costelloe, Arlene Egan

Marking Schemes for an Authentic Group Project, Trial by Statistics – A Case Study Kim Bryceson



Session 4c. Interactive tools in classroom

Virtual room 3

Thursday 4, 9:00 – 10:40 Chair: Leanri Van Heerden

Flipped teaching and interactive tools. A multidisciplinary innovation experience in higher education Jesús Sergio Artal-Sevil, Ana Felicitas Gargallo-Castel, Marta Sofía Valero-Gracia

"Post-it mapping": analogical disruption in the classroom Guiomar Liste, Tamar Buil, Juan Delgado, Jose Vicente Pinar

Social entrepreneurship as a tool for promoting critical, paradoxical learning in the field of business organization and management: An experiment from the University of Zaragoza Ignacio Bretos, Millán Díaz-Foncea, Clara Sarasa, Alla Kristina Lozenko, Carmen Marcuello

A pedagogic approach by contextual immersion Samuel Ismael Billong Iv, Bernabé Batchakui, René Simo Nono, Georges Kouamou

Session 4d. Mobility and out of class learning

Thursday 4, 9:00 – 10:40 Chair: Anja Pfennig

Virtual room 4

Breaking down the classroom walls: how to train future media professionals in an interdisciplinary and applied way while fostering social change Jorge Franganillo, Lydia Sánchez, M. Ángeles García Asensio, Anna Marquès

From Times Square to Eyre Square: Hackathons as Authentic Learning for Information Systems Students Mairéad Hogan

THURSDAY 4th

Learning Outside the Classroom: A Distinctive Approach to Co-Curricular Recognition in the Australian context Joe Fernando Chicharo, Kylie Austin, Julia Coyle, Amy Thompson

Service-learning by PhD students to aid socially neglected people José S. Torrecilla, Santiaga Buitrón Ruiz, Manuel Sánchez, John C Cancilla, Sandra Pradana, Ana Maria Perez Calabuig

How to support mobility students to gain soft-competences: Knowledge, Skills and Attitudes Eva M. De La Torre, Fernando Casani, Adriana Pérez Encinas, Jesús Rodríguez Pomeda

Session 5. Non-linear session II

Thursday 4, 11:15 – 12:15

Virtual rooms: from 1 to 14

(VR1) The use of EduBlog in initial teachers training: an experience of a teaching innovation project Maria Isabel Pardo Baldoví, Diana Marín Suelves, María Isabel Vidal Esteve

(VR2) Baltic – Nordic Universities in the EU Research and Innovation Programme Horizon 2020 Dina Bērziņa

(VR3) Improving international student transition to professional employment Dorothy Wardale

(VR4) The development of soft skills among students during a business game Mikhail Vasilievich Vinichenko, Alexander Vasilievich Melnichuk, Sergey Anatolievish Makushkin

THURSDAY 4th

(VR5) Integrating STEMM in Higher Education: a proposed curriculum development framework Lindsey Conner

(VR6) Transdisciplinary teaching and learning: an experiment Antonella Giacosa

(VR7) Education technology based on a 3D model of house VirTec Daiva Makuteniene, Olga Ovtšarenko, Elena Safiulina, Edgaras Timinskas

(VR8) Higher Education and Solidarity? The Integration of Refugee Students at Austrian Universities Dimitri Prandner, Robert Moosbrugger

(VR9) Good-bye email, welcome Slack Juan M. Lopez-Zafra, Ricardo A. Queralt, Sonia De Paz-Cobo

(VR10) The bad and the ugly: a systematic review of technology's negative impacts' mentions in literature from 2005 to 2020 Inês Tavares Silva, Luis Filipe Rodrigues, Marta Mello Sampayo

(VR11) hybrid Design based research for Agile Software development (hDAS) in ISD contexts: a discovery from studying how to design MUVEs for VET Todd Cochrane

(VR12) The world of fractals Peter Tasnádi, Peter Nagy

(VR13) Gamification in Online Educational Systems Hazem Ibrahim, Walid Ibrahim

(VR14) Motivations and concerns of outgoing Erasmus students Valeria Caviezel, Anna Maria Falzoni, Linda Galizzi



Session 6a. Assessment and evaluation II

Thursday 4, 12:15 – 13:15 Chair: Paul O'Leary Virtual room 1

The Skills of University Students in Educational Settings Assessed by Company Tutors: A Longitudinal Study in Italy Cristiana De Santis, Marta Cecalupo, Anna Salerni

Breaking down Silos through Authentic Assessment: a Live Case Analysis Olivia Freeman, Rosie Hand, Aileen Kennedy

On strategies to improve student engagement Maria Asunción García, Ana María Valle

Session 6b. STEM education

Thursday 4, 12:15 – 13:15. Chair: Rianne Van Lambalgen Virtual room 2

Supporting deep understanding with emerging technologies in a STEM university math class Domenico Brunetto, Clelia Marchionna, Elisabetta Repossi

Scientific Discourse: Can Our First-Year Students Express Themselves in Science? Marnel Mouton, Ilse Rootman-Le Grange

Teaching Security in Introductory C-Programming Courses Dieter Pawelczak



Session 6c. Technology in education III

Thursday 4, 12:15 – 13:15

Virtual room 3

Chair: Nicolaas Johannes Luwes

Factors affecting Cloud Computing adoption in Higher Learning Institutions in South Africa: Acase of Matjhabeng TVET Colleges Dina Moloja, Ephias Ruhode

Effective integration of computational tools into Chemical Engineering studies at an international level Moises Garcia-Morales, Claudia Roman, Miguel Angel Delgado, Francisco Lemos, Maria Amelia Lemos, Jorge Ramirez, Angela Danila

Impact of GUI personalization of a word processor on a learning activity course Arnaud Zeller, Pascal Marquet

Session 6d. Learning and educational models I

Thursday 4, 12:15 – 13:15. Chair: Monique Keevy Virtual room 4

Information overload and lecturer mistakes during engineering course organization Kristina Tihomirova, Linda Mezule

CLab Torino: a transdisciplinary environment to provide a challenge-based teaching model Chiara Lorenza Remondino, Eleonora Fiore, Paolo Marco Tamborrini

Contributing factors to academic achievements: from community college to university in Hong Kong Yeena Li, Bin Li, Kin Cheung, Hilda Tsang



Session 7a. Assessment and evaluation III

Virtual room 1

Thursday 4, 16:30 – 18:00 Chair: Marita Margarita Mcgrory

Reliability of multiple-choice versus problem-solving student exam scores in higher education:Empirical tests Eric S Lee, Naina Garg

MOCCA College: An assessment of inferential narrative and expository comprehension Mark L. Davison, Ben Seipel, Sarah E. Carlson, Virginia Clinton, Patrick C. Kennedy

Practice tests improve performance, increase engagement and protect from psychological distress Stuart Graham Marlin, Tori English, Lewis Morley, Tahlia O'Keefe-Quinn, Paige Whitfield

Chart for Flexible Curriculum in terms of Time and Similarity Manuel Fernando Neira Embus, Jesus Hernán Camacho Tamayo, María Alejandra Guzmán Pardo



Session 7b. Innovative learning experiences III

Thursday 4, 16:30 – 18:00 Chair: Leah Li Echiverri Virtual room 2

Project-based learning: A practical approach to implementing Memsource in the classroom Katrin Herget

Creating a project-based degree at a new university in Africa Laurel Staab

Veterinary students' perceptions of participation in a service-learning activity Marta Elena Alonso, Jose Ramiro Gonzalez Montaña, Juan Carlos Dominguez, Juan Manuel Lomillos

Enhancing students' preparation for the professional field: A quasi-experimental study on a new community service learning module for first year pedagogical sciences students Leonie Vreeke, Jorg Huijding, Susan Branje, Belinda Hibbel, Jaap Van Der Ham, Isabelle Dielwart, Hanna Mulder

Travel as pedagogy: embodied learning in short-term study abroad Bridget Mckenney Costello



Session 7c. Teacher education II

Thursday 4, 16:30 – 18:00 Chair: Orlando E. Contreras-Pacheco Virtual room 3

Preliminary study on the awareness of the SDGs in future primary school teachers Ana Mercedes Vernia-Carrasco, Victoria Pastor-Fuentes, Miguel A. López -Navarro

Information skills and library knowledge for higher education teachers Tatiana Sanches

Using Virtual Reality to promote pre-service teachers' classroom management skills and teacher resilience: A qualitative evaluation Jolien Mouw, Marjon Fokkens-Bruinsma, Gert-Jan Verheij

Exploring student teachers' reflection skills: Evidence from journal tasks Monika Kusiak-Pisowacka

"I really don't know what you mean by critical pedagogy." Reflections made by in-service teachers in the USA Yin Lam Lee-Johnson



Session 7d. Policies on Higher Education

Thursday 4, 16:30 – 18:00 Chair: James Folkestad Virtual room 4

Internal branding at university: Do tenure and job security matter? Marta Retamosa, Ángel Millán, Juan Antonio García, María Millán

Bridging the gap between academic and policy-oriented activities in higher education institutions Laura Márquez-Ramos

Preventing university dropout: the relation between the student vulnerability features and academic performance in the first year Istrate Marinela, Bănică Alexandru, Athes Haralambie

The Impact of Government Policy on Higher Education International Student Recruiters Melissa James

FRIDAY 5th

REGULAR SESSIONS: SESSION 8, 10 AND 11 Papers in regular sessions: 15 min presentation plus 5 min Q&A

NON-LINEAR-SESSION: SESSION 9

Papers in non-linear session: iterative 5 min presentations plus Q&A

Session 8a. Competency-based learning

Friday 5, 9:00 – 10:40 Chair: Sean Sturm Virtual room 1

Planned Chaos in Electrical Engineering Education Thomas Fuhrmann, Michael Niemetz

Student participation and peer-to-peer learning processes in primary education Eduard Ramirez Banzo

Becoming an Expert, Ambassador or Doing Project Work: Three Paths to Excellence for Students at Artevelde University of Applied Sciences Bart Lievens, Karel Cappelle, Liesbet Matthys

Future competencies for digitally aligned specialties: coping intelligently with global challenges Elena Libin

(Natural) Science and Technique in Medicine: Teaching Competences along with Research Activities Johannes Lang, Holger Repp



Session 8b. Innovative tools for teaching II

Friday 5, 9:00 – 10:40 Chair: Lindsey Conner Virtual room 2

Escape room in education: a bibliometric study Diana Marin Suelves, Isabel Vidal Esteve, M. Isabel Pardo Baldoví

An Approach to Building Learning Objects Peter Thaysen

An Investigation of the Role Programming Support Services Have for Mature Students Keith Nolan, Aidan Mooney, Amy Thompson, Mark Noone

Combined Use of Problem Based Learning and Flipped Learning in Turbomachinery Juan Ignacio Corcoles, Ángel Martínez-Romero

Design of three-dimensional cartographical didactic materials for Physical Geography teaching Luis M. Tanarro, Jose Úbeda, Nuria De Andrés, José M. Fernández-Fernández, Javier De Marcos, Diana Ovaco, Jesús García, David Palacios



Session 8c. Entrepreneurship and employment

Friday 5, 9:00 – 10:40 Chair: Susan K. Walker Virtual room 3

Employability skills of graduates:Insights from job advertisements Abdul Suleman, Fátima Suleman, Filipa Cunha

The Value of an Enterprise Postgraduate Research Programme for creating business start-ups in the UK Kassandra A. Papadopoulou, Robert A. Phillips

Entrepreneurship and University Spin-offs for (Academic) Employment? Augusto Cocorullo, Stefano Boffo, Francesco Gagliardi

Employability Through Experiential Delivery of Intercultural Communication Skills Online Isabella Christine Crawford, Stephanie Swartz, Belem Barbosa, Susan Luck

Faculty management after higher education reforms – exploring the organizational structure of faculties considering their context factors Ilse Hagerer



Session 8d. Innovative learning experiences IV

Friday 5, 9:00 – 10:40 Chair: Paul Wilson Virtual room 4

Projects with added value to increase competitiveness and student satisfaction Sílvia Espinosa Mirabet, Jordi Serra Simón, Joaquim Majó Fernández

Interaction in spoken academic discourse in an EMI context: the use of questions Jane Helen Johnson, Mariangela Picciuolo

A score methodology to assess concept maps in medical education in the context of pathophysiology teaching Nuno Neuparth, Marta Fonseca, Beatriz Oliveira, Pedro Carreiro-Martins, António Rendas

Conceptual Framework for Assessing Process Variables Salient for Service -Learning Experience Ka Hing Lau, Robin Snell

FRIDAY 5th

Session 9a. Non-linear session III

Friday 5, 11:15 - 12:15

Virtual rooms: from 1 to 13

(VR1) A Comparison of students' attitudes and attainment on an enterprise module for scientists and engineers Robert Phillips

(VR2) Assessing Community Impact after Service-Learning: A Conceptual Framework Ka Hing Lau, Robin Snell

(VR3) Transforming YouTube into a valid source of knowledge for Anatomy students Antoni Alegre-Martínez, Maria Isabel Martínez-Martínez, Jose Luis Alfonso -Sánchez

(VR4) Functional and conservation value of fruits – a lab approach Rui Manuel Alves Ferreira, Isabel Maria Simão Alves-Pereira, Joana Manuela Capela-Pires, Marta Sofia Garcia Candeias

(VR5) Challenging students to develop work-based skills: A PBL experience Alba Manresa Matas, Jasmina Berbegal-Mirabent, Dolors Gil-Domenech

(VR6) The power of peer-review: A tool to improve student skills and unit satisfaction Ruth Wallace, Shelley Beatty, Jo Lines, Catherine Moore, Leesa Costello

(VR7) The Validation of a Quantitative Measure of Self-authorship among Chinese University Students Dorothy Tao Li

FRIDAY 5th

(VR8) Student Understanding of Number Line Graphs Alison Mirin

(VR9) Socrative in the Language Classroom: Tackling Classroom Anxiety and Encouraging Participation Jennifer Irene Wood

(VR10) The role of internationalisation in students' cultural literacy and intercultural communication Alina Romanovska, Irina Presnakova

(VR11) The Challenge of Research Supervision: The Experience of Lecturers in Various Academic Disciplines Angela Siobhan Wright

(VR12) Advancing understandings on Students' Mobility as a Tool to reach 2030 Agenda Rosalina Pisco Costa

(VR13) Using Real Data in a quantitative methods course to enhance teachers' and school leaders' statistical literacy Manuela Heinz



Session 10a. Student attitudes

Friday 5, 12:15 – 13:15

Virtual room 1

Chair: Isabella Christine Crawford

Class Discussion and Class Participation: Determination of Their Relationship Keer Xu, Leah Li Echiverri, Haoyu Shang

Relationships Between External Factors and University Students' Attitudes towards Academic Research Jiying Yang, Leah Li Echiverri, Feng Tang

Student Engagement in Co-designing and Co-teaching Cornerstone Course of EECS Design and Implementation at National Taiwan University Shi-Chung Chang, Jennifer Wen-Shya Lee, Kun-You Lin, Ho-Lin Chen, Jiun-Peng Chen, Shih-Yuan Chen, Chien-Mo Li, Rui-Fu Xu, Tzi-Dar Chiueh, Hsiao-Wen Chung, Niccolo Chen

Session 10b. Internationalization

Friday 5, 12:15 – 13:15 Chair: Ilse Hagerer Virtual room 2

A Case Study of Internationalization in Chinese Non-government Institutions Mei Wang, Lindsey Conner, Bev Rogers

Did the Bologna Process contribute to improving international students' success rates in Germany's HEIs? Twenty years of success rates in Germany: how the Bologna Process impacts on the success rates of International and German students. Marita Margarita Mcgrory

European Joint Doctorates: myth or reality? Pilar Coy Fuster, Sebastian Canovas, Ann Van Soom, Nicola Bernabo, Patrick Lonergan, Karl Schellander



Session 10c. Strategies and experiences in HE

Friday 5, 12:15 – 13:15 Chair: Jane Helen Johnson Virtual room 3

Alternative Strategies for Higher Education Provision at TAFE Queensland Paul Wilson

Critical Thinking and Culturally-Sustaining Teaching: Developing the Historical Literacy of Māori and Pasifika Undergraduates in Aotearoa/New Zealand Nancy November, Sean Sturm, Ema Wolfgramm-Foliaki

Addressing engineering threshold concepts in an African university of technology Leanri Van Heerden, Nicolaas Luwes

Session 11a. Learning and educational models II

Friday 5, 14:45–15:45 Chair: Keith Nolan Virtual room 1

Drugs, Achievements and Educational Systems: Predictive Models for Society and Education through Speculative Data Ana S. Moura, João Barreiros, M. Natália D. S. Cordeiro

Classroom Learning Motivators: Breaking ESL Chinese university students' passivity in class discussion. Leah Li Echiverri

Factors That Shape University Students' Attitudes Towards Academic Research Leah Li Echiverri, Wanghan Chen, Xinyi Wang



Session 11b. Organizational aspects

Friday 5, 14:45–15:45

Virtual room 2

Chair: Marta Elena Alonso

Perceptions of organizational injustice in French business schools Lovasoa Ramboarisata, Linda Ben Fekih Aissi

Stakeholder Management: Formulating a Primer for Practitioners Orlando E. Contreras-Pacheco, Juan C. Lesmez-Peralta

Staff Experiences of Victoria University's First Year College During the Implementation of Block Mode Teaching Humberto Manuel Oraison, Loretta Konjarski, Janet Young, Samuel Howe, Andrew Smallridge

Session 11c. E-learning

Friday 5, 14:45–15:45 Chair: Leonie Vreeke Virtual room 3

On the Use of Bayesian Probabilistic Matrix Factorization for Predicting Student Performance in Online Learning Environments Jung Yeon Park, Jinho Kim, Wim Van Den Noortgate

A Student Workload Estimator Tool: Rethinking Modular Credit Liwen Lai, Bimlesh Wadhwa

Public Health Observatories: a learning community model to foster knowledge transfer for sustainable cities Domenico Vito, Manuel Ottaviano, Maria Fernanda Cabrera, José Gabriel Teriús Padrón, Vittorio Casella, Riccardo Bellazzi

SPONSORS AND SUPPORTERS











