

EDULEARN²²

**14TH INTERNATIONAL CONFERENCE
ON EDUCATION AND NEW LEARNING
TECHNOLOGIES**

**PALMA (SPAIN)
4TH-6TH OF JULY, 2022**



CONFERENCE PROCEEDINGS



EDULEARN₂₂

**CONFERENCE
PROCEEDINGS**

Published by
IATED Academy
iated.org

EDULEARN22 Proceedings

14th International Conference on Education and New Learning Technologies
July 4th-6th, 2022
Palma, Mallorca, SPAIN

Edited by

Luis Gómez Chova, *University of Valencia, Spain*
Agustín López Martínez, *University of Barcelona, Spain*
Joanna Lees, *CEU Cardinal Herrera University, Spain*

DOI: 10.21125/edulearn.2022

ISBN: 978-84-09-42484-9

ISSN: 2340-1117

Book cover designed by J.L. Bernat

© Copyright 2022, IATED Academy. This work is subject to copyright. All rights reserved.

The intellectual property rights of the contents of the publication are the sole property of IATED Academy and therefore the reproduction, distribution, public disclosure, transformation or any other activity that can be carried out with the contents of its proceedings is forbidden, without written consent from IATED Academy.

These proceedings are published by IATED Academy. The registered company address is: Plaza Legión Española 11, 46010 Valencia, Spain.

Bibliographic Information

Book Title 14th International Conference on Education and New Learning Technologies	Book Series EDULEARN Proceedings	Editors Luis Gómez Chova Agustín López Martínez Joanna Lees
Publication Year 2022	Publisher IATED Academy	Publisher Address Valencia, Spain
Book ISBN 978-84-09-42484-9	Series ISSN 2340-1117	DOI 10.21125/edulearn.2022
Conference Name EDULEARN22	Dates July 4th-6th, 2022	Location Palma, Mallorca, Spain
Copyright Information This work is subject to copyright. All rights reserved.	Topics Education Educational Research Educational Technology	

Editorial policy and Publication ethics:

The papers published in these proceedings reflect the views only of the authors. The publisher cannot be held responsible for the validity or use of the information therein contained.

The International Academy of Technology, Education and Development (IATED) aims to publish conference proceedings that contain original research articles of high quality meeting the expected ethical standards. The publication guidelines are provided for authors who submit articles to IATED conferences in order to maintain high ethical standards.

IATED shall guarantee the high technical and professional quality of the publications and that good practices and ethical standards are maintained. If unethical behaviors are identified, an investigation will be initiated and pertinent actions will be taken.

More information about the publication ethics of IATED is available at iated.org/publication_ethics

Preface

EDULEARN22 Conference Proceedings contain selected and revised papers from the 14th annual International Conference on Education and New Learning Technologies.

EDULEARN22 was held in Palma (Spain) last 4-6 July 2022. Every year, EDULEARN brings together lecturers and researchers from universities and educational institutions from all over the world. This edition welcomed participants from 79 different countries, ensuring a geographic diversity and a multicultural environment.

The main objective of EDULEARN22 was to offer a meeting point for educational experts to share and discuss their experiences and projects on education, pedagogical technologies, and educational innovations. The conference program offered different keynote speeches, plenary sessions, parallel thematic sessions and workshops delivered by education experts. The keynote speeches are available at IATED Talks (iated.org/talks/)

In addition to the Technical Program, different networking activities and events were scheduled where participants could interact with other delegates and shared their perspectives on education.

The scope of EDULEARN22 included the following topics: Digital Tools In Education, Digital literacy, Open Educational Resources, Virtual and Augmented Reality, Flipped learning, e-learning experiences, Blended and Hybrid learning, m-learning, digital transformation in education, Game-based learning, MOOCs, Coding and Computational Thinking, Digital Technologies for learning under lockdown, Personalized and Adaptive learning, Peer and Team-based learning, Student Engagement, University-Industry cooperation, International Projects, Exchange and Mobility Programs, Entrepreneurship Education, Student support and Wellbeing, STEM education, Diversity and Equity in education, Special and Inclusive experiences, Tutoring and Mentoring, Curriculum design, Quality assurance, Active and Experiential learning, Professional Development of Teachers, Pre-Service Teacher experiences, Vocational Education, Digital Competence of Teachers.

The EDULEARN22 Proceedings include the accepted contributions presented at EDULEARN22 Conference. The EDULEARN22 International Program Committee is composed of lecturers and researchers from all over the world. A meticulous job in selecting papers for publication was conducted. We wish to thank the program committee members who conducted a blind peer review process to guarantee the quality of the contributions and presentations. The following points were evaluated: information content, relevance to the field, general structure, clarity of contents, originality, relation to the conference topics and disciplines. The language of the publication was exclusively English.

Moreover, EDULEARN22 aims to publish conference proceedings that contain high-quality original research articles, meeting the expected ethical standards. Authors publishing in EDULEARN22 Proceedings signed the IATED copyright transfer form. IATED guarantees the high technical and professional quality of the publications, and that good practices and ethical standards are maintained. More information about the publication ethics of IATED is available at: https://iated.org/publication_ethics

Finally, we wish to extend our most sincere thanks to all members and delegates who have contributed to EDULEARN22 Proceedings. We also wish to express our gratitude to all participants and attendees for their engagement, motivation and passion for education.

Luis Gómez Chova
Agustín López Martínez
Joanna Lees

Organizing and Program Committee

Organizing Committee

Program Chairs

Luis Gómez Chova, *University of Valencia, Spain*
Agustín López Martínez, *University of Barcelona, Spain*
Joanna Lees, *CEU Cardinal Herrera University, Spain*

Local Arrangements Chairs

David Martí, *International Academy of Technology, Education and Development, Spain*
M^a Jesús Suesta, *International Academy of Technology, Education and Development, Spain*
Javi Doménech, *MSX International Techservices, Spain*
Miguel Peiró, *Progresa Vocational Training Center, Spain*

Publication Chairs

Chelo González, *Polytechnic University of Valencia, Spain*
Ignacio Candel Torres, *Capgemini, Spain*

Publicity Chairs

Eladio Duque, *International Academy of Technology, Education and Development, Spain*
Juanan Herrero, *Graphimage Graffor, Spain*

Web Masters

Jose Luis Bernat, *International Academy of Technology, Education and Development, Spain*
Javier Martí, *IVIRMA Global IT, Spain*

Session Chairs

Abdelhak Oulmane – *Polytechnique Montréal, Canada*
Adam Frost – *University of Manchester, United Kingdom*
Amtiaz Fattum – *The Arab Academic College for Education - Haifa, Israel*
Ann Conway – *Technological University Dublin, Ireland*
Asta Daunoriene – *Kaunas University of Technology, Lithuania*
Ayelet Weizman – *Kibbutzim College of Education, Technology and the Arts, Israel*
Bernhard Bengler – *Hawai'i Pacific University, United States*
Bert Zulauf – *Heinrich-Heine-University of Düsseldorf, Germany*
Bettina Fuhrmann – *Vienna University of Economics and Business, Austria*
Bob Barrett – *American Public University, United States*
Dale Reed – *University of Illinois Chicago, United States*
Debby Cotton – *Plymouth Marjon University, United Kingdom*
Denis Liakin – *Concordia University, Canada*
Doris Elster – *University of Bremen, Germany*
Emmanuel Glakpe – *Howard University, United States*
Farshid Zabihian – *California State University, Sacramento, United States*
Gary Wingenbach – *Texas A&M University, United States*
Guenter Tusch – *Grand Valley State University, United States*

Gunnar Oskarsson – *University of Iceland, Iceland*
Hanna Haydar – *Brooklyn College - City University of New York, United States*
Ilze Kacane – *Daugavpils University, Latvia*
Jana Bérešová – *Trnava University, Slovakia*
Jennifer Robinson – *University of Arizona Global Campus, United States*
Jens Siemon – *University of Hamburg, Germany*
Jim Playfoot – *White Loop, United Kingdom*
Karen Eini – *Ruppin Academic Center, Israel*
Kathrin Bierwirth – *Institute for Social Research and Social Economy, Germany*
Katia Karadjova – *Georgia Southern University, United States*
Keith Buckley – *Rollins College, United States*
Kelvin Sung – *University of Washington, United States*
Kjetil Falkenberg – *KTH Royal Institute of Technology, Sweden*
Laura Mason – *Swansea University, United Kingdom*
Lecia Barker – *University of Colorado Boulder, United States*
Liam Morgan – *University of Technology Sydney, Australia*
Louis Babineau – *Université du Québec à Rimouski, Canada*
Luís Moreira – *Colégio Casa Mãe, Portugal*
Mangala Tawde – *Queensborough CC, CUNY, United States*
Manuela Milani – *Humanitas University, Italy*
Maria Luisa Spreafico – *Politecnico di Torino, Italy*
Maria Susy Rogers – *University of South Wales, United Kingdom*
Marie-Pierre Gagnon – *Université Laval, Canada*
Marilyn Dono-Koulouris – *St. John's University, United States*
Mario Mäeots – *University of Tartu, Estonia*
Marta Fuentes Agustí – *Universitat Autònoma de Barcelona, Spain*
Martina Bode – *University of Illinois at Chicago, United States*
Martina König – *University of Applied Sciences, FH JOANNEUM Graz, Austria*
Martino Pavignano – *Politecnico di Torino, Italy*
Meital Amzalag – *Holon Institute of Technologies, Israel*
Mercedes Valiente Lopez – *Universidad Politécnica de Madrid, Spain*
Merja Laamanen – *University of Jyväskylä, Finland*
Michael Dorff – *Brigham Young University, United States*
Michal Menšík – *Moravian Business College Olomouc, Czech Republic*
Mohsen Dorodchi – *University of North Carolina at Charlotte, United States*
Monica Dugo – *Virtual Internships, United Kingdom*
Pamela Brett MacLean – *University of Alberta, Canada*
Pernilla Falkenberg Josefsson – *Södertörns University, Sweden*
Rebecca Allen – *Mount St. Joseph University, United States*
Reed Stevens – *Northwestern University, United States*
Roslyn Johnson-McCurry – *Southern Crescent Technical College, United States*
Sami Ammar – *Polytechnique Montréal, Canada*
Taija Chaya Votkin – *Aalto University, Finland*
Thomas Rachfall – *HS Merseburg, Germany*
Vegard Johansen – *NTNU - Norwegian University of Science and Technology, Norway*

International Program Committee

Alexander Mikroyannidis – *The Open University, United Kingdom*
Aline Grunewald Nichele – *Fed. Inst. of Edu., Sci. & Tech. of Rio Grande do Sul, Brazil*
Ana Lucas – *Universidade Europeia / Laureate International Universities, Portugal*
Ana Paula Lopes – *Polytechnic Institute of Oporto, Portugal*
Anamarija Štefić – *Josip Juraj Strossmayer University of Osijek, Croatia*
Andrew Youde – *The University of Huddersfield, United Kingdom*
Anemona Peres – *Frontex, Poland*
Asako Ohno – *Osaka Sangyo University, Japan*
Bob Barrett – *American Public University, United States*
Boza Tasic – *Ryerson University, Canada*
Bozena Mannova – *Czech Technical University in Prague, Czech Republic*
Chang-Tik Chan – *Monash University Malaysia, Malaysia*
Chiew Hong Ng – *National Institute of Education, Singapore*
Elena Savova – *University of Library Studies and Information Technologies, Bulgaria*
Fausto Brevi – *Politecnico di Milano, Italy*
Filomena Soares – *Polytechnic of Porto, Portugal*
Hanna-Riitta Kymäläinen – *University of Helsinki, Finland*
Helen Reddy – *University of Nottingham, United Kingdom*
Iolie Nicolaidou – *Cyprus University of Technology, Cyprus*
Jana Bérešová – *University of Trnava, Slovakia*
Jane Davies – *University of Nottingham, Malaysia*
Kathleen O'Sullivan – *University College Cork, Ireland*
Laura Zizka – *Ecole Hôtelière de Lausanne / HES-SO Univ. of App. Sci. & Arts, Switzerland*
Leonor Silva de Mattos – *University of Hertfordshire, United Kingdom*
Louise Robson – *University of Sheffield, United Kingdom*
Manuel Gericota – *Polytechnic of Porto, Portugal*
Maria Luisa Spreafico – *Politecnico di Torino, Italy*
Maria Susy Rogers – *The University of South Wales, United Kingdom*
Marion Milton – *University of Notre Dame, Australia*
Martina Bode – *University of Illinois at Chicago, United States*
Michelle Flood – *Royal College of Surgeons, Ireland*
Monika Jakubiak – *Maria Curie-Sklodowska University, Poland*
Nathalie Wesseling – *Amsterdam University of Applied Sciences, Netherlands*
Polona Gradišek – *University of Ljubljana, Slovenia*
Rebecca Allen – *Mount St. Joseph University, United States*
Sandra Gomes – *IPAM, Portugal*
Sean Lancaster – *University of Bristol, United Kingdom*
Siobhan O'Sullivan – *Khalifa University in Medical Education, United Arab Emirates*
Suzy Connor – *Kyushu University, Japan*
Teemu Patala – *Context Learning Finland Oy, Finland*
Teresa Cardoso – *Universidade Aberta, LE@D, Portugal*
Thomas Rachfall – *Hochschule Merseburg, Germany*
Tunde Szecsi – *Florida Gulf Coast University, United States*
Victor Fester – *University of Waikato, New Zealand*
Victoria Brennan – *Liverpool John Moores University, United Kingdom*
Wayne Bailey – *The University of Huddersfield, United Kingdom*
Wendy Gorton – *EdTechTeam, United States*

Panel Chairs

Desiree Cranfield – *Swansea University, United Kingdom*

Julie Smith – *Webster University, United States*

Maria Luisa Spreafico – *Politecnico di Torino, Italy*

Michelle R. Weise – *National University System, United States*

Omar Blibech – *Gulf University, Bahrain*

Reed Stevens – *Northwestern University, United States*

Stephen Heppell – *Universidad Camilo José Cela, Spain*

Wayne Holmes – *University College London, United Kingdom*



Wayne Holmes, University College London (United Kingdom)

Workshop: The right type of AI in Education

Current AI in education approaches tend to be solutions- rather than problems-oriented. In this workshop, we're going to take steps to address this, focusing on identifying genuine education problems that the application of AI might help address. Throughout, we will take a critical and human rights perspective, and will ensure a voice for all.



Michelle R. Weise, National University System (United States)

Workshop: Jumping to your next S-curve

In this futures-oriented workshop, Dr. Michelle R. Weise will facilitate small group breakout sessions in which you will each have an opportunity to think through your current business or organizational model as well as your value proposition for the working learners of today and tomorrow.



Stephen Heppell, Universidad Camilo Jose Cela (Spain)

Workshop: The aggregation of marginal learning gains: making your learning space so very much better

The workshop explores the many environmental details covered in Stephen's keynote and seeks simple, cost effective, proven, try-today, solutions to optimising your learning space. If we want to be our best learning selves, then how might we start today?



Desiree Cranfield, Swansea University (United Kingdom)

Workshop: Knowledge Sharing café – teaching innovation before, during and after Covid-19

The aim of this session is to provide an opportunity for attendees, academics, to come together, in an informal setting to informally share teaching experiences, both good and bad, with the aim to inform practice.

The impact of this session can be the building of networks, the immediate sharing of teaching best practice of a time before, during, and after the pandemic, improving the knowledge around teaching practice during this difficult period.



Julie Smith, Webster University in St Louis, Missouri (United States)

Workshop: Media Literacies: The 21st Century Survival Skills that can Change the World

People around the world are spending – on average – eight hours a day with electronic mass media. Yet even in 2022, we are still not talking enough about how this affects people personally, politically, physically, emotionally and educationally. Using theoretical frameworks to provide context as well as classroom experiences to provide relevance, Smith will explain the importance of media literacy skills, how to teach them and the difference they can make in the lives of citizens and students.



Reed Stevens, Northwestern University (United States)

Workshop: FUSE Studios: A Choice and Interest Centered Learning Environment

In this one-hour session, the FUSE team, led by creator Reed Stevens, will seek to bring the audience inside the FUSE experience in two ways over the first 25 minutes: (1) We will provide a tour of the design principles and core activities of a FUSE Studio. (2) We will share vivid representations of youth and teacher-facilitator experiences in FUSE, drawn from a half decade of video-based ethnographic fieldwork and extended interviews with students. In the second 25 minutes, we will seek to bring the audience further inside the FUSE experience via trying one or more FUSE challenges.



Maria Luisa Spreafico, Politecnico di Torino (Italy)

Paola Morando, Università degli studi di Milano (Italy)

Workshop: Not only math: a game-based learning experience for a new teaching approach

In this workshop we present three didactic games in two versions each: math and art, math and science and math and English. Participants will experience the activities live during the workshop. Since we only use everyday materials, like paper and recycled items, teachers can easily replicate the games in their own classes.



Hesham Elmarsafawy, Gulf University (Bahrain)

Workshop: Science Fiction Drama for Continuous Development in Higher Education

The Workshop aims to introduce innovative pedagogy and outline the mechanism of utilizing science fiction drama in the educational processes as alternative tool for Brain warm-up, support the understanding of science matters, forming futuristic view, foster creativity and enhance students' learning abilities and engagement.

EDULERN22 Keynote Speakers

Keynote Speakers

Michelle R. Weise – National University System, United States

Stephen Heppell – Universidad Camilo Jose Cela, Spain

Wayne Holmes – University College London, United Kingdom

Michelle R. Weise – National University System (United States)



Keynote speech: Long Life Learning: Preparing for Jobs that Don't Even Exist Yet

Tech is advancing; jobs are morphing, and job tenure is shorter; retirement is delayed or gone entirely; and education has to be continuous. Education and workforce strategist Dr. Michelle R. Weise talks about the infrastructure we need to build for a future filled with 20, 30, or more job changes. From wraparound supports for workers to targeted education, integrated earning and learning, and transparent and fairer hiring, Dr. Weise will discuss the research from her latest book and how we prepare talent for jobs that don't even exist yet.

Biography: Dr. Michelle R. Weise (pronounced W-ice) is the Vice Chancellor of Strategy and Innovation at National University System. She is also the author of *Long-Life Learning: Preparing for Jobs that Don't Even Exist Yet* (Wiley, 2021). Her book was awarded the 2021 Phillip E. Frandson Award for Literature by UPCEA (University Professional and Continuing Education Association), recognizing the author and publisher of an outstanding work of continuing higher education literature. Thinkers50 named her one of 30 management and leadership thinkers in the world to watch in 2021. Dr. Weise's work over the last decade has concentrated on preparing working-age adults for the jobs of today and tomorrow. She has served as a senior advisor at Imaginable Futures, a venture of The Omidyar Group. She was also the chief innovation officer of Strada Education Network as well as of Southern New Hampshire University. With Clayton Christensen, she coauthored *Hire Education: Mastery, Modularization, and the Workforce Revolution* (2014) while leading the higher education practice at Christensen's Institute for Disruptive Innovation. Dr. Weise also advises BrightHive, a data collaboration platform, the Virginia Economic Development Partnership, the Institute for Higher Education Policy (IHEP), the SkillUp Coalition, Basta, Hitch, Bayes Impact, Clayton Christensen Institute Social Capital R&D Project, and World Education's Personal and Workplace Success Skills Library. She has also served as a commissioner for Massachusetts Governor Baker's Commission on Digital Innovation and Lifelong Learning, Harvard University's Task Force on Skills and Employability, and the American Academy of Arts and Sciences' Commission on the Future of Undergraduate Education. Her commentaries on redesigning higher education and developing more innovative workforce and talent pipeline strategies have been featured in *The Economist*, *The Wall Street Journal*, *The New York Times*, *Harvard Business Review* and on *PBSNewshour*. Michelle is a former Fulbright Scholar and graduate of Harvard and Stanford.

Stephen Heppell – Universidad Camilo Jose Cela (Spain)



Keynote speech: The aggregation of marginal learning gains: why they matter so much for the future of Learning

Learners are facing unprecedented choices - not only of nomadic campuses, hybrid systems and remarkable new technologies, but also of the many details, from light brightness to levels of volatile organic compounds in their learning places, and even diet. These combine to have a substantial impact on our learning, but if we neglect them, then today's learners will seek better places for their learning, elsewhere. This keynote also explores where those better places might be.

Biography: Professor Stephen Heppell has been a professor since the 1980s, he has an unrivalled track record of success and a string of huge projects in both Learning and Technology. He is credited with being the person who put the C into ICT. His support for better Learning is sought by everyone from governments and major corporations, through schools and universities, to elite sports – lately England Rugby, and Team GB’s elite Olympic coaches. Everyone needs better learning. He currently holds the Felipe Segovia Chair of Learning Innovation at Universidad Camilo Jose Cela in Madrid. Additionally, he is Emeritus Professor and Chair of New Learning Environments at Anglia Ruskin University. A pioneer of multimedia and CD-ROM before the Internet, post-internet Professor Heppell created and led what was the Guinness Book of Record’s largest internet learning project, years before Google, Facebook et al. He has been, and continues to be, at the heart of many world leading projects since. Professor Heppell’s learning space design work extends beyond the digital and virtual. Pioneering learning space designs include the UK “Classrooms of Tomorrow” project, much work in the UK Building Schools for the Future initiative, and today school and university building projects ranging from Peru to Spain, from Australia to SE Asia, from Syrian refugees to some of the wealthiest learning institutions in the world. Pivotal research including the learnometer project analysing the light, temperatures, CO2 and more that contribute to better learning and working spaces, have led to Stephen being in considerable demand to transform physical learning spaces in education, but also everywhere from new media to the Australian mining industries.

Wayne Holmes – University College London (United Kingdom)



Keynote speech: Artificial Intelligence and Education. A Critical Studies Perspective

Artificial Intelligence (AI) is frequently hailed as a ‘solution’ to many of education’s core problems (e.g., OECD, 2021) – problems such as the lack of qualified teachers, student underachievement, and better preparing learners for workplaces and career paths that may be very different from current paradigms. However, such claims tend to be aspirational rather than evidence-based (Miao & Holmes, 2021), and overly-simplistic, forgetting issues such as agency, pedagogy, surveillance, efficacy, and ethics (Holmes et al., 2021; Holmes et al., in press; Holmes & Porayska-Pomsta, in press; Porayska-Pomsta, Holmes and Nemorin, in press). Current approaches tend to be solutions- rather than problems-oriented, and all too often replace teacher functions rather than empower teachers, while the teaching of AI almost always focuses on the technological dimension of AI to the exclusion of the human dimension. Accordingly, this presentation will explore teaching with and about AI, from a critical studies and human rights perspective. It will identify and address many of the key myths, and will pose more questions about AI and the futures of learning than it answers.

Biography: Wayne Holmes (PhD, University of Oxford) is a learning sciences and innovation researcher who teaches at University College London and is a researcher on Artificial Intelligence (AI) and education for UNESCO, IRCAI (the International Research Centre for Artificial Intelligence under the auspices of UNESCO), and the Council of Europe. Having been involved in education throughout his life, Wayne brings a critical studies perspective to the connections between AI and education, and their ethical and social implications. His recent publications include “The Ethics of AI in Education: Practices, Challenges and Debates” (in press), “Artificial Intelligence and Education, through the Lens of Human Rights, Democracy and the Rule of Law” (in press), “Artificial Intelligence in Education. Promise and Implications for Teaching and Learning.” (2019), “Ethics of AI in Education: Towards a Community-Wide Framework.” (2021), and, for UNESCO, “AI and Education: Guidance for Policy-makers.” (2021). Wayne also co-authored the EU’s DigComp 2.2 Annex “Citizens Interacting with AI Systems” (2022), and has given invited talks on AI and education in Brazil, China, Croatia, Denmark, Germany, Greece, India, Japan, Oman, Slovenia, Spain, and the US (and online to audiences in many other countries around the world).

Conference Tracks & Sessions

The INTED2022 conference program is available online at <https://iated.org/edulearn22>

ORAL SESSIONS MONDAY

Digital Literacy
Next Generation Classroom
Student Engagement
University-Industry Collaboration
International Cooperation
Language Learning and Teaching
STEM Education during COVID-19
Media Literacy, Cybersecurity and Data Privacy
Flipped Learning
Peer and Team-Based Learning
Entrepreneurship Education
Exchange and Mobility Programmes
Language Learning Technologies
Architecture & Civil Engineering Education
Metaverse and Virtual Reality Environments
MOOCs & Open Educational Resources
Personalized and Adaptive Learning
Life-long & Workplace Learning
Educational Management
Pedagogical Innovations in Engineering Education
Digital Tools in Maths Education
Virtual & Augmented Reality
Blended & Hybrid Learning
Tutoring and Mentoring
Education for Sustainability
Student Support and Wellbeing
Experiences in Engineering Education
Maths in Higher Education

POSTER SESSIONS MONDAY

Emerging Technologies in Education
New Experiences in Education

ORAL SESSIONS TUESDAY

Digital Transformation of Education
Data Science & AI in Education
Student Support during COVID-19
From Face-to-Face to Remote Learning (1)
Diversity and Equity in Education
Health Literacy and Patient Education
Mathematics in Primary & Secondary Education
e-Learning Experiences
Work-based Learning
Assessment of Student Learning (1)
Early and Primary Education
Social Inclusion and Academic Success of Chinese Students in EU Higher Education
Experiences in Health Sciences Education
STEM Education Experiences

m-Learning
Active & Experiential Learning
Assessment of Student Learning (2)
From Face-to-Face to Remote Learning (2)
Digital Divide and Educational Inequalities
Special and Inclusive Education
Curriculum Design & Quality Assurance
Digital Technologies for Learning under Lockdown
Game-based Learning
Computer Science and Programming in Higher Education
From Face-to-Face to Remote Learning (3)
Teaching Experiences and Support during COVID-19
Business Education Experiences
Professional Development of Teachers
21st Century Skills
Digital Competences of Teachers
Coding & Computational Thinking
Emergency Remote Teaching during COVID-19
Student Wellbeing in Social Media and Online Learning
Vocational Education
Pre-service Teacher Experiences

POSTER SESSIONS TUESDAY

From face-to-face to Remote Learning
New Trends in Education and Research

VIRTUAL SESSIONS

DIGITAL TRANSFORMATION OF EDUCATION

Data Science & AI in Education
Learning Analytics & Educational Data Mining
Digital Transformation
Digital Technologies and Resources for Learning under Lockdown
21st Century Skills
Educational Programming & Robotics

DIGITAL & DISTANCE LEARNING

Distance Education in COVID-19 Times
Challenges and Practices during the Pandemic and Beyond
Blended & Mobile Learning
MOOCs & Open Educational Resources
Learning Management Systems & Virtual Learning Environments

INNOVATIVE EDUCATIONAL TECHNOLOGIES

AI, Chatbots & Robots
Virtual & Augmented Reality
Social Media in Education
Technology Enhanced Learning

TEACHER TRAINING & ED. MANAGEMENT

ICT & Digital Skills
Professional Development of Teachers
Educational Management

ACTIVE & STUDENT-CENTERED LEARNING

Gamification & Game-based Learning
Experiential Learning
Problem & Project-Based Learning
Soft Skills Development
Pedagogical Innovations

ASSESSMENT, MENTORING & STUDENT SUPPORT

Assessment & Evaluation
Rethinking Assessment in COVID-19 Times
Feedback for Learning
Tutoring & Coaching
Student Support & Motivation

EDUCATIONAL STAGES & LIFE-LONG LEARNING

From Pre-school to Secondary Education
Non-Formal and Informal Learning
Transition to the Job Market
Developing Entrepreneurship in Education
Life-Long & Workplace Learning

QUALITY & IMPACT OF EDUCATION

Quality in Education
Experiences and Challenges in Curriculum Design
Sustainability & Social Impact of Education
Links between Education and Research
University-Industry Collaboration
Mobility & International Projects

MULTICULTURALITY & INCLUSION

Multicultural Education
Diversity Issues
Special Educational Needs
Inclusive Education

STEM EDUCATION

Mathematics & Statistics
Engineering Education
STEM Experiences

LANGUAGE LEARNING AND TEACHING

Foreign Languages
Language Learning & Translation Studies
Teaching Foreign Languages during the Lockdown

DISCIPLINE-ORIENTED SESSIONS

Architecture & Interior Design Education
Health Sciences Education
Computer Science Education
Business & Tourism Education

Table of Contents

TEACHER TRAINING DURING THE PANDEMIC OUTBREAK: THE EXPERIENCE OF AN ECUADORIAN PUBLIC UNIVERSITY	1
<i>K. Salvador-Cisneros, C. Bolaños-Mendoza</i>	
PREPARE PUBLIC OPINION AND REMOVE BARRIERS TO INTELLIGENT ENERGY USE	9
<i>H. Friman, G. Konforty, M. Zarmati, Y. Sitbon, I. Banner, Y. Einav, N. Shaked</i>	
GAME – SET – MATCH: GROW! HOW PROFESSIONAL TENNIS FOSTERS PERSONAL DEVELOPMENT OF BUSINESS STUDENTS	16
<i>B. Greimel-Fuhrmann, R. Berger, W. Eschauer</i>	
STRATEGIES FOR USING SOCIAL MEDIA APPS TO INCREASE ENGAGEMENT IN ONLINE LEARNING	21
<i>G. Solano</i>	
PECULIARITIES OF ACQUIRING LINGUISTIC MATERIAL BY AUTISTIC FOREIGN LANGUAGE STUDENTS IN THE INCLUSIVE EDUCATION FRAMEWORK	22
<i>S. Kogotkova, O. Lisyutina, O. Beletskaya, D. Ushakova, E. Bogdanova</i>	
IS PUBLIC HEALTH WORTH STUDYING DURING THE COVID-19 PANDEMIC? A QUALITATIVE ANALYSIS	27
<i>J. Gotlib, M. Jaworski, P. Małkowski, M. Panczyk</i>	
SELF-REFLECTION IN SHAPING THE RELATIONSHIP BETWEEN THE AUTHENTIC LEADERSHIP SKILLS AND THE ATTITUDE TOWARDS EVIDENCE-BASED NURSING PRACTICE - THEORETICAL MODEL FOR POSTGRADUATE EDUCATION	35
<i>M. Panczyk, D. Wawrzuta, S. Musik, M. Jaworski, J. Gotlib</i>	
USING AN ARTISTIC APPROACH TO THE TEACHING OF SOLID GEOMETRY IN A PROFESSIONAL DEVELOPMENT COURSE FOR MATHEMATICS TEACHERS	43
<i>A. Hall, S. Pais</i>	
USING A STEAM APPROACH IN A PROFESSIONAL DEVELOPMENT COURSE FOR MATHEMATICS TEACHERS	53
<i>A. Breda, P. Carvalho, A. Hall</i>	
ROLE PERCEPTION OF NOVICE TEACHERS: GENERAL EDUCATION TEACHERS VS. SPECIAL EDUCATION TEACHERS	62
<i>S. Bar-On, B. Gavish</i>	
STUDENTS' PERCEPTIONS OF FLIPPED CLASSROOM APPROACH – RESULTS FROM AN EDUCATIONAL INNOVATION PROJECT	64
<i>A.P. Lopes, F. Soares, A. Bentabol, A. Esteban, M.M. Muñoz, M.D. Ruiz, M.J. Bentabol, M. Rojas de Gracia, M. Soler, R. Caña</i>	
SPREADING PHOTONICS AT THE EUROPEAN RESEARCHERS' NIGHT	71
<i>R.A. Perez-Herrera, S. Tainta, M. Bravo Acha</i>	
ONLINE ENGINEERING MATHEMATICS COURSE – DEVELOPMENT AND IMPLEMENTATION OF A SUCCESSFUL PROJECT	76
<i>F. Soares, A.P. Lopes, A. Cellmer, A. Uukkivi, C. Serrat, C. Pantazi, C. Feniser, E. Safiulina, E. Martin, F. Serdean, I. Kierkosz, G. Kelly, J. Cymerman, K. Brown, M. Alier, M. Latõnina, M. Bruguera, M.R. Estela, O. Labanova, V. Bocanet, V. Sushch</i>	
ASSESSMENT OF THE EXTENT OF PRESCHOOL TEACHERS' UTILISATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN TEACHING	86
<i>C. Ugwuanyi, C. Okeke</i>	
COULD YOU TEACH CRITICAL THINKING THROUGH PROJECT-BASED LEARNING? FINDING THE ANSWERS THROUGH A META-ANALYSIS	92
<i>I. Alzaabi</i>	
STUDENTS' PREFERENCES REGARDING SOFT SKILLS TRAINING AFTER REMOVAL OF RESTRICTIONS FROM COVID19 AND IN GENERAL	99
<i>H. Friman, H. Ragones, M. Balberg</i>	
STUDENTS' PERCEPTION OF PARENTAL BEHAVIOR AND AUTHORITY AS PREDICTOR OF STUDENT-PROFESSOR INTERACTION	103
<i>A. Mandarić Vukušić, A. Grčić, D. Dolić, M. Ljubetić</i>	
VISITS WITH STUDENTS TO COMPANIES: EFFECTIVE LEARNING ON SITE	113
<i>M.V. Biezma-Moraleda</i>	

ICT USE BY CZECH ADOLESCENTS AND YOUNG ADULTS DURING THE PERIOD OF THE COVID-19 PANDEMIC	119
<i>I. Olecká, J. Pospíšil</i>	
ABUSE EXPERIENCES ON SOCIAL NETWORKING SITES AND RECOMMENDATIONS FOR CHANGES IN PREVENTION	124
<i>I. Olecká, J. Pospíšil, L. Trochtová</i>	
EVALUATION OF THE IMPACT OF ONLINE TEACHING ON STUDENTS WITH SPECIAL EDUCATIONAL NEEDS (SEN)	130
<i>V. Lee, J. Lee, A. Ho, R. Cheung, J. Ng</i>	
CONCEPTUAL AND THEORETICAL MODEL OF OPTIMISM AND SHAME IN EVIDENCE-BASED NURSING EDUCATION	131
<i>M. Jaworski, D. Wawrzuta, J. Gotlib, M. Panczyk</i>	
DEVELOPING PUBLIC SPEAKING SKILLS IN A GROUP OF PUBLIC HEALTH STUDENTS WITH THE USE OF THE MICROSOFT TEAMS PLATFORM. ASSESSMENT OF THE QUALITY OF EDUCATION: A QUALITATIVE ANALYSIS	139
<i>J. Gotlib, M. Jaworski, D. Wawrzuta, P. Małkowski, M. Panczyk</i>	
USABILITY ASPECTS FOR ONLINE COURSES	148
<i>B. Doersam, N. Schuler</i>	
GAME-BASED LEARNING AS A TOOL FOR ENHANCING STUDENT ENGAGEMENT AND LEARNING EXPERIENCES IN VIRTUAL CLASSES	158
<i>Z. Ismat, M. Neo, S.H. Hew, F.T. Leow, K.Y. Ang, Y.Y. Tan</i>	
MANAGEMENT OF FINAL EXAMINATIONS DURING THE PANDEMIC COVID-19	165
<i>J. Ďurica, A. Velas, V. Soltés</i>	
LINKS BETWEEN MATHEMATICS EDUCATION AND DANCE	171
<i>M. López, S. Carnero, J. Rodrigo, S. Lantarón, Y. López</i>	
PROMOTING SUSTAINABILITY LITERACY IN SCIENCE EDUCATION	181
<i>D. Elster</i>	
DO AS I SAY, DON'T DO AS I DO: DEMOCRATISING AND DEMYSTIFYING ACADEMIC WRITING THROUGH TECHNOLOGY	188
<i>E. Tan, S. Carnegie</i>	
EXPLORING THE CONTRIBUTION OF LINGUISTIC, COGNITIVE AND CULTURAL FACTORS TO THE DIDACTICS AND KNOWLEDGE BUILDING OF SCIENCE WITH A FOCUS ON MATHEMATICS AND COMPUTER SCIENCE	189
<i>M. Kritikou, D. Tsolis</i>	
HOW SPANISH UNIVERSITIES ARE ADDRESSING SOCIAL ISSUES IN THEIR STRATEGIC PLANS?	194
<i>E. Planells-Alexandre, R. Isusi-Fagoaga, A. García-Aracil</i>	
SOCIAL INNOVATION APPROACHES AT HIGHER EDUCATION INSTITUTIONS	204
<i>E. Planells-Alexandre, A. García-Aracil, R. Isusi-Fagoaga</i>	
TEACHING HEALTH PROMOTION TO BUILD RESILIENCE IN CRITICAL COVID-19 TIMES	213
<i>D. Vankova</i>	
AN INCLUSIVE GAMIFIED LEARNING ENVIRONMENT FOR ENABLING QUALITY EDUCATION FOR DISADVANTAGED LEARNERS	222
<i>I. Stefan, A. Stefan, H. Tsalapatas, O. Heidmann</i>	
HARDWARE IN THE LOOP TEST BENCH DEVELOPMENT SUITABLE FOR NEW SPACE CONCEPT	223
<i>A. Flores Caballero, A. Marcos</i>	
EARLY DESIGN OF A HIGHLY INTERACTIVE DIGITAL COLLABORATION SERVICE FOR HYBRID LEARNING	232
<i>H. Tsalapatas, O. Heidmann, T. Jesmin, J. Terasmaa, C. Vaz de Carvalho, I. Stefan, A. Stefan, M. Caeiro</i>	
SOFTWARE TRAINING TOOL AT SUPPORTING DEVELOPMENT OF CREATIVE KNOWLEDGE IN THE FIELD OF TECHNOLOGICAL PREPARATION OF PRODUCTION	238
<i>P. Baron, M. Kociško, E. Franas</i>	
EDUCATIONAL INTEGRATION OF DIGITAL TECHNOLOGIES DURING COVID-19 PANDEMIC: AN EXPERIMENT IN THE FACE OF EMERGENCY REMOTE LEARNING?	245
<i>B. Olawale, V. Mncube, W. Hendricks</i>	
"US" AND "OTHERS": COMMUNICATING INTERCULTURAL PERCEPTIONS IN HIGHER EDUCATION	251
<i>A.M. Capraru, S.M. Munteanu, S. Paduretu, L. Braniste</i>	

THE TRANSFORMATION LEADERSHIP ROLE OF PRIVATE HIGHER EDUCATION IN PROMOTING SOCIAL JUSTICE: A SOUTH AFRICAN CASE	258
<i>W. Engelbrecht, W. Bowles, B. van Wyk</i>	
A ROOM OF ONE'S OWN: HOW 'OLD' EDUCATIONAL INEQUALITIES CAN BE PERPETUATED AND DEVELOPED BY ONLINE PLATFORMS	259
<i>K. Angell</i>	
AN EXOGENOUS THREAT THAT LED TO ENDOGENOUS CHANGE: THREE INNOVATIVE PEDAGOGICAL RESPONSES TO TEACHING PRACTICAL COURSES ONLINE DURING COVID-19 LOCKDOWNS	263
<i>K. Angell</i>	
FEMALE FACULTY IN HIGHER EDUCATION IN GREECE: DATA ANALYSIS AND VISUALIZATION, TRENDS AND PERSPECTIVES	264
<i>E. Prappa, E. Papaioannou, C. Kaklamanis</i>	
A WEB APPLICATION FOR SCHEDULING EDUCATIONAL VISITS	274
<i>A. Prappa, E. Papaioannou, C. Kaklamanis</i>	
ENHANCING KNOWLEDGE ACQUISITION IN CHEMICAL ENGINEERING STUDIES THROUGH "QUIZZ" PLATFORM CLASS COMPETITIONS	283
<i>M.A. Delgado Canto, C. Roman, I. Martínez García, Y.M. Isa, L. Lazar, M. García-Morales</i>	
CHANGES IN PERCEPTIONS OF STUDENT SELF-ASSESSMENT	292
<i>E. Aflalo</i>	
CASE STUDY ON THE EFFECTIVENESS OF THE MENTAL AND PHYSICAL ACTIVITIES IN VIRTUAL AND AUGMENTED REALITY	296
<i>D. Gudoniene, T. Blazauskas, E. Staneviciene, L. Motiejunas</i>	
NATURAL AND HEALTHIER SOCIAL ENVIRONMENTS FOR UNIVERSITY STUDENTS THAT ENHANCE ACADEMIC MOTIVATION	306
<i>M. Uyuskan, B. Erkan, Y. Avci, D. Hasirci</i>	
PRESCHOOL CHILDREN READING SKILLS TEACHING MODULE THROUGH INTERACTIVE WHITEBOARD	315
<i>A.H. Masnan, H.H. Baharudin</i>	
LEARNING HOW TO USE APA GUIDELINES: AN INNOVATIVE EDUCATIONAL INTERVENTION VIA INSTAGRAM	325
<i>S. Collado, R. Rodríguez-Rey, C. Fidalgo, M. A. Sorrel, L. Bermejo-Toro, M. Prieto-Ursúa</i>	
INCULCATING STUDENT PROBLEM-SOLVING SKILLS THROUGH SELF-DIRECTED LEARNING IN A SMART LEARNING ENVIRONMENT	326
<i>T.K. Neo, A. Amphawan, S.H. Hew, M. Neo, K. Hamidani, Y.C. Chang</i>	
A CONCEPTUAL FRAMEWORK USING EXPERIENTIAL LEARNING TO ENCOURAGE STUDENT ENGAGEMENT	333
<i>K. Hamidani, T.K. Neo, V. Perumal, A.I. Susanti, M. Pradana, S. Artadita</i>	
USE OF TECHNOLOGIES IN HIGHER EDUCATION: THE CASE OF TOURISM COURSES	340
<i>A.E. Sousa, S. Pais</i>	
UN-E-NAV: A PROGRESSIVE WEB CAMPUS NAVIGATOR	346
<i>A. Ntoumi, E. Papaioannou, G. Moisiadis, C. Kaklamanis</i>	
CRITICAL REFLECTIVE ASSESSMENT TECHNIQUE: A FRAMEWORK TO CULTIVATE ENGAGED SCHOLARSHIP IN BUSINESS EDUCATION	356
<i>P. Msweli, M. Tabane</i>	
TEACHERS, THE INTERNET, COMPUTERS, AND SMARTPHONES - WHAT SKILL SETS SHOULD TODAY'S EDUCATORS HAVE?	363
<i>L. Tomczyk</i>	
SOFTWARE AND HARDWARE IN THE WORK OF THE MODERN TEACHER IN THE INFORMATION SOCIETY	373
<i>L. Tomczyk, L. Fedeli</i>	
PUBLIC HIGHER EDUCATION FEES IN SOUTH AFRICA: WHAT ACCOUNTS FOR DIFFERENCES?	383
<i>G. Ngorima, P. Msweli</i>	
ENGINEERING STUDIES IN HEBREW FOR ARABIC SPEAKING STUDENTS – THE EFFECT OF STUDYING IN A NON-NATIVE LANGUAGE	391
<i>E. Gur</i>	
THE IMPACT OF COVID-19 ON ACCOUNTING EDUCATION	397
<i>C. Fajardo</i>	

POPULARIZATION OF STEM EDUCATION IN THE COUNTRY OF GEORGIA: STUDENT RECRUITMENT STRATEGY OF SDSU GEORGIA <i>H. Guven</i>	398
ARCHITECTURAL PEDAGOGY: TOWARDS PROFESSIONAL PRACTICE <i>A. Huang, V. Hui, K. Sarmiento</i>	408
A LITERATURE REVIEW RELATED TO 3D TECHNOLOGY PROMOTING SPATIAL VISUALIZATION <i>C.H. Chivai, A. Soares, P. Catarino</i>	417
LECTURERS' JOB PERFORMANCE DURING THE COVID-19 LOCKDOWN: A CONDITIONAL LATENT GROWTH CURVE MODEL <i>M. Ghasemy</i>	426
RESILIENCE-PROMOTING MESSAGING IN POST-PANDEMIC UNIVERSITY COMMUNICATION <i>L. Irimies, E. Mesaros, C. Irimies</i>	436
PREREQUISITES AND FEATURES OF THE DEVELOPMENT OF E-EDUCATION IN THE CONDITIONS OF DIGITALIZATION <i>A. Goloborodko</i>	448
A CRITICAL REALIST EVALUATION OF DIGITAL TECHNOLOGY USE IN HIGHER EDUCATION INSTITUTIONS IN SOUTH AFRICA <i>M.S. Achieng</i>	460
SHORTENING THE GAP BETWEEN BIOMEDICINE AND MEDICAL HUMANITIES: DESIGN AND MAIN OUTCOMES OF A NEW CURRICULUM IN HEALTH COMMUNICATION FOR MEDICAL STUDENTS <i>R. Ruiz Moral, S. Denizon, D. Monge Martín, S. Alvarez Montero, C. Garcia de Leonardo, F. Caballero Martinez</i>	467
IMPROVING ACADEMIC AND PROFESSIONAL ENGAGEMENT IN HIGHER EDUCATION ONLINE STUDENTS THROUGH VIDEO-MAKING: SCHOOL LIBRARIANS ON THE SCREEN <i>T. Sanches</i>	474
FOSTERING STUDENTS' LEARNING THROUGH A STUDY SKILLS TRAINING PROGRAM INTERVENTION <i>L. Moreira</i>	482
FOSTERING 21ST-CENTURY LEARNERS THROUGH SKYPE IN THE CLASSROOM <i>L. Moreira</i>	483
THE SELF-EFFICACY OF TRAINEE TEACHERS WHO WERE RECOMMENDED FOR QUALIFIED TEACHER STATUS (QTS) IN ENGLAND DURING THE COVID-19 PANDEMIC <i>R. Tynan, A. Mallaburn</i>	484
A CRITICAL EVALUATION OF CRITERIA-BASED ASSESSMENT OF SUBJECT KNOWLEDGE AND OTHER COMPETENCIES OF TEACHERS IN TRAINING: A PRACTITIONER RESEARCH JOURNEY <i>R. Tynan</i>	490
STUDENTS' INTERNATIONAL COMPETITION – PROMOTING ENGAGEMENT AND SOCIAL SKILLS <i>F. Soares, A.P. Lopes, V. Bocanet, K. Brown, A. Cellmer, I. Kierkosz, O. Labanova, C. Serrat, A. Uukkivi</i>	498
DIGITAL SERVICE LEARNING LAB: DESIGN AND IMPLEMENTATION OF A DIGITAL TEACHING PLATFORM FOR THE DEVELOPMENT OF STUDENT COMPETENCES THROUGH SERVICE LEARNING PROJECTS <i>A. Schneider, A. Schmalfuß, S. Uhlig</i>	508
ON-LINE CONFERENCE SKILLS ACQUIRING BY ELDERLY IMMIGRANTS FROM FORMER SOVIET UNION IN ISRAEL DURING ISOLATION OF COVID-19 <i>N. Khvorostianov</i>	509
ONLINE ASSESSMENT USING DIFFERENT TOOLS AND TECHNIQUES IN HIGHER EDUCATION <i>A.P. Lopes, F. Soares</i>	510
GENERIC ASSESSMENT TOOL FOR ACADEMIC PROGRAM ACCREDITATION <i>Y.E.I. Mansour, M. Ezzat, S. Khahro</i>	518
I AM NOT A ROBOT: LEARNING WITH TECHNOLOGY <i>L. Zizka, G. Probst</i>	527

THE IMPACT OF THE MEDIUM ON TIME ESTIMATION, READING COMPREHENSION AND CONFIDENCE AMONG STUDENTS WITH AND WITHOUT ADHD <i>Y. Meer, T. Katzir</i>	535
MULTIMEDIA DESIGN FOR TACTICAL PLAY LEARNING AMONG SPORT PRACTITIONERS <i>M. McMahan</i>	536
INFUSION OF THE LEARNING MANAGEMENT SYSTEM AT A SOUTH AFRICAN UNIVERSITY OF TECHNOLOGY <i>O. Ogundaini, N.B.W. Mlitwa (Mlita)</i>	548
PSYCHOLOGICAL OWNERSHIP AND THE INTENTION TO DEVELOP OPEN EDUCATION RESOURCES (OER): A THEORETICAL MODEL APPROACH <i>A. Schneider, A. Schmalfuß</i>	558
INDUSTRY-GUIDED EDUCATION (IG-EDU) <i>A. Elmessiry, M. Elmessiry, M. Elmessiry</i>	559
REINFORCING EXPERIENTIAL LEARNING: MAINTAINING AND SUSTAINING ARCHITECTURAL PEDAGOGY PRE- AND POST-COVID <i>V. Hui, A. Weiss, A. Winslow, E. Fernandes, J. Lieberman</i>	567
FINANCIAL LITERACY OF TECHNICALLY ORIENTED STUDENTS IN SLOVAKIA: AN EVALUATION OF FUNDAMENTALS OF FINANCIAL LITERACY <i>I. Katrencik, M. Zatrochova</i>	574
PSYCHOLOGICAL RESEARCH OF INTELLECTUAL AND CREATIVE ABILITIES OF YOUNGER SCHOOLCHILDREN <i>K. Satova, A. Dzhusupova, B. Satanov, B. Sadykova, A. Karkulova</i>	582
LEARNING BY DOING ABOUT HEALTH AND SUSTAINABILITY THROUGH FOOD LABELING <i>M. Cámara, M.C. Matallana, M.L. Pérez-Rodríguez, M.C. Sánchez-Mata, V. Fernández Ruiz, P. Morales, R.M. Cámara, P. García-Herrera, E. Arranz, M. Ciudad-Mulero, L. Domínguez, E.N. Vega, M. Cotacallapa, T. Jaramillo-Vivanco</i>	587
SENSORY ANALYSIS OF FOODS AS A TOOL FOR EDUCATION IN HEALTHY FOOD CHOICES: A SERVICE LEARNING EXPERIENCE (APS) <i>V. Fernández-Ruiz, M. Cámara, M.C. Matallana, M.C. Sánchez-Mata, P. Morales, R.M. Cámara, P. García-Herrera, M. Ciudad-Mulero, L. Domínguez, E.N. Vega</i>	593
CHATBOTS: A PERSONALISED TEACHER'S ASSISTANT OR DIGITAL FAQ? <i>A. Forrester</i>	601
DESIGN AND MULTIMEDIA AS A RESPONSE AND STIMULUS TO NON-FACE-TO-FACE CLASSES IN PRIMARY EDUCATION IN TIMES OF THE COVID 19 PANDEMIC <i>M. Zunguze, Y. Mondlane</i>	602
THE FACTORS CONTRIBUTING TOWARDS POOR LEARNERS' PERFORMANCE IN LIFE SCIENCE: A PRACTICAL COMPONENT <i>K. Maremane, M. Rankhumise, O.N. Mafa-Theledi, E. Ngobeni</i>	608
THE INTRODUCTION OF INTERNATIONAL STUDENTS IN NEW ZEALAND TO THE INDIGENOUS MAORI CULTURE <i>D. Lopez, C. Freeman</i>	614
A FRAMEWORK FOR EMBRACING DIGITAL TRANSFORMATION TO EMPOWER REMOTE LEARNING IN TIMES OF CRISIS (COVID-19) IN SOUTHERN AFRICAN PRIMARY AND SECONDARY SCHOOLS <i>S. Nkomo, W. Matli</i>	620
USE OF VIDEO TUTORIALS AS A TEACHING TOOL FOR LABORATORY PRACTICALS IN THE FIELD OF CHEMICAL ENGINEERING <i>M.A. Delgado Canto, M. García Morales, S.D. Fernández Silva, A. Palma López, J.F. Rubio Valle, C. Roman, I. Martínez García</i>	629
COMPARISON OF PROBLEM-BASED LEARNING VERSUS TRADITIONAL TEACHING METHOD AMONG HIGH SCHOOL STUDENTS: AN EXPERIMENTAL STUDY <i>Y. Sorroche-Del-Rey, L. Piedra-Muñoz, E. Galdeano-Gómez, E.M. García-Granero</i>	638
LIGHTING DESIGN AND VIRTUAL THEATRE LABORATORIES: 3D VISUAL SIMULATORS FOR ONLINE CLASSROOM ENVIRONMENTS <i>J. Greenberg</i>	645
IN-SERVICE TEACHER EDUCATION: A MODEL TO ADVANCE TEACHER KNOWLEDGE AND SKILLS OF TECHNOLOGY INTEGRATION IN TEACHING AND LEARNING <i>M.Z. Ramorola</i>	646

DEBRIEFING TEACHER TRAINERS' PERCEPTIONS OF VARIANT LEARNING OPPORTUNITIES IN A RURAL SOUTH AFRICAN UNIVERSITY <i>X. Khalo, M.B. Nkohla</i>	652
NEW YORK THEATRE TRAVEL STUDY PROJECT: AN IMMERSIVE PROFESSIONALIZING LEARNING EXPERIENCE FOR STUDENTS <i>J. Greenberg</i>	661
THE USE OF DIGITAL TECHNOLOGIES IN THE TEACHING OF MATHEMATICS DURING THE COVID19 PANDEMIC – A CASE STUDY WITH UNDERGRADUATE TOURISM STUDENTS <i>S. Pais, A. Hall, A.E. Sousa</i>	662
FROM DISRUPTION TO “COMFORT-ZOOM” ROUTINE PRESERVICE TEACHERS' PERSPECTIVE ON REMOTE LEARNING DURING THE CORONA YEAR <i>Y. Nissim, E. Simon</i>	668
PRODUCTIVE STRUGGLE IN TEACHER PREPARATION: CANDIDATES AS CRITICAL CURRICULUM DESIGNERS <i>C. Lunsmann, J. Collazo</i>	669
ANALYSIS OF COLLECTIVE INTELLIGENCE IN A DISCIPLINARY COMMUNITY <i>M. Yoshida</i>	673
WHAT IMPACT TO STUDENTS' LEARNING WILL BE: A SHIFT OF SYNCHRONOUS ONLINE TEACHING MODE? <i>K.M. Pang</i>	683
KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) STUDY OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) AMONG STUDENTS AND PROFESSIONALS: EVALUATING EDUCATIONAL NEEDS <i>D. Vankova</i>	690
TRAINING OF MICRO, SMALL AND MEDIUM-SIZED ENTREPRENEURS FOR SUSTAINABLE DEVELOPMENT AND PEACE BUILDING IN TERRITORIES OF ARMED CONFLICT <i>O.A. Fragozo Manjarrez</i>	698
THE STUDENT-CENTERED METAVERSE: CONNECTING VR, MR, AR TO GEN Z STUDENT NEEDS <i>S. Daly, X. Luo</i>	703
INTUITIVE AND ANALOGICAL APPROACH TO TEACHING, LEARNING AND UNDERSTANDING THERMODYNAMICS <i>E. Glakpe</i>	704
LINGUO-CULTURAL ASPECT IN TEACHING A FOREIGN LANGUAGE USING MULTIMEDIA TECHNOLOGIES <i>E. Andreeva, I. Korneva, T. Usmanov</i>	713
THE IMPACT OF THE GLOBAL PANDEMIC ON THE EDUCATION OF UNIVERSITY STUDENTS <i>V. Bolek, A. Romanová</i>	718
FLIPPED CLASSROOM IN LABORATORY PRACTICES OF MOLECULAR BIOLOGY: PERCEPTION OF THE STUDENTS FROM CHEMISTRY DEGREE <i>M.D. Busto, N. Ortega, S.M. Albillos, S. Ramos-Gómez, M.C. Pilar-Izquierdo, B. Velasco, D. Palacios</i>	725
DO YOU ACCEPT GAMIFIED EDUCATIONAL TOOLS FOR THE LEARNING OF ACCOUNTING? MEASUREMENTS TO MANAGE SATISFACTION OF USERS IN PUBLIC UNIVERSITY <i>L.M. Marín-Vinuesa, P. Portillo-Tarragona, S. Scarpellini, M. Marco-Fondevila, J.A. Aranda-Usoń</i>	733
DESIGN THINKING AS A “GOOD PRACTICE” OF X-LEARNING <i>I. Pondelíková</i>	739
STAY WITH US! EXAMINING ACADEMICS' MOTIVATION, INTENTION TO REMAIN, AND TURNOVER INTENTION AMIDST THE COVID-19 LOCKDOWN THROUGH GROWTH CURVE MODELING <i>M. Ghasemy, L. Frömbling</i>	749
SMARTPHONE APPLICATION FOR PHOTOGRAPH-BASED AUTOMATIC SOLVING OF ELECTRONIC CIRCUITS FOR DISTANCE LEARNING <i>N. López-Ruiz, P. Escobedo, M. Carvajal, A. Martínez-Olmos</i>	760
THE DESIGN OF TRAINING CENTRES USING VIRTUAL REALITY <i>V. Binasova, G. Gabajova, B. Furmannova, M. Krajcovic, B. Micieta, M. Kasajova, M. Rakyta</i>	761
REFLECTING ON NEXT GENERATION LEARNING AND TEACHING SPACES – THE VOICE OF THE ACADEMIC COMMUNITY <i>V. Carlos, S. Bruckmann, M.J. Rosa</i>	769

EDUCATIONAL PLANNING AND PROFESSIONAL PRACTICES IN EARLY CHILDHOOD SERVICES: CASE STUDIES	778
<i>A. Giuliani</i>	
PROMOTE UNDERGRADUATE STUDENTS' DISTRIBUTED LEADERSHIP THROUGH PROJECT-BASED LEARNING EXPERIENCES	786
<i>A. Giuliani</i>	
ENGAGING LEARNERS IN E-LEARNING HEALTH ROOMS: A MALAYSIAN-KOREAN CASE STUDY	794
<i>M. Neo, H.K. Park, T.K. Neo, H.Y.J. Tan, M.J. Lee, J.Y. Soh, J.Y. Oh, K.Y. Ang, N. Ludin</i>	
VIRTUAL SPEAKING HEAD AS A TOOL IN SPEECH THERAPY	802
<i>E. Pajorova</i>	
REFLECTIONS ON A MULTI-NATIONAL SOUTH-NORTH HIGHER EDUCATION CAPACITY BUILDING PROJECT IN MARINE EDUCATION AND TRAINING	808
<i>H. Theunissen, T. Pittaway, B. Du Plooy</i>	
AUDIO USE AS A TEACHING TOOL: A STUDY IN SÃO LUÍS REGION/BRAZIL	809
<i>R.J. Silva Ferreira, M.J. Antunes</i>	
DIDACTIC PROPOSAL FOR THE STUDY OF THE BIOLOGICAL IMPORTANCE OF CHIRAL COMPOUNDS IN THE CONTEXT OF THE REMOTE LEARNING	814
<i>A. Grunewald Nichele, K. Silva dos Santos Moraes, F. Nunes da Silva</i>	
CREATING EDUCATIONAL EQUIPMENT FOR CHEMISTRY LABS USING MOBILE DEVICES	819
<i>A. Grunewald Nichele, K. Silva dos Santos Moraes</i>	
MATHS FOR ENGINEERING: PARTING FROM CLASSICAL METHODS	827
<i>E. Martinez-Martin, A. Costa</i>	
A SOFTWARE PLATFORM FOR DIGITAL ASSESSMENT OF PEDAGOGICAL SPECIALISTS' QUALIFICATION PROGRESS IN BULGARIA	832
<i>P. Nakov, E. Mihaylova, M. Lazarova, O. Nakov, V. Mladenov</i>	
PLATFORM OF OPEN EDUCATIONAL RESOURCES (OER) ON CYBERSECURITY AND PROFESSION	838
<i>S. Martínez-Requejo, J. Fernandez-Collantes, G. Mariscal-Vivas, L.A. López-Fraile, E. Jiménez-García, S. Esteban-Gonzalo</i>	
A VIDEOGAME FOR FOSTERING CYBERSECURITY	846
<i>L.A. López-Fraile, G. Mariscal-Vivas, J. Fernandez-Collantes, S. Martínez-Requejo, S. Esteban-Gonzalo, E. Jiménez-García</i>	
THE EFFECT OF PRACTICING WITH DIGITAL TOOLS ON THE VOCABULARY ACHIEVEMENTS AND ACADEMIC EMOTIONS OF THIRD GRADERS WITH DIFFERENT READING PROFILES	852
<i>M. Sadan, T. Katzir</i>	
ENHANCING ENGAGEMENT OF DENTAL UNDERGRADUATES BY FLIPPING HISTOLOGY	857
<i>M.P. Álvarez-Vázquez, M.T. Angulo-Carrere, C. Bravo-Llatas</i>	
MOOCS AND ACCESS TO HIGHER EDUCATION BY SOUTH AFRICAN UNDERPRIVILEGED LEARNERS	863
<i>M.C. Mabhele, J.P. Van Belle</i>	
DESIGN AND EVALUATION OF A TEACHER TRAINING COURSE ON VIDEOCONFERENCING-BASED EFL TEACHING: A CASE STUDY OF SYRIAN PRE-SERVICE EFL TEACHERS	870
<i>L. Ispardon, H. Selcuk</i>	
LOW-COST TELEPRESENCE ROBOT USING ARTIFICIAL AND CELLULAR INTELLIGENCE FOR USE IN EDUCATION	877
<i>R. Coutinho, P. Notargiacomo</i>	
DEVISING A PROFESSIONAL DEVELOPMENT PROGRAM FOR ADJUNCT FACULTY TO UPSKILL FOR BLENDED LEARNING CAPABILITY	887
<i>S.Y. Chye</i>	
EDUCATION EVOLVED FOR THE 22ND CENTURY: FACING THE NEW WORLD OF MEGA-COMPLEXITY	894
<i>D. Brooks</i>	
IS FACEBOOK AN ADEQUATE TOOL TO IMPROVE STUDENTS' INTRINSIC MOTIVATION AND ACADEMIC PERFORMANCE DURING COVID PANDEMIC?	895
<i>C. Fidalgo, S. Collado, G. Lopez-Crespo, M. Mendez-Lopez, S. Garces-Arilla</i>	

RESULTS OF A UNIVERSITY EXPERIENCE, COMPARING FACE-TO-FACE, ONLINE AND HYBRID TEACHING IN A CONTEXT OF SARS-COV-2	896
<i>I. Tort-Ausina, J.A. Gómez-Tejedor, J. Molina-Mateo, J. Riera Guasp, J.M. Meseguer Dueñas, R. Martín Cabezuolo, A. Vidaurre</i>	
ENGAGING YOUR COLLEGE STUDENTS: 30 TOOLS YOU CAN USE NEXT WEEK	906
<i>J. Smith</i>	
AN INTEGRATIVE HOLISTIC MODEL OF ECONOMIC EDUCATION	907
<i>B. Greimel-Fuhrmann</i>	
DIGITAL FORENSICS: 17 TOOLS TO DISCERN FACT FROM FICTION ONLINE	915
<i>J. Smith</i>	
COMMUNICATION SKILLS FOR RESEARCHERS	916
<i>B. Butragueno, J.F. Raposo Grau, M.A. Salgado de la Rosa</i>	
THE 4TH INDUSTRIAL REVOLUTION: THE NEW BUSINESS MODEL FOR HIGHER EDUCATION – PRELIMINARY FINDINGS	924
<i>J. Bengoechea, A. Bell</i>	
DIDACTIC MATERIAL DEVELOPMENT IN TEACHING ENGLISH TO MASTER'S DEGREE STUDENTS FROM THE PERSPECTIVE OF SKILLS ACQUISITIONS AND STUDENT LEARNING OUTCOMES	929
<i>M. Saryan</i>	
COURSE DESIGN MODIFICATION BASED ON STUDENTS' PREFERENCES	938
<i>M. Saryan</i>	
USE OF THE ANKI SOFTWARE IN COASTAL ENGINEERING COURSES: METHODOLOGY AND RESULTS	944
<i>J.J. Muñoz-Perez, A. Contreras, B. Jigena, F. Contreras, P. Lopez</i>	
POSTS ON INSTAGRAM AND FACEBOOK TO ENHANCE COLLEGE STUDENTS INTERACTION IN EFL SUPPORTED BY GRAMMAR AND VOCABULARY PRACTICE	949
<i>D. Vascónez, S. Vascónez, J. Samaniego Villarroel, A. Carrera Rivera</i>	
DISCUSSION BOARDS AND DIGITAL PORTFOLIOS TO DEVELOP METACOGNITIVE SKILLS IN AN ONLINE EFL CLASS	955
<i>S. Vascónez, D. Vascónez, A. Carrera Rivera, J. Samaniego Villarroel</i>	
CRITICAL READING AND USE OF COMICS IN TEACHING FRENCH AS A FOREIGN LANGUAGE	964
<i>C.M. Míguez Álvarez</i>	
THE COMIC AS A DIDACTIC RESOURCE IN TEACHING FRENCH IN HIGHER EDUCATION	974
<i>C.M. Míguez Álvarez</i>	
SIMULATION IN ADVANCED LIFE SUPPORT TRAINING: OPINION OF STUDENTS IN POSTGRAD CRITICAL CARE	982
<i>C. Pinto, F. Segadães, A. Pinto, A. Teixeira, C. Augusto, I. Rocha, A. Veríssimo</i>	
APPLIED TOOL TO EXAMINE FACTORS ENHANCING OR INHIBITING SENSE OF COHERENCE IN TEACHING SITUATION (SOCITS) AMONG TEACHING INTERNS	990
<i>E. Bracha, D. Hoffenbartel</i>	
CURRICULUM DESIGN IN A LIFE-LONG-LEARNING PROGRAMME CONSIDERING INDUSTRY 4.0 AND DIGITALISATION – BUZZWORDS OR NECESSITY?	991
<i>M. Koenig</i>	
ARTIFICIAL INTELLIGENCE AND EDUCATION: MYTH AND FACTS	996
<i>V. Queiroz, M. Simonette, E. Spina</i>	
EXPLORING HOW SIMULATION-BASED TECHNOLOGY CAN ENHANCE TEACHING AND LEARNING IN BUSINESS SCHOOLS	1002
<i>N. Papanikolaou</i>	
ADDRESSING SUSTAINABILITY AND CLIMATE CHANGE THROUGH PARTICIPATORY SIMULATION GAMES IN A MULTICULTURAL ENVIRONMENT IN HIGHER EDUCATION: AN EXPERIENCE IN A MASTER DEGREE ON SMART CITIES AND COMMUNITIES	1003
<i>J. Terés-Zubiaga, I. Capellán-Pérez, A. Campos-Celador</i>	
AN INTERVENTION TO SUPPORT STUDENTS WITH ACADEMIC WRITING DURING THE COVID-19 LOCKDOWN	1013
<i>N. Mather</i>	
THE STATE OF VISUAL IMAGINATION OF CHILDREN WITH VISION IMPAIRMENTS IN THE PROCESS OF MUSIC PERCEPTION	1020
<i>L. Darinskaia, R. Demjančuk, V. Sorokin</i>	

PSYCHOLOGICAL CHARACTERISTICS OF CREATIVE THINKING OF CHILDREN SUFFERING FROM COMORBID OPHTHALMIC PATHOLOGY <i>L. Darinskaja, V. Sorokin, G. Molodtsova, R. Demjanчук</i>	1025
LEAF PROJECT: SCIENCE COMMUNICATION IN COVID ERA <i>M. Martini, A. Della Ceca, G. Burzachechi, R. Donghia, G. Ciocca, S. Pierangeli, E. Diociaiuti, V. Guglielmotti</i>	1030
THE EFFECTS OF PHONOLOGICAL FEATURES IN GENERAL ENGLISH PROFICIENCY PREDICTION BY DICTATION PERFORMANCE <i>K. Kotani, T. Yoshimi</i>	1040
LIVE LEARNING AS A REQUIREMENT OF ASYNCHRONOUS FIRST-YEAR EXPERIENCE: THEMES AND UNDERSTANDINGS FROM STUDENT RESPONSES <i>J. Robinson, S. Manning, T. Mooney, D. Hilbrink, C. Dollar, B. Sorensen</i>	1048
PAUSE: REVISITING AN ACRONYM FOR PROVIDING SOLID AND ACTIONABLE FEEDBACK FOR ONLINE UNIVERSITY STUDENTS <i>J. Robinson</i>	1058
VIRTUAL ROOM EXPERIENCE: DEVELOPING SKILLS IN REMOTE TEACHING <i>R.J.S. Ferreira, G.G.C. Braga, J.L.M. Sousa, C.A. Carvalho, J.S.L. Sousa</i>	1059
USING ONLINE FOCUS GROUP TO DEVELOP VIRTUAL SERVICE-LEARNING PROJECTS <i>M.C. González-Rabanal, A. Acevedo-Blanco</i>	1063
BLENDED LEARNING – HOW TO CREATE AN EFFECTIVE COURSE <i>K. Buckley</i>	1071
ADULT EDUCATION DURING COVID-19: BEST PRACTICES, TECHNOLOGY TOOLS, AND THE INSTRUCTORS' PERSPECTIVES TO ENHANCE ONLINE TEACHING, LEARNING, AND TRAINING <i>L. Orozco, R. Giraldo-Garcia</i>	1072
EVALUATION OF THE COGNITIVE-EMOTIONAL APPROACH IN LISTENING TO MUSIC IN CROATIAN GENERAL EDUCATION SETTING <i>S. Vidulin</i>	1073
A FRAMEWORK FOR DEVELOPING SOCIALLY RESPONSIBLE BUSINESS LEADERS <i>A. Kukreja, J. Ricks, J. Bartkus, A. Helm</i>	1082
THE DEBATE AS A TOOL FOR SCIENCE LEARNING AND EVALUATION OF SCIENTIFIC WORK. APPLICATION TO POSTGRADUATE TEACHING IN BIOMEDICINE <i>A. Bort, B. Sánchez, J.M. Mora-Rodríguez, I. Díaz-Laviada</i>	1090
THE BENEFITS OF APPLYING PROJECT-BASED LEARNING FOR BETTER STUDENT COMPREHENSION <i>B. Kirilova</i>	1100
THE ROLE OF DIGITAL TECHNOLOGIES IN CELEBRATING FESTIVITIES UNDER COVID-19 <i>I. Kacane, O. Kovzele, M. Grizane</i>	1105
FACTORS HINDERING EFFECTIVE ONLINE TEACHING AND LEARNING: INSIGHTS FROM A HIGHER LEARNING INSTITUTION IN SOUTH AFRICA <i>R. Minty, R. Brink, A. Alao</i>	1114
QUALIFICATION RECOGNITION SYSTEMS ADOPTED BY UNIVERSITIES: AN EXPLORATORY DATA ANALYSIS <i>K. Zourou, M. Ziku</i>	1124
ADAPTATION OF STUDENTS TO THE EDUCATIONAL ENVIRONMENT OF THE SCHOOL: STATEMENT AND SOLUTION OF THE PROBLEM <i>A. Mendugalieva, N. Litvinenko, N. Nikolaeva</i>	1131
BREAKING OUT OF THE TRADITIONAL CLASSROOM: A REVIEW ON THE USE OF ESCAPE ROOMS IN PRIMARY AND SECONDARY SCHOOLS <i>M. Cruz</i>	1136
DESIGN, DEVELOPMENT, AND IMPLEMENTATION OF NON-FACE-TO-FACE DYNAMIZATION STRATEGIES IN A MASTER'S IN SCIENCE SUBJECT <i>I. Fernandez-Bueno, R. Usategui-Martín</i>	1146
SELF-EFFICACY AND SATISFACTION WITH ONLINE LEARNING DURING COVID-19 LOCKDOWN: UPPER-YEAR AND LOWER-YEAR STUDENT COMPARISON <i>L. Zekanović-Korona, P. Pedić Duić, J. Grzunov</i>	1147
LANGUAGE LEARNING STRATEGIES OF CZECH MILITARY PROFESSIONALS IN THE CONTEXT OF SELF-REGULATED LEARNING <i>J. Rozsypalkova, H. Brzobohata, E. Tomeskova</i>	1155

STUDENTS' ACCEPTANCE OF GAMIFICATION IN SECONDARY SCHOOL COMPUTER SCIENCE CLASSES <i>A. Vrcelj, M. Holenko Dlab, N. Hoić-Božić</i>	1162
THE CARNEGIE CLASSIFICATION SYSTEM AND AMERICAN HIGHER EDUCATION FUNDING POLICIES: AN ANALYSIS OF INFORMATION RESOURCE COLLECTIONS AT SELECTED RESEARCH INSTITUTIONS <i>N. Brown, T. Clark, H. Aubrey, K. Anderson, T. Jordan, D. Hill-Eley, H. Swanson, E. Cameron</i>	1170
ONLINE TEACHING STRUCTURE IN IT – A CASE STUDY <i>T. Drange</i>	1174
THE POTENTIAL OF ONLINE SCIENCE CAFÉS TO FACILITATE INFORMAL STEM LEARNING IN JAPAN: EXPERIENCE UNDER THE INFLUENCE OF COVID-19 <i>M. Nakamura</i>	1182
AN INNOVATION IN THE PREPARATION OF TEACHERS OF LANGUAGE USING MULTIMEDIA BASED EDUCATION <i>Z. Kumorová</i>	1191
LESSONS, DISCOVERIES, CHALLENGES, AND RESULTS IN AN INTERDISCIPLINARY LEARNING COMMUNITY OF HIGHER EDUCATION TEACHERS <i>T. Sanches, C. Duarte, M. Batista, J.P. Miranda</i>	1198
BLOCK AND BLEND: A MIXED METHOD INVESTIGATION INTO THE IMPACT OF A PILOT BLOCK TEACHING AND BLENDED LEARNING APPROACH UPON STUDENT OUTCOMES AND EXPERIENCE <i>E. Buck</i>	1207
AUDIOVISUAL RESOURCES IN LABORATORY PRACTICES FOR HYDRAULIC ENGINEERING <i>A. Contreras, O. Castillo, J.J. Muñoz-Perez, F. Contreras, B. Jigena, E. Garcia, P. Lopez</i>	1208
GUIDED CLINICAL CASE AS A METHODOLOGY FOR LEARNING: EXPERIENCE IN THE SUBJECT OF ENDOCRINOLOGY AND NUTRITION IN THE MEDICAL DEGREE <i>S. Martinez-Hervas, D. Ortiz Masia, J.F. Martinez-Valls, J.F. Merino Torres, C. Sanchez Juan, J.T. Real</i>	1212
READINESS OF TEACHERS FOR THE FORMATION OF FUNCTIONAL LITERACY OF YOUNGER STUDENTS <i>A. Mendugalieva, G. Muss, J. Ivkina, Z. Iskuzhieva</i>	1216
HOW CAN HIGHER EDUCATION PROMOTE GENDER EQUALITY, DIVERSITY AND NON-DISCRIMINATION? <i>M. Drake, P.K. Juutilainen, L. Vanhanen-Nuutinen, P. Aura</i>	1222
HOW TO EMPOWER HIGHER EDUCATION COLLABORATIVE LEARNING WITH CLOUD-BASED GRAPHIC DESIGN TOOLS <i>M. Aho</i>	1227
IMPLEMENTATION OF “KAHOOT!” APPLICATION TO COMPLEMENT THE MASTER CLASSES IN “STATISTICS” SUBJECT <i>S. Mollà-Casanova, P. Serra-Añó, C.J. Calvo-Saiz, A. Bizy, M. Bernabé-Villodre, M. Zarzoso</i>	1237
AR.E.A. - AUGMENTED REALITY IN EDUCATION ACTIVITIES: PERSPECTIVES FOR NEW LEARNING PROCESSES <i>E. Lonardo</i>	1242
HOW TO SUPPORT JOB INTRODUCTION WITH 360° DEGREE VIRTUAL REALITY ENVIRONMENT IN CASE FOREST MACHINE OPERATOR MOTOAJÓ OY <i>M. Aho, M. Jäntti</i>	1251
EDUCATION AND THE 2030 AGENDA: IMPACT ON INFORMATION AND COMMUNICATIONS TECHNOLOGIES <i>A. Baquero, R. Escortell</i>	1258
PANDEMIC TIMES: A DIDACTIC INTERVENTION OF NUMERIC CALCULATION COURSE <i>E. Cruz, M.M. Nascimento, J. Matias</i>	1267
A STUDY ON THE GROUP INTERACTIVE EFFECT OF DIFFERENT GROUPING MODELS IN FOREIGN LANGUAGE FLIPPED LEARNING: A CONTRASTIVE STUDY BETWEEN HETEROGENEOUS-MULTIPLE-INTELLIGENCES GROUPS AND FREE GROUPS <i>J. Ma</i>	1277
MULTIMODAL DISCOURSE ANALYSIS OF ENGLISH LANGUAGE MASSIVE OPEN ONLINE COURSES (MOOCs): FROM A RHETORICAL STRUCTURE THEORY PERSPECTIVE <i>J. Ma</i>	1283

FLIPPED CLASSROOM AND GAMIFICATION IN THE TEACHING OF THE PHYSICS LABORATORY	1292
<i>J.C. Jimenez-Saez, P. Palacios, S. Muñoz</i>	
INFORMATION TECHNOLOGY PROMOTES THE DEVELOPMENT OF TEACHERS' LIFELONG EDUCATION	1298
<i>Y.J. Li</i>	
ACTIVE LEARNING DURING THE COVID-19 PANDEMIC - A TRIPLE EXPERIMENT	1302
<i>V. Santos, A. Hall, N.R. O. Bastos, C.M.R. Caridade</i>	
PRODUCTS DEVELOPED AND RESULTS OBTAINED WITHIN THE EUROPEAN TRANSNATIONAL EDUCATION PROJECT "CHERISH - CULTURAL AND NATURAL HERITAGE: A SUSTAINABLE TOURISM VET INTEGRATED APPROACH"	1308
<i>P. Ciccioni, R. Coratella, F. D'Esposito, P. Ragni</i>	
ENHANCEMENT OF SCHOOL TEACHER EDUCATION IN DEVELOPING COUNTRIES: EGYPT AS A CASE STUDY	1319
<i>M.A. Zaki Ewiss, L. Olivo, S. Afifi</i>	
USE OF RESEARCH AS A TRAINING TOOL IN BACHELOR AND MASTER SUBJECTS IN A MULTIDISCIPLINARY APPROACH	1330
<i>F. Jiménez, J.E. Naranjo, M. Clavijo</i>	
RESEARCH AND CRITICAL ANALYSIS OF SOLUTIONS AS A TEACHING TOOL IN MASTER STUDIES	1338
<i>F. Jiménez</i>	
HOW TO IMPROVE THE TEACHING OF SCRUM IN SPANISH UNIVERSITIES	1343
<i>J. Gutiérrez Rodríguez, F. Gracia Ahufinger</i>	
CRITICAL THINKING SKILLS IN NURSING STUDENTS	1347
<i>C. Pinto, A. Verissimo, F. Segadães, A. Pinto, C. Augusto, A. Teixeira, I. Rocha, A.L. Carvalho</i>	
SHIFTING TO REMOTE TEACHING IN TIME OF SOCIAL DISTANCING: A STUDY OF A FACULTY OF EDUCATION IN TEACHER EDUCATION COLLEGE	1354
<i>O. Broza, L. Biberman-Shalev, D. Patkin</i>	
SAFEGUARDING UNIVERSITY STUDENTS AND STAFF ON LINE: WHAT WORKS IN HIGHER EDUCATION	1355
<i>E. Bond</i>	
IMPLEMENTATION OF SCHOOL MEDIATION PROGRAMS AS A TOOL FOR CONFLICT RESOLUTION IN ECUADORIAN ADOLESCENTS	1356
<i>J.E. Jordán Buenaño, Á. Jiménez-Sánchez, P. Poaquiiza Poaquiiza, S.G. Vayas Castro, M.A. López Paredes</i>	
THE IMPACT OF EVERYDAY TECHNOLOGY ON THAI SECONDARY SCHOOL STUDENTS' CONFIDENCE IN ENGLISH COMMUNICATION	1365
<i>N. Srisuk, N. Songkram, P. Tantrarungroj, P. Thamsuwan, N. Songkram</i>	
SECONDARY TEACHERS' PEDAGOGICAL REASONING FOR USING TECHNOLOGY IN MATHEMATICS LESSONS: AN EXPLORATIVE STUDY	1372
<i>B. Cabbek, T. Rotsaert, T. Schellens</i>	
DESIGNING THE GEO-HISTORY CURRICULUM: A CASE OF PARTICIPATORY RESEARCH IN THE ITALIAN SCHOOL	1381
<i>M. Pentucci</i>	
EXPERIENCE IN THE APPLICATION OF FLIPPED CLASSROOM METHODOLOGY IN A COURSE OF CHEMICAL ENGINEERING	1387
<i>F. Espínola, M. Moya, I. Romero, C. Cara, M. Ocaña</i>	
STUDENT'S SKILLS DEVELOPMENT IN THE FRAMEWORK OF EXTRACURRICULAR ACTIVITIES IN HEI-S	1394
<i>Ü. Kesli, L. Ariva</i>	
ENTREPRENEURIAL SKILLS IN ENGINEERING STUDENTS BASED ON ENTRECOMP: AN ANALYSIS OF THEIR REFERENCES IN THE ENTREPRENEURIAL VOCATION THROUGH GAMIFIED LEARNING STRATEGIES	1400
<i>J.J. Morillas Guerrero, E. Tovar Caro</i>	
FLIPPED LEARNING AND STUDENT APPROACH TO LEARNING IN A FIRST YEAR CHEMISTRY SUBJECT	1410
<i>L. Atarés-Huerta, M. Leiva-Brondo</i>	
A NATURAL FACE TO FACE INTERACTION USING SOCIAL ROBOTICS	1417
<i>F.J. Perales, S. Ramis, J.M. Buades, C. Manresa-Yee, A. Jaume</i>	
MATHEMATICS, COMPUTERS AND COMPETITIONS: 30 YEARS TOGETHER	1422
<i>M.P. Oliveira</i>	

USING 'CYBERTASKS' TO INTEGRATE TECHNOLOGY AND WRITING SKILLS INTO 21ST CENTURY HIGHER-EDUCATION: AN ANALYSIS OF STUDENTS' PERCEPTIONS <i>C. Girón-García, A.J. Silvestre-López</i>	1431
PERCEPTION OF THE EFFECTIVENESS OF TEACHING OBSERVATION AS A MEANS OF SETTING UP AND DESIGNING FACULTY DEVELOPMENT PATHWAYS <i>M. Milani</i>	1442
PRESCHOOL EDUCATION AND EMERGENCY REMOTE TEACHING IN THE COVID ERA: EXPLORING THE PRACTICES AND EXPERIENCE OF IN-SERVICE PRESCHOOL EDUCATORS <i>S. Sypsa, I. Voulgari, D. Manassis, M. Sfyroera</i>	1447
DIGITAL PROFILES OF BASIC EDUCATION TEACHERS: PANDEMIC CONTEXT <i>R.A. Gómez Ortíz, M.F. Trejo</i>	1455
GOOD PRACTICES IN THE USE OF TECHNOLOGY IN TEACHING <i>F. Pinedo, R.A. Gómez Ortíz</i>	1464
STUDENT SOCIOECONOMIC STATUS AND EMPLOYMENT EXPECTATIONS: DO POORER STUDENTS EXPECT LESS? <i>J. Bagrain, M. Weaver</i>	1473
IMPROVEMENT AND UPDATING OF THE THERMOTECHNICS TEACHING PROJECT IN INDUSTRIAL ENGINEERING <i>A. Picallo-Perez, P. Sarruigarte, J.M. Hidalgo-Betanzos, J.M. Sala-Lizarraga</i>	1480
HAVE THE BOYS GONE OVERBOARD? A STUDY TO INVESTIGATE THE ACADEMIC PLIGHT OF MALE LEARNERS <i>N. Mather</i>	1491
CHALLENGES OF DISTANCE ASSESSMENT IN HIGHER EDUCATION AND THE IMPACT OF ACADEMIC ACHIEVEMENT ON ALUMNI EMPLOYMENT (EVIDENCE FROM GEORGIA) <i>E. Kharaihvili, I. Natsolishvili, N. Shonia</i>	1499
INTERNET ADDICTION PREVENTION IN MEDIA EDUCATION <i>I. Rác</i>	1507
HANDS-ON AND GAME-BASED ACTIVITIES FOR TEACHING MATH IN PRISON <i>A. La Fortuna, P. Morando, M.L. Spreafico</i>	1514
BRAINS ON IN MATH CLASSES <i>P. Morando, G. Turconi</i>	1522
CREATIVELY CONTEXTUALIZING THE MATH COURSE FOR ARCHITECTURE FRESHMEN <i>M.L. Spreafico</i>	1530
A FUZZY MULTI-CRITERIA STUDENT-BASED MODEL FOR EVALUATION OF UNIVERSITY LECTURERS' PERFORMANCE <i>M. Pavlačková, O. Pavlačka</i>	1537
PROJECT-BASED LEARNING IN MACHINE LEARNING COURSE: EXPERIENCE AND OUTCOMES <i>K. Mallibhat, S. Chikkamath, R. Tabib, S.R. Nirmala, U. Mudenagudi</i>	1545
APPLICATION AND RESULTS OF THE INTERNAL COHERENCE SCALE IN A MEDICAL SCHOOL AS A PRIOR STEP FOR THE DETECTION OF EDUCATIONAL NEEDS <i>R. Ruiz Moral, D. Monge Martín, C. Garcia de Leonardo, S. Alvarez Montero, E. Cervera Barba, F. Caballero Martínez</i>	1552
STUDENT REFLECTION ON THE TRANSLATIONAL PLATFORM FOR ADDRESSING & SOLVING SOCIAL-PROBLEMS (T-PASS) AND ITS POTENTIAL TO UNDERGRADUATE PEDAGOGY <i>K.T. Chan, Y.C.Y. Lie, T.S. Li, V. Lee</i>	1557
FLIPPED CLASSROOM TEACHING METHOD OF A BUSINESS MODEL PROJECT AT EAE BUSINESS SCHOOL <i>S. Ajour El Zein, A. Ariso, C. Tomas-Perez, P. Sartorato Neto</i>	1564
INTEGRATING AUGMENTED REALITY INTO EDUCATION AND TRAINING: REMARKS AND INSIGHTS FROM A FIVE-YEAR EXPERIENCE IN THE FIELD <i>S. Pitsikalis, I.E. Lasica, A. Kostas, C. Vitsilaki</i>	1565
"ROTEIRO ENTRE MARÉS": AN APP FOR THE PROMOTION OF OCEAN LITERACY <i>C. Faria, R. Gaspar, D. Boaventura, C. Duarte</i>	1572
WORK BASED LEARNING AND APPRENTICESHIP IN ITALY, SPAIN, GREECE, LITHUANIA, UK AND IRELAND- A STUDY REPORT <i>D. Kiriakos, A. Moungholias</i>	1573

YOUTH DIGITAL LIFE	1580
<i>M. Anzalag, S. Hardof-Jaffe</i>	
KNOWN AND UNDERSTOOD? SNOEZELEN – MSE: A COMPARATIVE ANALYSIS OF STUDENTS’ KNOWLEDGE	1581
<i>K. Janku, A. Smrokowska-Reichmann, R. Ribes Castells</i>	
DIGITAL TWIN ARCHITECTURE TO DEVELOP BUSINESS INTELLIGENCE AND DIGITAL COMPETENCIES	1589
<i>A. Santana Reynoso</i>	
DESIGN OF BUSINESS PROCESSES THROUGH AN INNOVATION CHALLENGE-BASED LEARNING COURSE	1590
<i>A. Santana Reynoso, M.F. Matamoros Huerta, M. Lule Salinas</i>	
THE IMPACT OF THE COVID-19 PANDEMIC ON SOCIAL EMOTIONAL LEARNING	1591
<i>A. Martino, M. Dono-Koulouris</i>	
REIMAGINING AN UNDERGRADUATE GENETICS LABORATORY: USING BIOINFORMATIC TOOLS AND 3D PRINTING TO STUDY THE COVID VIRUS IN AN ONLINE ENVIRONMENT	1598
<i>A. Ribes-Zanora, A. Simmons</i>	
ENHANCING STUDENTS’ CONCEPTUAL UNDERSTANDING REGARDING ELECTRICAL ENGINEERING CONCEPTS: RELEVANCE BETWEEN CIRCUIT AND ELECTROMAGNETIC-FIELD CONSIDERATIONS	1604
<i>G. Pagiatakis, N. Voudoukis, D. Uzunidis</i>	
ENHANCING HIGHER EDUCATION TUTORING WITH ARTIFICIAL INTELLIGENCE INFERENCE	1609
<i>B. Silva, A. Reis, J. Sousa, E. Solteiro Pires, J. Barroso</i>	
DEVELOPMENT OF PRE-SCHOOL CHILDREN’S COGNITIVE COMPETENCE THROUGH GAMES	1614
<i>A. Širiakovienė, S. Kovienė</i>	
RELATIONSHIP BETWEEN PERSONAL QUALITIES OF MODERN PARENTS AND DEFICIENCIES IN THEIR PEDAGOGICAL PREPARATION TO EDUCATE THEIR CHILDREN	1621
<i>A. Širiakovienė, S. Kovienė</i>	
ENHANCING STUDENT ENGAGEMENT WITH ASYNCHRONOUS LEARNING ACTIVITIES IN FLIPPED CLASSROOMS IN FULLY ONLINE LEARNING ENVIRONMENTS– A CASE STUDY	1631
<i>V. Elumalai, D. Bino</i>	
CHILDREN’S LITERATURE: A WAY FOR THE DEVELOPMENT OF MATH AND SOFT SKILLS	1639
<i>A. Breda, C. Cruz</i>	
THE ORIGINS AND CREATION OF A STUDENT INVESTMENT TEAM	1647
<i>F. Sánchez Coll, C. Donaldson, J. Villagrasa</i>	
TEACHERS' REFLECTIONS ON STUDENTS' LEARNING APPROACHES WHO RESUMED PHYSICAL CLASSROOMS AFTER ALMOST TWO YEARS DUE TO COVID-19 PANDEMIC-INDUCED DISRUPTIONS	1656
<i>S.K. Shankar, S. Tripathi, N. Nupur, P. Chejara</i>	
INTERNATIONAL NETWORKING: THE CASE OF THE EUROPEAN PROJECT QUILL	1665
<i>E. Mendes Silva, I. Chumbo, V. Gonçalves, C. Martins, A. Dotras Bravo, A. Alves</i>	
STUDY COMPETENCES – A CONCEPT AND A PLATFORM FOR INTEGRATING STUDY SKILLS AS A PART OF HIGHER EDUCATION	1674
<i>M. Gundtoft, J. Winding</i>	
MODEL OF INCLUSIVE CLASSROOM IN BULGARIA	1675
<i>V. Sivakova</i>	
VIRTUAL REALITY TO REDUCE STUDENT TEST ANXIETY AND ENHANCE PREPAREDNESS FOR CLINICAL EXAMINATIONS	1683
<i>S. Esmail, B. Concannon, K. Werther, S. Mulholland</i>	
APPLICATION OF AUGMENTED REALITY IN TEACHING AND COMPUTER MODELING WITHIN TECHNICAL DOCUMENTATION	1684
<i>S. Hlavata, E. Franas, M. Kocisko, M. Pollak</i>	
THE ROLE OF GLOBALIZATION IN THE DEVELOPMENT OF EDUCATION IN SUDAN	1692
<i>A. Mohamed Abdalla, K. Hussein, M. Moseykina</i>	
TRAINING AND SUPPORT FOR SUDANESE TEACHERS AND SCIENTISTS: CHALLENGES AND SOLUTIONS	1696
<i>K. Hussein, A. Mohamed Abdalla</i>	

EDUCATIONAL DEVELOPMENT IN THE POST-COVID-19 ARAB WORLD USING CAPABILITY MATURITY APPROACH	1700
<i>M.A. Zaki Ewiss, A.A. El-Sherif, W.M. Seif</i>	
USING PLAYER TYPES TO DEVELOP IMPLEMENTATION OF EDUCATIONAL GAME	1710
<i>A. Sivonen, K. Heikkinen</i>	
DESIGN THINKING, TEACHER PROFESSIONALISATION AND INNOVATION OF EDUCATION: A GOOD MATCH?	1719
<i>M. Henderikx, N. Heeroma</i>	
PROXIMITY OR LANGUAGE: FACTORS ATTRACTING INTERNATIONAL DOCTORAL STUDENTS TO THE UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)	1725
<i>G. Barandika, E. Simon, E. Portillo, O. González-Abrisketa, I. Astorkiza</i>	
INTERNATIONAL DOCTORAL STUDENTS IN THE AREA OF “SCIENCES” AT THE UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)	1731
<i>G. Barandika</i>	
ONLINE EXAMS: BENEFITS AND DAMAGES (PROS AND CONS)	1738
<i>J.F. Ruiz-Ruiz, M.A. García-Muñoz, J. Jódar-Reyes, C. Ordóñez-Cañada, A. Huertas-Armesto, A. López-Moreno</i>	
INVESTIGATING STUDENTS’ USE OF INTUITION THROUGH PUZZLE-BASED INTERVENTIONS IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION	1746
<i>P. Murphy, S. Klymchuk, T. Evans, J. Stephens, M.O.J. Thomas</i>	
HAS THE LEARNING-SERVICE METHODOLOGY AN IMPACT ON THE ACADEMIC COMPETENCES? THE RELEVANCE OF TEMPERAMENTAL INDIVIDUAL DIFFERENCES IN A SAMPLE OF UNIVERSITY STUDENTS	1754
<i>N. Sánchez-Pérez, M.C. Blanco-Gandía, C. Ferrer-Pérez, G. López-Crespo</i>	
INDIVIDUAL DIFFERENCES PREDICTING ACADEMIC ACHIEVEMENT AT UNIVERSITY LEVEL	1755
<i>N. Sánchez-Pérez, M.C. Blanco-Gandía, C. Ferrer-Pérez, G. López-Crespo</i>	
MOBILITY IN THE TIME OF CORONA: WHEN VISITING THE EUROPEAN CAMPUSES CHANGED TO VIRTUAL MEETINGS	1756
<i>M. Laamanen, L. Kallio</i>	
LABORATORY EXERCISES IN ELECTRONICS ENGINEERING EDUCATION – EVALUATION OF PHYSICAL AND DIGITAL FORM	1757
<i>B. Pollen, M. Fojcik, A.L. Kampen</i>	
HOW TO PROMOTE LEARNING READING THROUGH PHONO-SYLLABIC EXERCISES: THE IMPLEMENTATION OF A DISTANCE LEARNING PROGRAM	1765
<i>R. Vegliante, A. Marzano, S. Miranda, C. Montefusco</i>	
MATHEMATICS DISTANCE LEARNING AND TEACHING IN UPPER SECONDARY SCHOOL: A STATE-OF-THE-ART REVIEW	1772
<i>R. Vegliante, A. Marzano, S. Miranda, C. Montefusco</i>	
AUDIO-BASED LEARNING AT WORK: PRELIMINARY RESULTS OF AN EXPLORATORY INTERVIEW STUDY	1780
<i>A. Ogunyemi, M. Bauters</i>	
INCLUSIVE UNIVERSITY DIGITAL EDUCATION: LESSONS LEARNED FROM THE COVID-19 MOVE TO ONLINE LEARNING	1788
<i>A. Carminke, M. Hilzensauer, A. Pecher, R. Vaughan, P. Rannou, F. Angeloni, M. Marchadour</i>	
AN ENHANCED ASSESSMENT METHODOLOGY FOR SIGNIFICANT WORK PLACEMENT	1795
<i>N. Fitzgerald, K. O’Sullivan, I. Morris, J. Walsh, F. Boyle, E. O’Connell, G. Corkery</i>	
INCREASING UNDERGRADUATE’S ENGAGEMENT THROUGH REFLECTIONS IN ELECTRONIC PORTFOLIOS	1802
<i>M.C. Blanco-Gandía, G. López-Crespo, N. Sánchez-Pérez, M. Alcaraz-Iborra, T.I. Jiménez-Gutiérrez, S. Valdivia-Salas, S. Montagud-Romero, C. Ferrer-Pérez</i>	
LEARNING STRATEGIES: TRADITIONAL VS AUTONOMOUS MODEL	1806
<i>S. Montagud-Romero, M.C. Blanco-Gandía, C. Ferrer-Pérez</i>	
IDENTIFICATION OF THE EXTENT OF THE UNIVERSITY’S INFLUENCE ON STUDENTS’ CREATIVE THINKING	1810
<i>T. Corejova, J. Ciba, M. Rostasova, A. Valicova</i>	

DIGITAL TEACHING LITERACY: IDENTIFYING SKILLS GAPS AND BEST PRACTICE IN ONLINE TEACHING IN SCHOOLS	1818
<i>A. Carminke, Ö. Sengülen, V. Marinescu, A. Rodideal, L. Popa, R. Marinache, S. Branea, S. Stylianou, C. Thrasyvoulou, V. Bravou, Y. Papagerasimou, A. Drigas, C. Kefalis, M. Steinmetz</i>	
THE ACQUISITION OF ETHICAL, PROFESSIONAL AND ENVIRONMENTAL RESPONSIBILITY IN THE ARCHITECT ACADEMIC TRAINING	1823
<i>I. Cabrera, E. Fenollosa, A. Llorca</i>	
INCLUSION OF NOVICE TEACHERS IN THE SCHOOL AS A LEARNING ORGANIZATION	1831
<i>J. Dzerviniks</i>	
LANGUAGE IMMERSION FOR EVERYONE: MASSIVE EXPOSURE TO TARGET LANGUAGE THROUGH AUTHENTIC MATERIALS & THE USE OF NEW TECHNOLOGIES	1840
<i>S. Betancor Falcón</i>	
ACCOUNTING STUDENTS' CONSTRUAL OF POTENTIAL EMPLOYERS: AN APPLICATION OF THE REPERTORY GRID TECHNIQUE	1845
<i>J. Bagraim, J. Sher</i>	
CITIZEN SCIENCE AS A TOOL FOR CHALLENGE-BASED LEARNING IN HIGHER EDUCATION	1850
<i>F. Vilariño</i>	
IMPLEMENTING HACKATHONS WITH STUDENTS FROM MULTI-DISCIPLINARY HIGHER EDUCATION DEGREES FOR A CHALLENGE-BASED LEARNING APPROACH	1851
<i>F. Vilariño, J. Serra-Ruiz</i>	
APPROACHES FOR EDUCATION IN INVESTMENT PROJECTS MANAGEMENT	1858
<i>D. Yordanova</i>	
DEVELOPING A FLIPPED CLASSROOM MODEL TO INCREASE CONCEPTUAL UNDERSTANDING IN BIOLOGY COURSES AT A COMMUNITY COLLEGE	1863
<i>P. Bhansali, S. Ghoshal, M. Tawde</i>	
FANFICTION COMMUNITIES AND THEIR ROLE IN PROMOTING BOTH READING AND WRITING IN YOUNG PEOPLE	1873
<i>G. López Sánchez, A. León-Geyer</i>	
OPPORTUNITIES FOR THE FORMATION OF DIGITAL COMPETENCIES IN EDUCATION DURING TRADITIONAL AND DISTANCE LEARNING	1883
<i>B. Ilieva, G. Atanasova</i>	
TRANSFORMATIONAL CHALLENGES FOR PEDAGOGICAL COMPETENCE: THE PERSPECTIVE OF ACADEMIC STAFF	1890
<i>O. Vindača, V. Ľubkina</i>	
ACADEMIC MIGRATION AND THE JUDICIALIZATION OF POLICIES IN THE ITALIAN HIGHER EDUCATION SYSTEM	1901
<i>M. Verardi</i>	
THE INTERNATIONALIZATION OF THE ITALIAN HIGHER EDUCATION SYSTEM, A PUBLIC POLICY ANALYSIS	1905
<i>M. Verardi</i>	
TEACHING LATIN-GREEK MEDICAL TERMINOLOGY FOR INTERNATIONAL MEDICAL STUDENTS: CHALLENGES AND PITFALLS	1913
<i>N. Malinovská, V. Sadloňová, S. Javornický</i>	
GAMIFICATION AS A MEANS TO INCREASE TEACHING EFFICIENCY	1920
<i>P. Brečka, M. Šebo, A. Hašková, J. Záhorec</i>	
REMOTED CURATION: DIGITAL OBJECT-BASED LEARNING IN UNIVERSITY MUSEUMS DURING THE COVID-19 PANDEMIC	1926
<i>S. Tanabashi</i>	
VIRTUAL INTERNSHIPS IN TECH CENTERS	1931
<i>L. Gómez Estrada, L. Pietra, S. Randaccio, C. Zoli, V. García Ortuño, R. Navarro Cerverò, P. Carrolaggi, P. Karampelas, J.S. Nunes, C. Solano Martínez, L. Gómez Estrada, J.L. Gomez Ribelles</i>	
EDUCATIONAL INCLUSION INTO DIVERSITY, FACING SCHOOL LEAVING: INNOVATIVE METHODOLOGIES TO SUPPORT ETHNIC MINORITY STUDENTS AND STOP HATE SPEECH IN EUROPE	1939
<i>J.L. Gómez Ribelles, R. Navarro Cerverò, V. García Ortuño, R. Sixto Iglesias, M. Ferré, M.J. Jiménez Cortiñas, F. Celdrán Martínez, P. Carrolaggi, M. Duarte Oliveira, N. Kovac, C. Zoli</i>	
BEYOND EDUCATION: DEVELOPING 21ST CENTURY COMPETENCIES THROUGH ONLINE LEARNING PROGRAMS AMONG INTERNATIONAL YOUNG STUDENTS	1944
<i>M.P. Celume</i>	

USABILITY AS A PREDICTOR OF CONTINUANCE INTENTION TO USE A SYSTEM FOR DIGITAL COMPETENCE ACQUISITION <i>A. Sobodić, I. Balaban</i>	1945
APPROACH TO PHYSICS AND TECHNOLOGY, THROUGH ITS APPLICATIONS, TO STUDENTS IN THE FIRST YEAR OF DEGREES IN INDUSTRIAL ENGINEERING <i>J. López, B. Montero, J. Martín, M. Rico, R. Bouza</i>	1955
A BLENDED LEARNING IN-SERVICE TEACHER TRAINING FOR SUPPORTING INQUIRY-BASED LEARNING IN ELEMENTARY SCHOOLS <i>B. Köpp, A. Clerc, H. Mandl</i>	1962
DETERMINANTS OF STUDENTS' SATISFACTION WITH HIGHER EDUCATION INSTITUTIONS: A LITERATURE REVIEW <i>M. Rodríguez Gascó, J. Martí-Parreño, J. González Such, R. Currás Pérez</i>	1971
DEVELOPMENT OF LEADERSHIP SKILLS IN WORKING LIFE PROJECTS <i>T. Tallgren, T. Uusitalo</i>	1977
ANALYSIS OF THE RESULTS ACHIEVED BY DIFFERENT FORMS OF TEACHING COMPUTER SCIENCE AT SECONDARY SCHOOLS <i>K. Shoylekova, B. Ivanova</i>	1986
ANALYSIS OF THE EVALUATION SYSTEM FOR THE RENEWAL OF ACCREDITATION IN UNIVERSITY MASTER'S DEGREES IN THE EDUCATIONAL FIELD IN ANDALUSIA <i>M.T. Nestares</i>	1992
FACT CHECKING IN HIGHER EDUCATION <i>A. Teles Vieira</i>	1997
HOW CAN WE TACKLE SOCIAL INCLUSION THROUGH GAMIFICATION MECHANISMS? <i>A. Teles Vieira</i>	2003
DIGITAL TECHNOLOGIES AND RESOURCES FOR ONLINE LEARNING <i>M.R. Jianu, V. Gridan</i>	2009
MEASURING 21ST CENTURY COMPETENCIES AMONG YOUTH: THE COMPETENCIES COMPOUND INVENTORY FOR THE 21ST CENTURY <i>M.P. Celume, H. Maoulida</i>	2016
HOW TO SUPPORT HEALTHCARE PROFESSIONALS' CONTINUING DEVELOPMENT IN LOW- AND LOW-MIDDLE-INCOME COUNTRIES? <i>C. Larue, L. Merry, R. Rouleau, D. Létourneau-Aspirot, M.F. Deschênes, S.A. Castiglione</i>	2017
GRAFFA: A SCIENTIFIC COMMUNICATION PROJECT BY YOUNG RESEARCHERS FOR VERY YOUNG PEOPLE <i>E. Diociaiuti, R. Donghia, M. Giovannetti, S. Macis, E. Margoni, E. Patrignanelli, M. Petrassi, L. Rubino</i>	2018
FROM FACE-TO-FACE TO ONLINE LEARNING: PERFORMANCE AND PERCEPTIONS IN A COMPUTER ORGANIZATION AND ARCHITECTURE COURSE <i>C. Margi, R. Silveira</i>	2026
4 X 4: METHODOLOGY TO DESIGN A SET OF 4 MOOCS BETWEEN 4 ENTITIES UNDER THE SAME TOPIC – ERASMUS + SMART REHABILITATION 3.0 PROJECT <i>B. Onecha, M. Bosch, M. Bosch Prat, C. Cornadó, E. Crespo, J. Martí</i>	2034
WHY AND HOW TO IMPLEMENT A MENTORING PROGRAMME IN UNIVERSITY ENVIRONMENTS? <i>M.L. Fernando Velázquez, A.I. Tarrero Fernández, V.A. Lafuente Sánchez</i>	2041
STUDENT VOLUNTEERING AND RESEARCH READINESS FOR INCLUSION IN PROGRAMS IN SUPPORT OF THE PUBLIC HEALTH <i>M. Obreykova, A. Andonova</i>	2050
PRACTICE OF COMPUTER THINKING EDUCATION WITH THE COOPERATION OF UNIVERSITY STUDENTS IN ELEMENTARY SCHOOL - PROPOSAL OF CLASS MANAGEMENT METHOD UNDER COVID19 <i>A. Minamide, K. Takemata, S. Fujishima</i>	2056
ON TOLERANCE AND TEACHING STRATEGY IN DESIGNING TOOLS FOR TEACHING FOREIGN LANGUAGES TO MULTICULTURAL AND MULTIETHNIC GROUPS OF STUDENTS <i>G.A. Necula</i>	2062
THE PRODUCTION OF SPACE: ONLINE EXPERIENTIAL LEARNING <i>S. Dugal, K. Srivichaiin, R. Levesque, R. Coleman, A. Mogauro, P. Elliott, M. Rizzo, L. Hurley, J. Digrazia, E. Bazile, B. Conti, K. Gauvin, A. Ornberg, M. Bergantine, T. DeJulia, A. Miller, Z. Kent, C. Gosselin, J. Sousa, G. Fawcett, A. Newton, C. Mitchell, H. Pangburn, J. Rosati, D. Casavant, S. Singh, R. Singh</i>	2063

TOURISM FACULTY PERCEPTIONS TOWARDS ONLINE TEACHING DURING ERT <i>S. Pais, L. Chagas, A.L. Pires</i>	2067
EDUCATION FOR SUSTAINABLE CONSUMPTION AND CONSUMER PREFERENCES <i>D. Rosu, M. Fratu</i>	2072
MICROTEACHING VIA ZOOM IN PRESERVICE ENGLISH LANGUAGE TEACHER TRAINING: TECHNOLOGY, PEDAGOGY, AND CONTENT KNOWLEDGE <i>C.H. Ng</i>	2078
TOWARDS SEAMLESS INCORPORATION OF EXPERIENTIAL LEARNING INTO SUMMATIVE EVALUATIONS CONDUCTED IN REALISTIC SETTINGS <i>M. Anzalag, D. Kohen-Vacs</i>	2085
THE SCHOOL MEETS ITS ENVIRONMENT. DISCOVERING THE VENICE LAGOON <i>N. Cazzador, S. Dal Maso, M. Bellio, E. Piva, S. Schumann, P. Irato, G. Santovito</i>	2086
MICROORGANISMS IN PRIMARY SCHOOL: A LABORATORY APPROACH TO STUDY MICROBIOLOGY AND BIOTECHNOLOGIES <i>S. Masiero, A. Lago, M. Bellio, E. Piva, S. Schumann, P. Irato, G. Santovito</i>	2095
DESIGN EDUCATION FOR A HEALTHIER AGEING: DESIGN STUDENTS EXPLORE MULTIMORBIDITY, A WIDESPREAD AGE-RELATED CONDITION <i>A. Buffagni, M. Frausin, G. Dalai</i>	2105
DOES ONLINE TEACHING IN UNIVERSITY ENVIRONMENT LACK AMBITION DURING THE COVID-19 PANDEMIC? <i>A. Oulmane</i>	2116
IMPACT OF MOBILE APPLICATIONS (APPS) IN FIRST-YEAR AGRICULTURE COURSES <i>G. Masilo, S. Simelane-Mnisi, A. Mji, I. Mokgobo</i>	2117
DEVELOPMENT OF A PRELIMINARY EDUCATION PROGRAM USING DIGITAL STORYTELLING: EDUCATIONAL PROGRAM FOR STUDENTS BEFORE LEARNING FULL-SCALE PBL <i>K. Takemata, A. Minamide, S. Fujishima</i>	2124
REFLECTION ON FEVER FOR "1+X" CERTIFICATE EXAMINATIONS <i>X. Wang, G. Guo, L. Yang, Y.J. Li</i>	2128
HYBRID LEARNING COMPARED TO OTHER METHODS USING AVIATION GAMING SOFTWARE <i>M. Landry, L. Landryova</i>	2132
A SYSTEM FOR DESIGN AND DEVELOPMENT OF MULTIMEDIA M-LEARNING RESOURCES: PROTOTYPE <i>T. Dobрева, S. Stoyanova-Petrova, D. Stoyanova, N. Mileva</i>	2141
CHARACTERISTICS OF COGNITIVE LOAD RAISED DURING QUESTION-ASKING IN MATHEMATICAL ACTIVITIES <i>I. Lavy, A. Shriki</i>	2148
MORE THAN THE TEXTBOOK TEACHES - CLIENT-BASED GLOBAL VIRTUAL TEAMS PROJECTS <i>S. Swartz</i>	2158
PRESCHOOL CHILDREN'S ABILITY TO SOLVE DIVERSE TYPES OF COMPARISON TASKS <i>A. Cubova, S. Pechouckova</i>	2159
AN EFFICIENT PERFORMER-BASED MODEL FOR AUTOMATIC FEEDBACK GENERATION FOR TEACHING OBJECT-ORIENTED PROGRAMMING <i>F.H. Wang</i>	2167
CHILDREN'S LITERATURE: A PATHWAY OF SCIENTIFIC AND DIDACTICAL OPPORTUNITIES <i>C. Cruz, A. Breda</i>	2175
@FISIOFARMA_US OUTREACH ACTIVITY: A NOVEL WAY TO LEARN PHYSIOLOGY AT THE UNIVERSITY OF SEVILLE <i>Á. Santana-Garrido, S. Arguelles Castilla, L. Carrascal Moreno, F. Nogales Bueno, P. García Miranda, C.M. Vázquez Cueto, P.A. Núñez Abades, M.L. Calonge Castrillo, M.J. Peral Rubio, A. Mate Barrero, M. Cano Rodríguez, O. Carreras Sánchez, M.L. Ojeda Murillo, M.D. Vázquez Carretero</i>	2183
THE DIALOGUE READING AS AN OPPORTUNITY FOR STUDYING LITERATURE <i>R. Lebedova</i>	2184
ENVIRONMENTAL AWARENESS THROUGH VIDEOS: PERCEPTIONS OF MIDDLE-SCHOOL TEACHERS IN INDIA <i>T. Vyas, G. Dalvi</i>	2189

COULD 'INSTAGRAM STORIES' IMPROVE PHYSIOLOGY SKILLS? AN EXPERIENCE IN PHARMACY AND OPTICS DEGREE	2197
<i>Á. Santana-Garrido, L. Carrascal Moreno, M.D. Vázquez Carretero, P. García Miranda, F. Nogales Bueno, C.M. Vázquez Cueto, P.A. Núñez Abades, M.L. Calonge Castrillo, M.J. Peral Rubio, M. Cano Rodriguez, A. Mate Barrero, O. Carreras Sánchez, S. Arguelles Castilla, M.L. Ojeda Murillo</i>	
PREPARING LIBRARIANS WITH THE SKILLS NECESSARY TO EDUCATE ENGLISH LANGUAGE LEARNERS IN THE U.S.	2198
<i>D. Lashaun Smith, X. Zhang, T. Tyler-Wood</i>	
TEACHERS, STUDENTS, AND PARENTS AS EDUCATION PARTNERS AND THEIR EDUCATIONAL OBJECTIVES IN PERSPECTIVE OF THE FUTURE EDUCATION	2204
<i>I. Barone</i>	
MANAGING STRESS IN ONLINE DISSERTATION STUDENTS: A MULTIPLE CASE STUDY OF FACULTY PERCEPTIONS OF LOWERING STUDENTS' AFFECTIVE FILTER	2211
<i>L. Bedford, A. Babcock</i>	
THE IMPACT OF POSITIVE ILLUSORY BIAS ON THE ESTIMATION OF SCHOOL COMPETENCE OF CHILDREN WITH ADHD	2212
<i>P. Škobrtal, I. Benešová, Z. Stránská, L. Lacková, M. Novotný, I. Tonhajzerová</i>	
THE CONTRIBUTION OF TECHNO-PEDAGOGY COURSES TO TEACHERS' SELF-EFFICACY IN PROVIDING SOCIAL, EMOTIONAL AND LEARNING SUPPORT TO STUDENTS THROUGH DISTANCE LEARNING PROCESSES DURING COVID-19 AND BEYOND	2219
<i>E. Salman, A. Sharif-Rasslan, J. Mussa, A. Fattum</i>	
INTRODUCTION OF ELECTRONIC LEARNING IN THE EDUCATIONAL DISCIPLINE "LASER-THERAPY"	2223
<i>I. Koleva, B. Yoshinov, R. Yoshinov</i>	
INTRODUCTION OF PC-BASED TESTS IN THE PROCESS OF EVALUATION OF PROFESSIONAL COMPETENCES IN THE FIELD OF "PEDIATRIC NEUROREHABILITATION"	2230
<i>R. Yoshinov, I. Koleva, B. Yoshinov</i>	
FOSTERING MEDICAL EDUCATION TECHNOLOGY STUDENTS' INNOVATION CAPABILITY THROUGH INNOVATIVE LEARNING FRAMEWORK IN THE NEW NORMAL ERA	2237
<i>K. Wilaphan, N. Songkram, S. Nguđgratoke</i>	
THE EVALUATION OF UNIVERSITY DISTANCE TEACHING DURING THE COVID-19 PANDEMIC: AN ON-GOING ITALIAN RESEARCH ACTIVITY ON THE IMPACT OF DIGITAL TECHNOLOGIES	2247
<i>A. Fornasari, C. Angelini, M. Conte, P. Contini</i>	
ACQUISITION OF STUDY COURSES IN THE CONTEXT OF LIFELONG LEARNING	2255
<i>I. Neimane</i>	
WORKING STATUS, TEACHING EXPERIENCES AND WORKPLACE DEVIANT BEHAVIORS OF PRIMARY SCHOOL TEACHERS IN ENUGU STATE NIGERIA	2261
<i>C. Okeke, C. Okeke, M. Ede</i>	
COLLABORATION AMONG THE TEACHING PRACTICUM TRIAD DURING COVID-19 USING THE PERUSALL PLATFORM	2267
<i>C. Nel</i>	
QUALITATIVE ANALYTICAL CHEMISTRY IN A CRIME SCENE: A MEANS OF INCREASING STUDENTS' INTEREST	2268
<i>V. Romero, I. Lavilla, I. de la Calle, F. Pena, C. Bendicho</i>	
THE CHALLENGE OF THE INCLUSION OF THE SUSTAINABLE DEVELOPMENT GOALS IN THE INITIAL TRAINING OF SECONDARY SCHOOL TEACHERS	2277
<i>C. López-Esteban</i>	
CHOOSING FOR LIFELONG LEARNING? THAT'S CREATING TOGETHER A SUPPORTED VISION, MAKING THE EDUCATIONAL OFFERING FLEXIBLE, USING A HYBRID EDUCATIONAL APPROACH AND DEVELOPING A COACHING MODEL FOR LEARNERS	2287
<i>S. Theuwen, A. Wanzeele</i>	
TROUBLESHOOTING IN AN ONLINE CIRCUIT SIMULATION PLATFORM: A STUDY ON THE TROUBLESHOOTING PROCESS BY FIRST-YEAR UNDERGRADUATE STUDENTS IN A BLENDED PROJECT-BASED LEARNING COURSE	2295
<i>N. Humbi, P.B. Patil, M. Vijayalakshmi</i>	
A PROPOSED APPROACH TO TEACHING INTRODUCTORY PROGRAMMING. EXPERIENCES FOR NON-SPECIALISTS IN COMPUTER SCIENCE	2301
<i>J.R. Pérez Beltrán, R.P. Neco, N.M. García Aracil, J.M. Catalán</i>	

M-LEARNING AS A LONG-LASTING SCAFFOLDING TOOL. HOW SOCIAL MEDIA AND MOBILE COULD SUPPORT NEW HYBRID FORMS OF DESIGN STUDIO TEACHING	2310
<i>V. Linfante, A.G. Manciaracina</i>	
COLLECTIVE PERCEPTION OF GEOGRAPHICAL SPACE IN EDUCATION	2318
<i>O. Cerba, K. Jedlicka</i>	
THE DISTRIBUTED CLASSROOM: FACING NEW CHALLENGES IN THE IMPLEMENTATION OF ITALIAN LANGUAGE COURSES DURING THE COVID-19 PANDEMIC	2326
<i>R. Dolci, T. Sbardella</i>	
SPEED NETWORKING AS TEAM MENTORING TOOL FOR EMPOWERING YOUNG WOMEN ENGINEERING STUDENTS	2335
<i>B. Lopez, M. Baena, B. Innocenti, N. Mancebo, I. Ferrer</i>	
ONLINE ENVIRONMENT TO SUPPORT THE INTERVENTION OF EXECUTIVE FUNCTIONS IN YOUNG CHILDREN: USER NEEDS IN A PILOT STUDY	2339
<i>S. Panesi, L. Ferlino, G.P. Caruso</i>	
APPLIED INTERNET TEACHING INNOVATION	2349
<i>Y. Cao, Q. Bai, Y. Huang</i>	
ANIMATION OF A FORGOTTEN INVENTION - THE SODA LOCOMOTIVE	2358
<i>A.L. Ehrhardt, N. Vorhauer-Huget, H.J. Rzepus, D. Broneske</i>	
PERSONAL EXCELLENCE BASED PROFILING TO IDENTIFY AND APPLY TOOLS AND TRAININGS FOR A BETTER AND SUSTAINABLE WORK-LIFE-FLOW	2365
<i>J.P. Czakerk, L. Pais, N. Rebelo, P. Nogueira, F. Scheibein, J. Wells, R. Berger</i>	
EXPERIENTIAL KNOWLEDGE INTO THE HIGHER EDUCATION SYSTEM: POSSIBILITIES AND PERSPECTIVES	2370
<i>M.B. Gambacorti-Passerini, F. Oggionni, G. Romeri, M. Sottocorno</i>	
STRATEGIES FOR CONTENT CHUNKING AND SEGMENTING FOR ONLINE COURSE DESIGN	2379
<i>S. Kavale, N. Humbi, S. Kurundawade</i>	
ANALYTIC RATING SCALES: TRAINING STUDENT TEACHERS TO JUDGE LANGUAGE LEARNERS' WRITTEN PERFORMANCES	2386
<i>J. Béréšová</i>	
DEVELOPMENT OF TEACHING STRATEGIES USING VIRTUALIZATION STRATEGIES AS COMPLEMENTARY RESOURCES ON GEOLOGY, CRYSTALLOGRAPHY, AND ARCHAEOLOGY	2391
<i>S. Barroso-Solares, O. Fadon, E. Rodriguez, C. Sanz-Minguez, A.C. Prieto, J. Pinto</i>	
INTERACTIVE CLINICAL VIRTUAL REALITY LAB FOR HIGHER EDUCATION STUDENTS IN BIOMEDICAL LABORATORY TECHNOLOGY	2397
<i>K. Van Den Bergh, I. Vermeulen, J. Willems, L. Gielen, R. Decraemer, B. Philtjens, V. Katsoulis, K. Merckx, D. Seré, J. Tummers, P. De Mazière, S. Martin</i>	
PLURALISTIC APPROACHES IN TEACHING GERMAN AS A SECOND LANGUAGE	2402
<i>J. Béréšová, R. Ševčík</i>	
DEVELOPMENT OF ADVANCED LABORATORY PRACTICES ON X-RAY DIFFRACTION USING PORTABLE X-RAY DIFFRACTOMETERS	2408
<i>A.I. Quílez-Molina, V. Hurtado-García, S. Barroso-Solares, M.A. Rodríguez-Perez, J. Pinto</i>	
ESTALQUIM. AN EXTRACURRICULAR PROJECT IN CHEMISTRY	2415
<i>M. Rodríguez Delgado, D. Quiñonero, J. Frau</i>	
INNOVATIVE TOOL OF PROGRESS ASSESSMENT: LEARNER-CREATED E-BOOK	2423
<i>O. Mangova, M. Andreeva</i>	
GENDER AND POWER RELATIONSHIPS IN GREEK AND ENGLISH PAREMIOLOGY: COMBATING GENDER STEREOTYPES IN EDUCATION	2428
<i>E. Theodoridou, M. Loikov</i>	
INNOVATIVE METHODS OF ENHANCING LISTENING SKILLS AND PERCEIVING PROPER NAMES IN POLITICAL DISCOURSE	2435
<i>O. Mangova, M. Andreeva</i>	
PERCEPTION OF ADVANTAGES/DIFFICULTIES OF REMOTE TEACHING DURING COVID-19 PANDEMIC: RESULTS FROM A SURVEY WITH 3000 ITALIAN ENGINEERING STUDENTS	2440
<i>R. Mazzola, M. Bozzi, I. Testa, F. Brambilla, M. Zani</i>	
IS BLENDED LEARNING FOR FUTURE DOCTORS BETTER THAN TYPICAL FACE-TO-FACE TEACHING? (COMPARATIVE ANALYSIS)	2446
<i>Z. Balázsová</i>	

CONVERSATIONAL MACHINES: CHATBOTS IN ENGINEERING EDUCATION	2450
<i>R. Dorado-Vicente, L. Robles-Lorite, E. Torres-Jiménez, G. Medina-Sánchez, A. García-Collado</i>	
TRANSITION, DOUBLE IMAGE AND A GREENHOUSE - DIFFERENT PERSPECTIVES ON TRANSITION TO SCHOOL	2457
<i>I. Somolanji Tokić, E. Slunjski</i>	
EXAMINATION OF THE PREVALENCE AND PREDICTORS OF VIDEOGAME ADDICTION AMONG SCHOOL CHILDREN	2465
<i>M. Ede, C. Okeke, C. Okeke</i>	
POPULARIZATION OF READING BOOKS IN THE FORM OF CREATING LEISURE READING CLUBS AND HOBBY GROUPS IN PRIMARY SCHOOLS IN THE CZECH REPUBLIC	2472
<i>J. Trávník</i>	
TEACHING INDIVIDUALS WITH AUTISM ONLINE SEXUAL ABUSE PROTECTION SKILLS	2481
<i>N. Akmanoğlu, Ş. Şahin</i>	
FRUGAL PROTOTYPING: AN INTERVENTION TO IMPROVE PROTOTYPING SKILLS IN ENGINEERING EDUCATION	2482
<i>K. Mallibhat, M. Vijayalakshmi, M. Asundi, S. Channangi</i>	
FRAMING DIGITAL SKILLS DEVELOPED THROUGH INFORMAL, DIGITAL ACTION INSIDE AND OUTSIDE UNIVERSITIES	2490
<i>K. Zourou, S. Oikonomou</i>	
STUDENTS' EVALUATION OF FAKE NEWS DETECTION AND COUNTERMEASURES AGAINST FAKE NEWS	2498
<i>T. Sigmund</i>	
THE DIGEDU-2021 PROJECT: DIGITIZATION AND DIGITALIZATION OF ELEMENTARY EDUCATION THROUGH MOBILE APPLICATIONS	2506
<i>M. Čarapina, L. Labura, M. Mišić, M. Zerec, S. Živković</i>	
CROSS-PLATFORM MOBILE APPLICATION FOR LEARNING PHYSICS	2515
<i>M. Vranić, M. Čarapina, I. Stipaničev</i>	
TEACHERS EXPERIENCE ON GAME-BASED LEARNING AND IDENTIFICATION OF THEIR MOST COMMON PRACTICES: A CROSS-NATIONAL EXPLORATORY RESEARCH	2521
<i>J. Martí-Parreño, J. Oceja-Castañedo, S. Arkun Kocadere</i>	
ACQUISITION OF TRANSVERSAL SKILLS THROUGH INFORMAL COOPERATIVE LEARNING VS INDIVIDUALIZED LEARNING IN RESPIRATORY PHYSIOTHERAPY	2528
<i>S. Cortés-Amador, M.A. Cebrià-I-Iranzo, F.M. Martínez-Arnau</i>	
EDUCATIONAL ESCAPE ROOMS ACTIVITIES TO FACILITATE LEARNING STRATEGIES AND IMPROVE TEACHING, LEARNING, AND ASSESSMENT PROCESSES	2534
<i>D. Sousa, A. Coelho, M. Torres</i>	
LABOR TRENDS IN THE FRAMEWORK OF THE CIRCULAR ECONOMY AND ITS IMPACT ON THE ADAPTATION OF UNIVERSITY TRAINING PROFILES FOR 2035	2540
<i>J.V. López</i>	
THE 4X4 PROBLEM-BASED LEARNING MODEL AS A STRATEGY FOR THE DEVELOPMENT OF THE FIVE DIMENSIONS OF COOPERATIVE LEARNING AND ITS IMPACT ON THE DEGREE OF MOTIVATION OF PHYSIOTHERAPY STUDENTS	2549
<i>S. Cortés-Amador, M.A. Cebrià-I-Iranzo, F.M. Martínez-Arnau</i>	
A GAME-BASED LEARNING CASE STUDY: WHO WANTS TO BE A MILLIONAIRE?	2554
<i>N. Kadoic, B. Divjak, D. Oreški</i>	
STUDENTS' SOFT COMPETENCES IN TIMES OF COVID-19	2563
<i>F. Achcaoucaou, A. Núñez-Carballosa, P. Miravittles, L. Guitart</i>	
THE MODERN APPROACH TO IMPLEMENTATION OF SLOVAK AND ENGLISH MATHEMATICAL TERMS INTO UNIVERSITY TEACHING/LEARNING PROCESS	2573
<i>B. Bačová, E. Leláková</i>	
WORK BASED LEARNING IN ENGINEERING EDUCATION	2579
<i>R. Ayinde, Z. Rihawi, F. Azmat</i>	
AUTHENTIC LEARNING FOR UNDERGRADUATE STUDENTS IN A B2B CONTEXT	2585
<i>S. Filipe, I. Saur-Amaral</i>	
CHILDLESSNESS AS AN AWARENESS ISSUE FOR THE WORKPLACE INCLUSION IN EDUCATION	2593
<i>V. Stige-Škuškovnika</i>	

RECORDING STUDENT-GENERATED VIDEOS OF THEORETICAL NOTIONS AS A SELF-LEARNING TOOL IN CHEMISTRY EXPERIMENTAL SUBJECTS BY FIRST-YEAR UNDERGRADUATE STUDENTS	2601
<i>E.J. Carrasco-Correa, M. Vergara-Barberán, H. Martínez-Pérez-Cejuela, J.M. Herrero-Martínez, E.F. Simó-Alfonso, M.J. Lerma-García, M. Beneito-Cambra</i>	
aTHEORETICAL CONCEPTS IN STUDENT-GENERATED VIDEOS AS A SELF-LEARNING TOOL IN CHEMISTRY-RELATED SUBJECTS	2608
<i>E.J. Carrasco-Correa, M. Vergara-Barberán, H. Martínez-Pérez-Cejuela, J.M. Herrero-Martínez, E.F. Simó-Alfonso, M.J. Lerma-García, M. Beneito-Cambra</i>	
MANAGING THE MONSTER OF TIME: A THEMATIC ANALYSIS EXPLORING HOW WOMEN TALK ABOUT THAT BEAST	2616
<i>A. Burnett, N. DiTunnariello, B. DeGreeff</i>	
EXPLORING TECHNOLOGY RESISTANCE IN ONLINE ASSESSMENT AND FEEDBACK PRACTICES	2617
<i>A. Soares, M. Lerigo-Sampson, J. Barker</i>	
OPPORTUNITIES AND CHALLENGES OF SUPERVISING INTERNATIONAL DOCTORAL STUDENTS FROM THE COMMUNITY OF PORTUGUESE LANGUAGE COUNTRIES: PORTUGUESE SUPERVISORS' PERSPECTIVES	2618
<i>S. Pinto</i>	
NEUROTECHNOLOGY APPLIED TO THE ASSESSMENT IN HIGHER EDUCATION	2627
<i>D. Puente Berdasco, T. Magal-Royo, E. Jiménez-Ibáñez</i>	
VOCATIONAL TRAINING OF THE BASIC BODIES OF INTEGRATED RESCUE SYSTEM OF THE CZECH REPUBLIC WITH THE USAGE OF THE SIMULATION TECHNOLOGIES AND THE VIRTUAL REALITY	2636
<i>M. Antonín</i>	
UKRAINIAN EDUCATION IN THE CONDITIONS OF WAR: CHALLENGES AND RISKS	2646
<i>V. Chepak, O. Klymenko</i>	
STAFF TRAINING AS A DETERMINING FACTOR IN THE ADOPTION OF 4.0 TECHNOLOGIES IN THE FURNITURE SECTOR	2657
<i>A. Muñoz-Puche, A.I. Jiménez-Zarco, A. Izquierdo-Yusta</i>	
DEVELOPMENT OF BPROGRAM: A GAMIFICATION-BASED APPLICATION TO ENHANCE PROGRAMMING LEARNING	2665
<i>A. Carrera Rivera, A. Mayorga Alban, J. Samaniego Villarroel, K. Brand Cordova, E. Bajaña Tomalá</i>	
ACCESSIBILITY OF INTACT PUPILS TOWARDS PUPILS WITH DISABILITIES THROUGH INTERACTIVE TEACHING MATERIALS	2671
<i>A. Hanakova, T. Hrudova, B. Hudcova, K. Kroupova, K. Simunkova, M. Potmesil, V. Ruzickova, G. Špinarova, L. Travnickova, E. Urbanovska, V. Vachalova</i>	
ONLINE TEACHING AND STUDYING AT A SELECTED UNIVERSITY IN THE CONTEXT OF THE COVID-19 PANDEMIC	2677
<i>M. Beranová, M. Navrátilová</i>	
THE IMPACT OF GAMIFICATION IN EDUCATION: LEARNING MATH FROM MOBILE GAMES	2678
<i>A. Carrera Rivera, A. Mayorga Alban, J. Samaniego Villarroel, S. Arias Rosales, D. Romero Herrera</i>	
ASSESSMENT OF ADHD TRAITS VIA STIMULI-TARGETED VIRTUAL REALITY	2684
<i>A. Bingham, M.F. Obeid</i>	
A TUTORING SERVICE TO RESPOND TO THE OCCASIONAL LEARNING DIFFICULTIES OF STUDENTS	2694
<i>S. Ammar</i>	
EXPERIENCE WITH VARIOUS FORMS OF HANDS-ON TEACHING	2699
<i>P. Fanta, L. Cupal, D. Skokanová</i>	
POSTPHENOMENOLOGICAL STUDIES OF MACHINE LEARNING EDUCATION IN ELEMENTARY SCHOOL	2704
<i>G. Shamir, G. Wellner, I. Levin</i>	
ADVANCING INCLUSIVE EDUCATION THROUGH INTERNATIONAL SIGN	2714
<i>T. Oliveira, P. Escudeiro, N. Escudeiro</i>	
IMPLICATIONS OF E-LEARNING DURING THE COVID-19 PANDEMIC	2715
<i>E. Babintseva, E. Kartseva, D. Mansur, E. Trifonova</i>	
WIDENING PARTICIPATION IN HIGHER EDUCATION: EXPLORING THE FACTORS THAT IMPACT ON BLACK ASIAN AND MINORITY ETHNIC STUDENTS ATTAINMENT AT A POST-1992 UNIVERSITY IN ENGLAND	2720
<i>P. Seuvou, N. Dodzo, Y.I. Osho, W. Ajaefobi, T.A. Ngwana, D. Sarwar, A. Pilkington, M. Daye</i>	

A UNIVERSITY-SECONDARY SCHOOL COLLABORATION TO PROMOTE SOCIAL INCLUSION FOR OLDER ADULTS WITH PHYSICAL DISABILITIES <i>S.H.S. Lo, J.P.C. Chau</i>	2730
FLIPPED LEARNING METHODOLOGY WITH DEVELOPMENT OF A TOXICOGENOMIC DATABASE IMPROVES TOXICOLOGY STUDENTS' ACADEMIC PERFORMANCE <i>P. Moyano, J.M. Garcia, E. Sola, A. Flores, J. García, L. Guerra, M.V. Naval, J. Sanjuan, M. Lobo, A. Pelayo, M.T. Frejo, M.J. Anadon, M. Ruiz, J. Del Pino</i>	2731
SIMULATED WORLDS AND TOXICOGENOMIC 3D MODELS USE IN CLASS IMPROVES TOXICOLOGY STUDENTS' ACADEMIC PERFORMANCE <i>P. Moyano, E. Sola, J.M. Garcia, A. Flores, J. Garcia, M.V. Naval, L. Guerra, J. Sanjuan, M. Lobo, M. Ruiz, M.T. Frejo, A. Pelayo, M.J. Anadon, J. Del Pino</i>	2738
A PATCHWORK QUILT: A COVID-INDUCED INNOVATION <i>C. Beaton</i>	2739
THE IMPORTANCE OF COLLABORATIVE AND MULTIDISCIPLINARY WORKS IN THE CO-CONSTRUCTION OF A PROJECT FOR COMPUTER LITERACY AND HEALTH RESEARCH FOR PREGNANT IMMIGRANT WOMEN IN QUEBEC CITY: A CASE STUDY <i>M.P. Gagnon, E. Corona Velazquez</i>	2749
EXPERIENCE WITH THE IMPLEMENTATION OF PERSONAL IT SUPPORT FOR TEACHERS IN TEACHING, RESEARCH, PUBLISHING AND E-LEARNING USING IN-HOUSE EDUCATIONAL SOFTWARE <i>S. Svetsky, O. Moravcik, D. Mikulowski, Z. Cervenanska</i>	2750
CERTIFICATION OF FEATURED CURRICULUM, THE EXPLORATION OF USING AR TO LEARN FEATURED COURSE <i>S.T. Wei</i>	2758
CHOICES FOR HIGHER EDUCATION AFTER COVID-19: TO BE OR NOT TO BE SERIOUSLY DIGITAL <i>A. Rof, A. Bikfalvi, P. Marques</i>	2765
CROSS-DISCIPLINARY NARRATIVES WITH THE METHOD OF OBJECT DECIPHERING FOR SELF-EXPLORATION <i>S. Tanabashi</i>	2772
DEVELOPMENT OF LOCAL WISDOM RESOURCE-BASED LEARNING MODEL WITH CLOUD TECHNOLOGY IN GAMIFICATION ENVIRONMENT TO DEVELOP COMMUNITY INFORMATION LITERACY FOR HIGHER EDUCATION LEARNERS IN THAILAND <i>N. Chamniyon, P. Koraneekij, J. Khlaisang</i>	2776
DIGITAL EDUCATIONAL ENVIRONMENT AS A PHENOMENON OF UNCERTAINTY IN PEDAGOGICAL PRACTICE <i>T.M. Rezer</i>	2786
TRANSFORMATION OF TEACHERS' CAPABILITIES IN THE IMPLEMENTATION OF PROFESSIONAL ACTIVITIES IN CONDITIONS OF UNCERTAINTY <i>T.M. Rezer</i>	2791
A COLLABORATION BETWEEN THE SOUTH AUSTRALIAN GOVERNMENT AND ABORIGINAL NATIONS TO EMBED ABORIGINAL KNOWLEDGES AND WAYS OF KNOWING INTO THE EDUCATION CURRICULUM <i>C. Dean, K. Price</i>	2797
THREE SEMESTERS OF ONLINE ASSESSMENT IN HIGHER EDUCATION FROM STUDENTS' VIEWPOINT <i>M. Plavšić, M. Diković, R. Matković</i>	2803
STUDENTS' OPINIONS OF PROLONGED ONLINE TEACHING AT UNIVERSITY DURING COVID-19 <i>M. Plavšić, M. Diković, R. Matković</i>	2812
UPSKILLING MASTER STUDENTS: ADDING DATA MANAGEMENT COMPETENCE FOR ALL DOMAINS <i>T. Miksa, A. Rauber, B. Sánchez, B. Saurugger</i>	2822
THE DEVELOPMENT OF PERSONAL AUTONOMY AND THE IMPACT OF PSYCHOLINGUISTIC CODE "MY CHILD", "MY STUDENT" ON MENTAL ATTITUDES AND BEHAVIORAL PATTERNS OF FORMAL AND INFORMAL EDUCATORS <i>H. Grigorova</i>	2823
INTRODUCTION TO OPEN SOURCES EDUCATION FRAMEWORK - NEW OPEN ACCESS OPPORTUNITIES <i>R. Yotova</i>	2830

DYNAMIC PRE-MODERATION: COLLABORATION AS AN INTEGRAL PART OF THE ASSESSMENT DESIGN PROCESS	2835
<i>D. Wagner, A. Whitham</i>	
MOBILE DEVICE AS A TOOL FOR DEVELOPING COMMUNICATION SKILLS	2844
<i>D. Tran, K. Kostolányová</i>	
SCHOOL LEADERSHIP AND DIGITAL TRANSFORMATION - THE ROLE OF THE SCHOOL LEADER	2850
<i>C.E. Toente</i>	
BIG INTEGER DATA TYPES - USAGE AND PERFORMANCE COMPARISON	2851
<i>M. Mikac, R. Logožar, M. Horvatić, E. Dumić</i>	
REMOTE LEARNING EXPERIENCES WITH INTRODUCTORY WEB PROGRAMMING COURSE	2861
<i>M. Mikac, R. Logožar, M. Horvatić</i>	
EVALUATION OF THERAPEUTIC AND EDUCATIONAL INTERVENTIONS WITH REGARD TO DRAMA THERAPY BY PEOPLE WITH DRUG DEPENDENCE	2872
<i>J. Vávra, M. Valenta, J. Pospíšil</i>	
AUTONOMY OF BEGINNING TEACHERS AS A PROCESS AND STATE IN THE ADAPTATION PERIOD	2878
<i>J. Ševčíková, J. Plischke</i>	
COMPARATIVE ANALYSIS OF PLATFORMS FOR CREATING MASSIVE OPEN ONLINE COURSES	2887
<i>J. Fabus, M. Garbarova, L. Vartiak</i>	
ANALYSIS OF THE MANAGEMENT AND OPERATION OF E-LEARNING IN THE WORLD	2892
<i>M. Garbarova, L. Vartiak</i>	
COMBUSTION ANALYSIS USING EXPERIMENTAL EQUIPMENT AND MATLAB	2898
<i>A.J. Extremera-Jiménez, A. Palomar-Torres, E. Torres-Jiménez, F.J. Gómez-de la Cruz, F. Cruz-Peragón</i>	
LAB SESSION IN THERMAL ENGINEERING: MODELLING PROPERTIES OF PURE SUBSTANCES VIA MATLAB	2903
<i>A. Palomar-Torres, A.J. Extremera-Jiménez, F. Cruz-Peragón, F.J. Gómez-de la Cruz, E. Torres-Jiménez</i>	
WHAT HAS COVID-19 THOUGHT US - CURRENT ISSUES AND DEVELOPMENT IN UNIVERSITY PRE-SERVICE ECEC EDUCATION IN CROATIA	2912
<i>I. Somolanji Tokić, T. Borovac</i>	
MAPPING BETWEEN INDUSTRY 5.0 AND EDUCATION 5.0	2921
<i>B. Andres, F. Sempere-Ripoll, A. Estesó, M.M.E. Alemany</i>	
ACTIVE LEARNING METHODOLOGIES AT THE UNIVERSITY CLASSROOM	2927
<i>B. Andres, F. Sempere-Ripoll, A. Estesó, R. de la Torre</i>	
FROM THE ANALYSIS OF A CASE STUDY TO THE CREATION OF STORYTELLING AS AN ACTIVE LEARNING METHODOLOGY AND ITS COMPARISON IN RELATION TO ACADEMIC PERFORMANCE AND SATISFACTION	2936
<i>B. Olivan-Blázquez, A. Asensio-Martínez, A. Aguilar-Latorre, M. Samper-Pardo, S. León-Herrera, F. Méndez-López de-la-Manzanara</i>	
CONSTRUCTION MANAGERS' LIBRARY FOR MODERN EDUCATION OF BUILDING PERSONNEL	2941
<i>P. Nowak, A. Nicał, J. Rosłon</i>	
LEARNING EXPERIENCES AFTER HIGHER EDUCATION: DOCTORAL STUDIES - WHAT IS HAPPENING?	2950
<i>S. Denchev, G. Petkov, B. Tetevenska, R. Yotova</i>	
GENERIC COMPETENCES CONSIDERED AS RELEVANT BY LABOR MARKET AND THEIR TRAINING AT THE UNIVERSITY IN THE FIELD OF SOCIAL WORK	2960
<i>E. García-Uceda, C. Sánchez-Álvarez, B. Olivan-Blázquez</i>	
REVERSE MENTORING AND COACHING FOR CONSTRUCTION MANAGERS	2966
<i>M. Książek-Nowak, P. Nowak, A. Nicał, J. Rosłon, M. Frydrych</i>	
TEACHING STONE CLADDING SAFE ASSEMBLING OPERATIONS WITH AUGMENTED REALITY	2975
<i>A. Nicał, P. Nowak, J. Rosłon</i>	
INTEGRATION OF THE INTERNET OF THINGS INTO THE CURRICULUM OF THE STUDENTS OF INFORMATICS AT THE UNIVERSITY	2982
<i>J. Pillár</i>	
DESIGN OF A ROBOTIC BOARD FOR TEACHING THE WATER CYCLE	2990
<i>A. De la Hoz Serrano, F. Cañada Cañada, L.V. Melo Niño, A. Álvarez Murillo, J. Cubero Juárez</i>	

SAFE EARTHWORKS PERFORMANCE EDUCATION WITH AUGMENTED REALITY	2994
<i>A. Nicał, P. Nowak, J. Rosłon</i>	
MANAGING THE MOTIVATION OF UNIVERSITY TEACHERS DURING A PANDEMIC FOR ENSURING THEIR WELL-BEING AT THE UNIVERSITY OF ZILINA	3001
<i>M. Strenitzerova, T. Corejova, K. Stalmachova</i>	
DIGITAL TWINS TO SUPPORT TEACHING IN AUTOMATIC CONTROL: THE ROTARY MOTION PLATFORM	3011
<i>J.E. Traver, C. Nuevo-Gallardo, I. Tejado, E. Pérez, B.M. Vinagre</i>	
BIM FOR THE INTEGRATION OF ENVIRONMENTAL PRODUCT DECLARATIONS IN SUSTAINABLE CONSTRUCTION STRATEGIES	3021
<i>J. Rosłon, A. Nicał, P. Nowak</i>	
IS BUSINESS EDUCATION BOOSTING ETHICAL DECISION-MAKING? AN EXPLORATION OF THE OPPORTUNITIES TO ADD ETHICAL ISSUES IN THE HIGHER EDUCATION CURRICULA	3026
<i>J. Valero-Gil, J.A. Aranda-Usón, A. Garrido, J. Gutiérrez, F. Llena, E. Llera-Sastresa, M. Marco-Fondevila, T. Montaner, A. Pérez, A. Sanz-Hernández, S. Scarpellini, I. Suárez-Perales</i>	
CART-PENDULUM PLATFORM IN CONTROL LEARNING IN ENGINEERING: FIRST STEPS TO CREATE ITS DIGITAL TWIN	3027
<i>C. Nuevo-Gallardo, J.E. Traver, I. Tejado, E. Pérez, B.M. Vinagre</i>	
IMMERSIVE DESIGN FOR BUILT HERITAGE VALORIZATION AND REHABILITATION	3037
<i>J. Rosłon, A. Nicał, P. Nowak</i>	
WHAT HAPPENED TO US? THE EFFECTS OF ONLINE LEARNING ON EMBODIED ENCOUNTERS DURING COVID-19	3043
<i>P. Kiviahio-Kallio, A. Dimkar</i>	
PSYCHOMOTOR DEVELOPMENT SCREENING AS A TOOL FOR EARLY IDENTIFICATION OF PREDICTORS OF NEURODEVELOPMENTAL DISORDERS AND ITS IMPORTANCE IN PROMOTING ACADEMIC SUCCESS OF CHILDREN	3053
<i>M. Popelková, E. Jurišová, L. Ptáčniková</i>	
USING FLIPPED CLASSROOM APPROACH IN DIGITAL ENVIRONMENT OF HIGHER EDUCATION	3061
<i>R. Pícek</i>	
PERCEIVED STRESS OF HIGH SCHOOL STUDENTS DURING DISTANCE LEARNING AS A RESULT OF THE COVID-19 PANDEMIC	3072
<i>M. Popelková, E. Jurišová, L. Ptáčniková, R. Rácz</i>	
ADAPTING CLASSES DURING COVID-19 IN THE DEGREE OF PHYSICAL THERAPY TO ENSURE STUDENT AND TEACHER'S WELL-BEING	3079
<i>B. Pérez-Domínguez, A. López-Brull, F. Cuenca-Martínez, L. Suso-Martí, J. Calatayud-Villalba, A. Herranz-Gómez, M. Blanco-Díaz, F. Domínguez-Navarro, J. Casaña-Granell, F. Álvarez Salvago</i>	
ATTITUDES OF HIGH SCHOOL MATHEMATICS TEACHERS ABOUT LIFELONG LEARNING	3080
<i>J. Begić</i>	
CREATING VIRTUAL LEARNING ENVIRONMENTS TO DELIVER EDUCATIONAL PROGRAMS FOR THE TREATMENT OF PERSISTENT PELVIC PAIN	3090
<i>B. Pérez-Domínguez, A. López-Brull, F. Cuenca-Martínez, L. Suso-Martí, J. Calatayud-Villalba, A. Herranz-Gómez, M. Blanco-Díaz, F. Domínguez-Navarro, J. Casaña-Granell, F. Álvarez Salvago</i>	
INTERACTIVE 360° WEBSITE VERSUS ON-SITE VISITS FOR ARCHITECTURE STUDENTS TO ACHIEVE READINESS IN CONSTRUCTION PRACTICE	3091
<i>B. Onecha, C. Cornadó, J. Morros-Cardona, O. Pons-Valladares</i>	
ANALYSIS OF TEACHING TECHNICAL SUBJECTS IN HYBRID EDUCATION AFTER A PANDEMIC	3097
<i>A. Tažiková, Z. Struková, R. Bašková, J. Čabala</i>	
VIRTUAL REALITY AS A TOOL FOR STUDYING MODERN RADIO SYSTEMS OF INFORMATION TRANSMISSION	3101
<i>Y. Daineko, A. Kulakayeva, D. Tsoy, M. Ipalakova, A. Aitmagambetov</i>	
EVALUATING THE IMPACT OF USING AUDIOVISUAL RESOURCES IN MATHEMATICS	3106
<i>M.A. García Muñoz, J.J. Ruiz Ruiz, C. Ordóñez-Cañada</i>	
ISSUES OF ICT SECURITY IN SECONDARY SCHOOLS AND ITS IMPACT ON EDUCATION	3115
<i>L. Pavlík</i>	

PHYSICAL ACTIVITY AND GENDER STEREOTYPES. PERCEPTIONS OF HIGH SCHOOL STUDENTS	3122
<i>M. Lopez-Bartual, M.T. Bartual-Figueras, J. Turmo-Garuz</i>	
ALGEBRAIC REASONING IN PROBABILITY TASKS	3128
<i>M. Burgos, M.M. López-Martín, N. Tizón-Escamilla</i>	
PROGRAM LEVEL ADAPTATIONS DURING PANDEMIC: OPPORTUNITIES AND FACULTY PERCEPTIONS	3138
<i>K. Mallibhat, N. Iyer</i>	
HIGHER EDUCATION DURING LOCKDOWN IN THE FACULTY OF ECONOMICS AND BUSINESS (UB): SOME EXPERIENCES AND REFLECTIONS	3146
<i>J. Turmo-Garuz, M.T. Bartual-Figueras, F.J. Sierra-Martínez</i>	
MATHEMATICAL PROBLEM POSING IN TEACHER TRAINING	3155
<i>M. Burgos, J. Chaverri, N. Tizón-Escamilla</i>	
THE EUROPEAN UNION, BULGARIA AND THE DIGITIZATION OF ARCHIVAL HERITAGE: A BRIEF OVERVIEW OF THE ACHIEVEMENTS SO FAR AND WHAT LIES AHEAD – GUIDELINES AND PROJECTS	3165
<i>H. Atanasov</i>	
ONCE AGAIN ON THE DIGITIZATION OF BULGARIAN STATE ARCHIVES – STRATEGIES, REPORTS, RESULTS, ASSESSMENTS AND PERSPECTIVES	3170
<i>H. Atanasov</i>	
DEBATE AS AN INTERACTIVE METHOD OF EDUCATION IN SECONDARY SCHOOLS IN BULGARIA FOR INCREASING MOTIVATION AND FORMATION OF KEY COMPETENCIES OF STUDENTS IN BIOLOGY AND HEALTH EDUCATION	3175
<i>N. Vakrilov, M. Becheva, A. Kirkova-Bogdanova, B. Tornyova, M. Bozhkova, P. Kasnakova, S. Ivanova</i>	
TEACHING COMPUTATIONAL THINKING AND PROGRAMMING AT THE LOWER SECONDARY SCHOOL: A SYSTEMATIC ANALYSIS	3183
<i>R. Saadjäro, P. Luik, T. Palts</i>	
GAME AS A LEARNING TOOL FOR FRENCH VOCABULARY AND PRONUNCIATION	3193
<i>D. Liakin, N. Liakina, W. Cardoso</i>	
AN EXPLORATION OF TRANSITION BETWEEN COMMUNITIES OF PRACTICE: FROM CLINICAL HEALTH CARE PROFESSIONAL TO ACADEMIC LECTURER	3194
<i>B. Ball</i>	
COVID-19 AND LECTURERS - A STUDY ON THE TRANSFORMATION OF TEACHING AND WORKING IN HIGHER EDUCATION INSTITUTIONS WITH A FOCUS ON THE POST-COVID ERA AND WORK OVERLOAD DURING THE PANDEMIC	3195
<i>T. Rachfall, D. Förster-Trallo, S. Dressler, S. Dressler</i>	
LIFELONG LEARNING AT THE FACULTY OF CIVIL ENGINEERING OF THE TECHNICAL UNIVERSITY IN KOŠICE (SLOVAKIA) UNDER LOCKDOWN	3206
<i>R. Bašková, A. Tažiková, Z. Struková, J. Čabala</i>	
APPLICATION OF BLOOM'S TAXONOMY IN CHEMISTRY LABORATORY CLASSES IN HIGHER EDUCATION	3211
<i>E.L. dos Santos Veiga, E. Cordoncillo, H. Beltrán-Mir</i>	
A SYSTEMATIC REVIEW OF INTRODUCTORY COMPUTER SCIENCE CURRICULUMS	3219
<i>G. Myers, B. Merga, M. Marques Samary</i>	
A PRELIMINARY STUDY ON SPATIAL ABILITY FOR PRIMARY SCHOOL TEACHERS' PROFESSIONAL DEVELOPMENT	3230
<i>E. Bufasi, I. Cakane, I. Dudareva, D. Namsone</i>	
USING MAGIC TO TEACH COMPUTER PROGRAMMING	3240
<i>D. Reed, R. Greenberg</i>	
EMOTIONAL ASPECTS OF LECTURERS' EMERGENCY REMOTE TEACHING DURING THE COVID-19 PANDEMIC	3249
<i>I. Raveh, S. Morad, M. Shacham</i>	
PHYSI-OUT DOORS: ADAPTING THE TEACHING RESOURCES TO THE COVID19 CONTEXT IN PHYSIOTHERAPY COURSES	3250
<i>F. Dominguez-Navarro, L. Suso Martí, F. Cuenca-Martínez, B. Pérez-Domínguez, J. Casaña-Granell, E. Falcó Crespo, M. Blanco-Díaz, A. Herranz-Gómez, A. López Brull, F. Álvarez Salvago</i>	
SIMULATION OF GROUP-BASED SPORTS PHYSIOTHERAPY SESSION IN PHYSIOTHERAPY STUDENTS: A PROPOSAL STUDY	3251
<i>F. Dominguez-Navarro, F. Cuenca-Martínez, B. Pérez-Domínguez, L. Suso Martí, J. Calatayud-Villalba, J. Casaña-Granell, A. Herranz-Gómez, A. López Brull, M. Blanco-Díaz, F. Álvarez Salvago</i>	

THE IMPACT OF RESOLUTELY CHOOSING FOR HYBRID LEARNING AS A DIDACTIC DESIGN PRINCIPLE DEVELOPING A SUPPORT AND PROFESSIONALIZATION MODEL FOR STUDY PROGRAMS, TRAINING TEAMS AND TEACHERS	3252
<i>S. Theuwen, B. Boelen, Y. Coninckx, K. Billiau, E. Cams, T. Vets</i>	
HIGHER EDUCATION AS A VALUE AND ITS IMPACT ON THE WELL-BEING OF SOCIETY	3260
<i>I. Mietule, I. Maksymova, K. Holikova, I. Kotane, L. Viskere</i>	
THE INFLUENCE OF PHYSICAL ACTIVITY COMPLEX ON PSYCHOPHYSIOLOGICAL PARAMETERS OF STUDENTS ASSESSED BY USING VIENNA TESTS	3268
<i>J. Porozovs, V. Veliks, A. Kļaviņa, A. Zūša</i>	
IMPLEMENTATION OF THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS IN THE PROJECT FRAMEWORK FOR RETHINKING ENGINEERING EDUCATION IN IRELAND	3276
<i>K. O’Sullivan, I. Morris, N. Fitzgerald, J. Walsh, F. Boyle, E. O’Connell, G. Corkery</i>	
DEVELOPING YOUNG CHILDREN’S COGNITIVE ARGUMENTATION IN COLLABORATION WITH TEACHERS: THE ROLE OF VERBAL AND NON-VERBAL ARGUMENTATIVE COMPONENTS IN CLASSROOM ACTIVITIES	3283
<i>J. Convertini, F. Arcidiacono, C. Miserez-Caperos</i>	
CONTRIBUTIONS OF CLIMATE CHANGE RESEARCH TO THE IMPLEMENTATION OF THE 2030 AGENDA	3289
<i>R. Ramos, M.J. Rodrigues, I. Rodrigues</i>	
PROBLEMS FACED BY ENGLISH SECOND LANGUAGE LEARNERS IN SOUTH AFRICA: TOWARDS A DIGITAL LANGUAGE LEARNING MODEL	3296
<i>R. Moyo, S. Ngidi</i>	
ENHANCING AUTHENTIC LEARNING THROUGH STUDENT-LED KNOWLEDGE EXCHANGE	3302
<i>D. Cotton, S. Bloxham, S. Cooper, J. Downey, M. Fornasiero, J. Allison</i>	
COLLABORATION AND LEARNING PROCESSES: DESIGN SPRINT FRAMEWORK WITHIN PRODUCT DISCOVERY	3303
<i>L. Cupal, D. Skokanová, P. Fanta</i>	
CROSSING BORDERS TO CONNECT ROUTES: RESEARCHING WITH EDUCATIONAL COMMUNITIES TO PROMOTE EQUITY AND FIGHT RACISM TOWARDS IMMIGRANTS IN A POST-PANDEMIC WORLD	3309
<i>A. Creus, A. Ornellas</i>	
IS THERE ANYBODY OUT THERE? OLD AND NEW CHALLENGES OF FORMATIVE FEEDBACK IN E-LEARNING	3310
<i>A. Creus</i>	
FIDELITY OF A 360° IMMERSIVE VIRTUAL REALITY SIMULATION ACTIVITY IN PHYSICAL THERAPY STUDENTS: A PILOT STUDY	3311
<i>A. Bermejo-Franco, L. Martínez-Caro, M. Medina-Sampedro, L. Rubio-Martínez, R. Ucerro-Lozano, M.I. Gaviña-Barroso</i>	
ENHANCING PROBLEM-SOLVING COMPETENCE BY ACQUIRING MOTIVATION THROUGH AUTOMATIC TUTORING	3317
<i>L.H. González Guerra, A.J. Leal Flores</i>	
ATTEMPTS TO IMPROVE TEACHING-RESEARCH LINKS THROUGH EMERGENCY REMOTE TEACHING IN HIGHER EDUCATION: A CASE STUDY FROM UNIVERSITY	3324
<i>A. Uaciquete, M. Valcke</i>	
THE PERCEPTION OF THE SDGS IN UNIVERSITY STUDENTS: OVERVIEW AND SURVEY DESIGN	3325
<i>R. Oltra-Badenes, V. Guerola-Navarro, H. Gil-Gomez, J.A. Gil-Gomez, D. Botella-Carrubi</i>	
EMPIRICAL TEST ON THE KNOWLEDGE THAT STUDENTS OF A FIRST-YEAR UNIVERSITY COURSE HAVE ABOUT THE SUSTAINABLE DEVELOPMENT GOALS (SDG)	3330
<i>V. Guerola-Navarro, R. Oltra-Badenes, H. Gil-Gomez, D. Botella-Carrubi, J.A. Gil-Gomez</i>	
PEDAGOGICAL TRAINING OF TEACHERS IN PORTUGUESE PUBLIC HIGHER EDUCATION INSTITUTIONS	3338
<i>T. Ferreira, J.P. Cravino</i>	
REVOLUTION OUR BODY. EXPLORING ARCHITECTURE STUDENT’S INTERCONNECTIVITY DURING CONFINEMENT	3347
<i>P. Lourenco, F. Bastos, T. Heitor</i>	

EVALUATION OF THE USE OF COMPUTER TOOLS THROUGH VIDEOS: A NEW TEACHING PROPOSAL IN LIGHT OF THE COVID UNCERTAINTY IN THE TRANSLATION AND INTERPRETING DEGREE	3356
<i>J. Gutiérrez-Artacho</i>	
DEPLOYMENT OF CREATIVE DIGITAL TECHNOLOGIES TO ENHANCE LEARNING AND TEACHING IN ONE OF THE SOUTH AFRICAN UNIVERSITIES	3362
<i>L. Baleni, N. Vokwana</i>	
HEALTHCARE CURRICULUM PRIORITIES TO ENHANCE DIGITAL SKILLS DURING THE COVID-19 PANDEMIC	3363
<i>I. Marin, D. Popovici</i>	
TEACHERS-STUDENTS-PARENTS DIGITAL PORTAL NEED ANALYSIS DESIGNED FOR ABROAD STUDIES	3373
<i>I. Marin, D. Popovici</i>	
AN APPROACH TO MONITORING GENDER EQUALITY PLANS IMPLEMENTATION	3383
<i>R. Doneva, S. Gaftandzhieva, K. Boykova</i>	
TOWARDS MICRO-CREDENTIALING IN EUROPEAN HIGHER EDUCATION	3392
<i>S. Gaftandzhieva, R. Doneva, M. Stoeva</i>	
A DIGITAL STORYTELLING MOOC FOR FOREIGN LANGUAGE LEARNING WITH A FOCUS ON L2 SPEAKING AND WRITING	3402
<i>S. Maravelaki, P. Panagiotidis</i>	
QUESTION GENERATION FOR TEXTBOOK FLASHCARDS	3412
<i>S. Upadhyay, E. Ginsberg, L. Dugan, E. Miltsakaki, H. Gonzalez, D. Choi, C. Yuan, C. Callison-Burch</i>	
BLOCKCHAIN IN EDUCATION: THE CASE OF LANGUAGE LEARNING	3413
<i>P. Panagiotidis</i>	
USING WEB 2.0 AND SOCIAL NETWORKING IN EDUCATION: THEORETICAL INSIGHTS	3414
<i>T. Limba, L. Lelešienė, S. Novogreckas</i>	
MULTIPLE INTELLIGENCES AND ENTREPRENEURIAL SKILLS AMONG SUCCESSFUL HIGH-TECH ENTREPRENEURS	3422
<i>D. Kaspi-Tsahor, R. Yavich, N. Davidovich</i>	
EFFECT OF PROBLEM SOLVING TEACHING STRATEGY ON BIOLOGY STUDENTS' ACQUISITION OF SCIENCE PROCESS SKILLS AND CRITICAL THINKING IN SECONDARY SCHOOLS IN TARABA STATE, NIGERIA	3426
<i>C. Audu</i>	
PROFESSIONAL DEVELOPMENT USING TRAUMA-INFORMED PRACTICES IN THE CLASSROOM	3433
<i>A. Zickafoose, G. Wingenbach, S. Haddad, J. Freeny, J. Engels, C. Hoeft</i>	
FROM PARAMETRIC TO NON-PARAMETRIC STATISTICS IN EDUCATION AND AGRICULTURAL EDUCATION RESEARCH	3434
<i>J. Silva-Lugo, L. Warner, S. Galindo</i>	
THE IMPORTANCE OF EMOTIONS IN THE TEXT RECEPTION IN LITERATURE CLASSES IN ELEMENTARY SCHOOLS	3435
<i>P. Bubeničková</i>	
PECULIARITIES OF MATHEMATICAL REASONING: THE CASE OF 4TH GRADE STUDENTS OF PRIMARY SCHOOL	3440
<i>N. Cibulskaitė, V. Grabauskienė, O. Mockaitytė - Rasteniene</i>	
GROUPWORK ASSESSMENT AS A TEACHING STRATEGY IN UNIVERSITY CONTEXTS	3447
<i>O. Ortiz Aldeán, J. Meza, K. Mendoza, N. Caizaluisa</i>	
COMPUTATIONAL THINKING OLYMPIAD AS AN EXAMPLE OF SERVICE-LEARNING	3457
<i>R. Herrero-Álvarez, C. León, G. Miranda, C. Rodríguez-León, E. Segredo, L. García, Y. Díaz</i>	
COMMUNICATIVE COMPETENCE OF MEDIATION ASSESSMENT LANGUAGE LEARNING THROUGH THE USE OF CHATBOTS	3463
<i>T. Magal-Royo, J. Garcia Laborda</i>	
VALIDATION OF AN INSTRUMENT TO RELATE THE LEARNING EXPERIENCE AND THE SATISFACTION OF THE TRAINING RECEIVED FROM THE MASTER'S GRADUATE	3470
<i>G. Zambrano</i>	

THE LEARNING EXPERIENCE AND THE SATISFACTION OF THE TRAINING RECEIVED BY MASTER'S GRADUATES AT A PRIVATE UNIVERSITY IN METROPOLITAN LIMA <i>G. Zambrano</i>	3477
MOBILE LEARNING RESEARCH AT RCAAP: A LITERATURE REVIEW BASED ON THE APPLICATION OF THE MAECC® META-MODEL <i>M. Ferreira Marques, T.M. Loureiro Cardoso</i>	3483
EDUCATION OF NURSES IN THE REPUBLIC OF CROATIA IN THE FIELD OF COMPUTER AND INFORMATION LITERACY <i>B. Marković</i>	3490
THE TRAINING AND EDUCATION OF CIVIL ENGINEERING STUDENTS AT NEW ZEALAND'S LARGEST TECHNICAL INSTITUTE <i>L. Tuleasca, W. Loo</i>	3503
ADAPTING DIGITAL MATERIALS FOR REMOTE FLIPPED CLASSROOM TEACHING <i>R. Fernández-Flores, B. Hernández-Morales, J.C. Espíndola-Núñez, I.R. Ramírez-Martínez</i>	3514
A REMOTE COLLABORATIVE WORK EXPERIENCE: PRODUCTION AND PUBLICATION OF EDUCATIONAL MATERIALS ON THE WOLFRAM DEMONSTRATIONS SITE <i>R. Fernández-Flores, T. Garza-Hernández, B. Hernández-Morales, T. Mata-Aguayo, I.R. Ramírez-Martínez, J. Ramírez-Urbano</i>	3520
EMOTIONAL INTELLIGENCE IN TEACHERS <i>S. Dobesova Cakirpaloglu, B. Kvapilová, S. Lemrová, I. Balaban Cakirpaloglu</i>	3525
A TRIAL OF ACTIVE LEARNING FOR BUSINESS MANAGEMENT EDUCATION IN A HYBRID LEARNING ENVIRONMENT <i>S. Baba, T. Uetake, A. Aoki, T. Majima</i>	3532
THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND BURNOUT IN PRIMARY SCHOOL TEACHERS <i>L. Křeměnková, S. Dobesova Cakirpaloglu, I. Plevová, M. Pugnerová, L. Hongyang</i>	3539
ONLINE LEARNING READINESS AND ATTITUDES TOWARDS DISTANCE EDUCATION <i>N. Dincer, A. Şimşek</i>	3545
LIBERATING RURAL WOMEN OF SOUTH AFRICA THROUGH SKILLS TRAINING FOR POVERTY ALLEVIATION <i>S. Tawiah, S.A. Tachie</i>	3556
A REFLECTIVE APPROACH IN INITIAL TEACHER TRAINING <i>I. Červenková, N. Porubová, I. Fialová</i>	3567
MONITORING AND TRACING OF MOVEMENT AND CONTACT OF PERSONS IN MEDICAL FACILITIES <i>K. Mäkkä, K. Kampová, L. Mariš</i>	3574
EVALUATION OF THE ACADEMIC ADVISING SYSTEM AND SUPPORT IN HONG KONG <i>V. Lee, J. Lee, A. Ho</i>	3579
CONTEXTS AND DYNAMICS OF INNOVATION FOR LEARNING <i>A. Magalhães, J. Matias Alves, A. Andrade</i>	3580
ANALYSIS OF STUDENTS' OPINIONS ON BARRIERS LIMITING THEIR UNIVERSITY STUDIES <i>J. Komora, N. Kozárová</i>	3590
OCCUPATIONAL THERAPY IN CHILDREN WITH AUTISM SPECTRUM DISORDER <i>H. Kynštová, P. Pecharová</i>	3597
IMPLEMENTATION OF STEM APPROACH AND ITS VARIETIES IN BULGARIA - HISTORICAL OVERVIEW AND CURRENT SITUATION <i>E. Ivanova</i>	3603
TOWARDS A MULTICULTURAL AND GLOBAL EDUCATION: STUDENTS CREATING EDUCATIONAL BIREFINERY VIDEOS WITH INTERNATIONAL COOPERATION <i>J. Remón, G.A. Hurst, J. Arauzo</i>	3610
PRACTICING CONFLICT RESOLUTION AND NEGOTIATION THROUGH GAME-BASED LEARNING AMONGST PSYCHOLOGY UNIVERSITY STUDENTS <i>P. Martín-Hernández, M. Gil-Lacruz, A.C. Tesán Tesán, J.L. Azkue Beteta, A.I. Gil-Lacruz</i>	3615
STUDENT'S APPROACH TO LEARNING PER STUDENT BASIS IN TWO SUBJECTS OF BIOTECHNOLOGY DEGREE <i>J. Blanca, J. Cañizares, M. Leiva-Brondo</i>	3621

ADAPTING THE METHOD OF LOCI IN VIRTUAL REALITY AS A TEACHING TOOL IN GENERAL EDUCATION	3627
<i>A. Mainka, E. Ossovski, M. Brinkmeier, A. Hütwel, T. Kirmess, D. Kalbreyer</i>	
EMERGING DISTANCE LEARNING PROBLEMS AND STRUCTURED SOLUTIONS IN TIMES OF CRISIS	3636
<i>V. Keseev</i>	
A SAFE LEARNING ENVIRONMENT FOR LIFE-SAVING SKILLS: HOW TO TRAIN FUTURE NURSES IN SUICIDE PREVENTION BY MEANS OF A VR-TOOL	3643
<i>C. Baten, A. Wanzeele</i>	
PROMOTING INFORMAL LEARNING IN ROMANIA: EVALUATING THE SUCCESS OF "OLIMPIADELE KAUFILAD" PROJECT IN A ROMANIAN HIGH SCHOOL	3644
<i>N.M. Erchedi</i>	
INVESTIGATING THE MISTAKES OF STUDENTS WITH DYSLEXIA DURING SOLVING MATHEMATIC PROBLEMS	3650
<i>V. Secha, F. Vlachos, M. Chalmpe</i>	
FROM TEACHER-CENTERED INSTRUCTION TO STUDENT-CENTERED LEARNING: THE CASE OF A 1ST YEAR DIGITAL SYSTEMS COURSE	3651
<i>M. Gericota</i>	
KNOWLEDGE FOR RESILIENT SOCIETY (K-FORCE PROJECT)	3661
<i>K. Mäkkä, K. Kampová, L. Mariš</i>	
PERSONALITY TRAITS OF WORKPLACE BULLYING VICTIMS	3666
<i>S. Dobesova Cakirpaloglu, B. Koapilová, M. Pugnerová, I. Plevová, L. Křeménková, Š. Vévodová</i>	
IMPROVEMENT OF ACTIVE LEARNING PROCESSES AND IDENTIFICATION OF NEW STRATEGIES FOR THE BETTER DEVELOPMENT OF STUDENT SKILLS THROUGH COOPERATION BETWEEN INVOLVED AGENTS WITHIN THE ETHAZI TRAINING MODEL	3673
<i>N. Lopez-Salas, A. Sarobe-Egiguren, A. Alijostes, I. Gorosmendi</i>	
HOW UNIVERSITY COURSE BECOMES SELF-DRIVEN: MOOC AS AN EXAMPLE	3678
<i>H. Mokayed, S. Al-Azzawi, R. Saini, M. Liwicki</i>	
HOW DO TEACHERS NOTICE STUDENT'S MATHEMATICAL UNDERSTANDING ABOUT INTERPRETING OF SLOPE AND WRITING LINEAR EQUATION OF GRAPH?	3686
<i>Z. Özel, R. Tekin-Sitrava, M. İşiksal-Bostan, S. Yemen-Karpuzcu</i>	
REDESIGNING THE PROCESS OF LEARNING IN A COLLABORATIVE VIRTUAL CLASSROOM	3691
<i>D. Skokanova, P. Fanta, L. Cupal</i>	
COGNITIVE-PROFESSIONAL DEVELOPMENT STRATEGIES AS THE BASIS OF FORMATION OF SUCCESS TRAJECTORY OF SUBJECTS OF EDUCATIONAL PROCESS	3695
<i>E. Luzik, N. Ladohubets, N. Komisarenko, T. Mikheyeva</i>	
BLENDED LEARNING ON STUDENTS WITH SPECIAL EDUCATIONAL NEEDS IN HIGHER EDUCATION DURING COVID-19 PANDEMICS	3706
<i>V. Lee, G. Chao</i>	
THE USE OF A MATRIX DESIGNED TO ENHANCE STUDENTS' UNDERSTANDING OF MOLECULAR POLARITY	3707
<i>H. Etxeberria, F.J. Juanes, M. Zubitur, M. Sánchez</i>	
A SCOPING REVIEW OF INTERCULTURAL COMPETENCE IN PRESERVICE TEACHER EDUCATION	3712
<i>M.H. Su, M. Valcke, P.I. Chou</i>	
THE HOUSE OF LOST HILL: FOSTERING MINDFULNESS AND INNOVATION BEHAVIOUR THROUGH A GAME BASED LEARNING EXPERIENCE	3719
<i>P. Martín-Hernández, A.C. Tesán Tesán, J.L. Azkue Beteta, A.I. Gil-Lacruz, M. Gil-Lacruz</i>	
THE USE OF INTERACTIVE COMMANDS IN UNIVERSITY TEACHING: ANALYSIS FROM THE STUDENT'S PERSPECTIVE	3725
<i>A. Marín García, I. Gil Saura, M.E. Ruiz Molina, R. Gil Saura, M. Bordian</i>	
PROFESSIONAL DEVELOPMENT FOR PRIMARY TEACHERS - FOSTERING CURIOSITY FOR LEARNING SCIENCE THROUGH INSPIRATIONAL SESSIONS!	3726
<i>A. Mallaburn, L. Seton, V. Brennan</i>	
GAMIFICATION AND TRADITIONAL TEACHING IN UNIVERSITY CLASSROOMS: IS IT POSSIBLE?	3727
<i>A. Marín García, I. Gil Saura, M.E. Ruiz Molina, M. Bordian, R. Gil Saura</i>	

“ALIMENTAL, QUERIDO WATSON”: SOLVING MYSTERIOUS CASES WHILE LEARNING NUTRITION – DEVELOPMENT AND RESULTS OF A DIGITAL EDUCATIONAL ESCAPE ROOM	3728
<i>G. Olaso-Gonzalez, C. Romá-Mateo, M. Piqueras-Franco</i>	
EVALUATION OF THE CHANGE IN THE ATTITUDES OF ECONOMICS STUDENTS TOWARDS ECONOMETRICS IN A FLIPPED CLASSROOM CONTEXT	3737
<i>M. Cladera</i>	
APPLICATION OF THE PROJECT MANAGEMENT METHODOLOGY AS A TOOL FOR EDUCATIONAL INNOVATION	3738
<i>A.M. Lara-Palma, B. Brotóns-Cano</i>	
COMIC-BOOK CLUB OF GRAPHIC MEDICINE: USING COMICS TO BOOST EMPATHY IN THE TEACHING OF MEDICAL SCIENCES	3744
<i>C. Romá-Mateo, G. Olaso-Gonzalez</i>	
THE EFFECT ON FINAL COURSE GRADES WHEN ANALYZING DIFFERENT LEVELS OF ENGAGEMENT IN PREPARATION FOR SEMINARS	3750
<i>P. Perlman-Dee, C. Godfrey</i>	
STUDENT LEVELLING WEB-BASED SYSTEM	3751
<i>S. Ghareeb, A.J. Hussain, D. Al-Jumeily, R. Al-Jumeily</i>	
TRAINING TEACHING ASSISTANTS IN SCIENCE AND TECHNOLOGY: CAN WE INCLUDE COURSE-SPECIFIC CONTENT INTO A TRAINING PROGRAMME?	3761
<i>S. Loix, I. Peeters</i>	
EVALUATING A MIDTERM EXAM AS A PREDICTOR FOR PASSING THE MATHEMATICS COURSE	3765
<i>N. Kaspríkova</i>	
ADVANCING TOGETHER IN MANAGERIAL AND INTERNATIONAL MANAGERIAL SKILLS: A PILOT PROJECT BASED ON FLIPPED CLASSROOM, PERSONAL BRANDING AND DIGITAL COMPETENCES	3770
<i>J. Barrera-Martínez, M.D.M. Bornay-Barrachina, G.M. Cuevas-Rodríguez, M.J. Foncubierta-Rodríguez, F. Guerrero-Alba, M. López-Fernández, J.A. Medina-Garrido, M. Ruiz-Martínez</i>	
WAVE ENERGY GENERATION: A STEMBACH EXPERIENCE WITH “IES AS LAGOAS (OURENSE)”	3771
<i>M. DeCastro, X. Costoya, S. Diaz-Vilela, M. Fernández, A. Gil-Pereiras, M. Gómez-Gesteira</i>	
ALTERNATIVE EDUCATIONAL MODELS – THE ROLE OF “LEARNING BY DOING” EDUCATIONAL APPROACH FOR ENHANCING THE UNIVERSITY IMAGE	3780
<i>D. Stoyanova, M. Pavlova, D. Ivanov</i>	
EÓLICE: A WAVE FLUME FOR TEACHING PURPOSES	3784
<i>X. Costoya, I. Martínez-Estévez, B. Arguilé-Pérez, J.M. Domínguez, A.J. Crespo, M. DeCastro, M. Gómez-Gesteira</i>	
EDUCATIONAL ACTIVITIES PROPOSAL TO MOTIVATE STUDENTS TO LEARN THE BASICS OF COMPUTER PROGRAMMING IN SECONDARY EDUCATION	3789
<i>J.R. Pérez Beltrán, R.P. Neco</i>	
THE NEUROCOGNITIVE NATURE OF DEVELOPMENTAL DYSLEXIA: EVIDENCE SUPPORTING THE MULTIPLE-DEFICIT MODELS	3797
<i>M. Chalmpé, F. Vlachos, E. Avramidis, S. Tzivinikou</i>	
DEVELOPING AN EARLY YEARS BASELINE ASSESSMENT DURING A PANDEMIC	3798
<i>C. Jellis</i>	
INTERNATIONAL MOBILITY – CASE OF STUDENT EXCHANGE MANAGEMENT	3803
<i>M. Tomičić Furjan, M. Kurešević, I. Oletić Tušek</i>	
AUDIOVISUAL RESOURCES TO ENHANCE PRACTICAL LEARNING IN THE SUBJECT “GENERAL PSYCHOPATHOLOGY” OF PSYCHOLOGY DEGREE	3810
<i>O. Peris-Baquero, M.V. Navarro-Haro, J. Osma, V. Martínez-Loredo, A. Díaz-García</i>	
CHALLENGES AND OPPORTUNITIES IN INTEGRATING INTERACTIVE CHATBOTS INTO CODE REVIEW EXERCISES: A PILOT CASE STUDY	3816
<i>J.C. Farah, B. Spaenlehauer, K. Bergram, A. Holzer, D. Gillet</i>	
THE UNIVERSITY AS AN UNSAFE ENVIRONMENT FOR IDEAS: THE PROMOTION OF CRITICAL THINKING	3826
<i>V. Martínez-Loredo, A. Díaz-García, M.V. Navarro-Haro, O. Peris-Baquero, J. Osma</i>	
THE APPLICATION OF DIGITAL SKILLS AND MULTIMEDIA TECHNOLOGIES IN EDUCATION AT THE UNIVERSITY OF CONSTANTINE THE PHILOSOPHER IN NITRA DURING THE CORONAVIRUS PANDEMIC	3827
<i>M. Šebo, P. Brečka, I. Tureková</i>	

APPLICATION OF INDIVIDUAL PROFILE TO ELECTRONIC HIGHER ENGINEERING AND SPECIALIZED CONTINUING EDUCATION <i>S. Toncheva-Pencheva, Y. Anastasova</i>	3834
PROBLEM TASKS AS A KEY TO A DEEPER UNDERSTANDING OF SCIENCE SUBJECTS <i>R. Maršálek, K. Trčková</i>	3842
EXAMINING STUDENTS' TEST ANXIETY AND PRE-UNIVERSITY PROGRAMMING EDUCATION IN AN UNDERGRADUATE INTRODUCTORY PROGRAMMING COURSE <i>B. Tomić, T. Stojanović, I. Antović</i>	3848
LEARNING TO CHOOSE – PRESENTING THE RATIONALE FOR WHY EVERY CHILD NEEDS TO BE TAUGHT HOW TO MAKE BETTER CHOICES <i>J. Playfoot</i>	3858
LINEAR DIOPHANTINE EQUATIONS AS A CONTEXT FOR WOLFRAM CLOUD-ENHANCED TEACHING OF MATHEMATICS <i>D. Nocar, J. Vaško, T. Zdráhal</i>	3866
EFFECTIVE LEARNING IN MATHEMATICS <i>P. Carvalho, L. Descalço</i>	3870
IMPORTANCE OF BLENDED LEARNING FOR CONSTRUCTION OCCUPATIONAL SAFETY PREVENTION <i>Z. Struková, A. Tažiková, M. Kozlovská, J. Čabala, R. Bašková</i>	3877
INTEGRATING THE EUROPEAN STRATEGY FOR SUSTAINABLE FINANCE AND THE SUSTAINABLE DEVELOPMENT GOALS IN BUSINESS MANAGEMENT AND FINANCE SUBJECTS <i>E. Escrig-Olmedo, M.A. Fernández-Izquierdo, M.J. Muñoz-Torres, J.M. Rivera-Lirio, I. Ferrero-Ferrero</i>	3884
LESSONS LEARNED FROM WORK-BASED LEARNING AND INTENSIVE COURSES IN HIGHER EDUCATION <i>A. Kutnjak, I. Gregurec, K. Tomičič-Pupek</i>	3890
AN EXPERIMENT WITH SERIOUS GAMES ON MATHEMATICS IN HIGHER EDUCATION <i>L. Descalço, P. Carvalho</i>	3899
IMPROVING THE PROFESSIONAL KNOWLEDGE OF CIVIL ENGINEERING STUDENTS BY USING MIXED REALITY <i>J. Čabala, Z. Struková, A. Tažiková, R. Bašková, M. Kozlovská</i>	3904
TEACHERS' VIEW OF THE TEACHING PROFESSION AND ITS CHANGES IN CONNECTION WITH THE USE OF DIGITAL TECHNOLOGIES IN EDUCATION <i>L. Herout</i>	3910
INFLUENCE OF CONTEXTUAL AND PERSONAL FACTORS ON STUDENT'S APPROACH TO LEARNING AT UNIVERSITY DEGREES <i>E. Sales, S. Menal-Puey, C. Martí, O. Ortíz, R. López-Flores, P. Santolaria, M. Leiva-Brondo</i>	3917
SOCIAL COMPETENCES OF PUPILS WITH SPECIAL EDUCATIONAL NEEDS AND THEIR DEVELOPMENT THROUGH COOPERATIVE TEACHING METHODS <i>I. Ištvan</i>	3926
SOCIAL MEDIA TECHNOLOGIES AND BLENDED LEARNING: PROMOTING INTERACTIVITY AND COLLABORATIVE LEARNING IN EDUCATIONAL EMERGENCIES <i>A. Njuguna</i>	3933
GOAL ORIENTED AND INTERACTIVE ONLINE TEACHING. CASE STUDY ON AN IT APPLIED IN SOCIAL SCIENCES COURSE <i>A.B. Andreica</i>	3942
CONNECTIONS BETWEEN PARTICIPATION IN MINI-COMPANIES AT UPPER SECONDARY SCHOOL AND ENTREPRENEURIAL SKILLS <i>V. Johansen, T. Schanke</i>	3953
ONLINE SECURITY AS PART OF EDUCATIONAL CONTENT AT PRIMARY SCHOOLS IN THE CZECH REPUBLIC <i>L. Herout</i>	3954
THE USE OF COOPERATIVE METHODS TO DEVELOP STUDENTS' CRITICAL THINKING IN TEACHING PROGRAMMES <i>I. Ištvan</i>	3960
DIGITIZATION AND ITS PLACE IN THE TRAINING CURRICULA OF FUTURE ARCHIVAL SPECIALISTS: THE EXPERIENCE OF ULSIT <i>S. Eftimova</i>	3966

CIRCULAR ECONOMY FOR PIGS: AN ACADEMIC RESEARCH PROPOSAL	3970
<i>G. Cervantes, G. Cuevas</i>	
A PROJECT-BASED LEARNING IMPLEMENTATION: AN EXAMPLE OF METHODOLOGY DESIGNED TO IMPROVE PHARMACY UNDERGRADUATE STUDENTS LEARNING	3979
<i>E. Perez Izquierdo, B. Sáez Pizarro, A.M. Fernández Olleros, P. Ros Viñegla</i>	
STEP BY STEP WITH THE SCRATCHJR APP AS A TOOL FOR DEVELOPING DIGITAL COMPETENCES AND COMPUTATIONAL THINKING	3985
<i>K. Kilianova, P. Kockova, K. Kostolanyova</i>	
TRENDS IN THE CHOICE OF TOPICS FOR DIPLOMA THESES IN THE SPECIALTY OF ARCHIVAL AND DOCUMENTARY STUDIES AT ULSIT	3995
<i>S. Eftimova</i>	
"STAY SAFE ONLINE" - EDUCATIONAL MATERIAL FOR THE DEVELOPMENT OF DIGITAL SAFETY COMPETENCE FOR PUPILS AT 1ST GRADE PRIMARY SCHOOL	3999
<i>P. Kockova, K. Kilianova, K. Kostolanyova</i>	
THE EFFECTIVENESS OF DIRECT APPLICATION OF THEORY ON STUDENTS' PROGRESS AND UNDERSTANDING	4005
<i>P. van Duijsen, D. Zuideroliet, M. Dirksen</i>	
IMPLEMENTATION OF THE ODS THROUGH SERVICE LEARNING TECHNIQUES BASED ON PM2 (PROJECT MANAGEMENT METHODOLOGY)	4012
<i>L.I. Hojas Hojas, E.M. García Del Toro</i>	
PERCEPTIONS AND READINESS OF KING SAUD UNIVERSITY STUDENTS TOWARDS ONLINE LEARNING DURING THE COVID-19 PANDEMIC	4018
<i>N. Alhazzani</i>	
RDI - PART OF HIGHER EDUCATION STUDIES	4029
<i>T. Lintilä, S. Sivén</i>	
DEVELOPING THE MODEL OF HYBRID ORGANIZATION FOR COMPANIES OPERATING IN IT SPHERE IN THE CITY OF NEW YORK	4038
<i>A. Skvorcovs, A. Lavrenteva</i>	
STUDENT'S PERSPECTIVE ON THE IMPLEMENTATION OF MASTER FINAL PROJECT AS A CASE STUDY IN LEGAL AND FORENSIC PSYCHOLOGY	4044
<i>J. Sanmarco, V. Marcos, D. Seijo, M. Novo, R. Arce</i>	
THE INTEGRATED PERSONALISED ADAPTIVE LEARNING SYSTEM IN THE EDUCATIONAL PROCESS TRAJECTORY	4049
<i>A. Nurutdinova, E. Sabaeva, E. Dmitrieva</i>	
UNIVERSITY EDUCATION OF NATIONAL SECURITY - A MAJOR FACTOR FOR SUSTAINABILITY IN THE CONTEMPORARY SOCIETY	4058
<i>S. Denchev, I. Peteva, S. Yordanova</i>	
COPYRIGHT LITERACY FORMATION AMONG STUDENTS AT UNIVERSITY INFORMATION ENVIRONMENT: SURVEY RESULTS	4062
<i>E. Zdravkova-Velichkova, T. Trencheva</i>	
COMPARISON BETWEEN THE IMPORTANCE THAT STUDENTS GIVE TO ENVIRONMENTAL AWARENESS FOR THEIR PROFESSIONAL DEVELOPMENT AND THE WORK CARRIED OUT BY THE BILBAO SCHOOL OF ENGINEERING IN THIS FIELD	4071
<i>A. Sarrionandia-Ibarra, E. Madrazo, J.M. Blanco, I. Bidaguren, I. Albaina</i>	
AN INNOVATIVE ONLINE INDIVIDUALIZED TUTORING PROGRAM TO MINIMIZE EDUCATIONAL DISRUPTION AMONG RACIALIZED, INDIGENOUS AND IMMIGRANT STUDENTS DURING COVID-19	4077
<i>W. Cukier</i>	
JUPYTER NOTEBOOKS FOR THE TEACHING OF BUSINESS MANAGEMENT IN STEM DEGREES	4078
<i>A. Suárez-García, M.A. Álvarez-Feijoo, E. Arce, F. Zayas-Gato, M. Novo</i>	
"NEVER HAVE I EVER ..." - UNEXPECTED OUTCOMES OF TEACHING DURING COVID19	4082
<i>M. Menšík</i>	
PROMOTION AND ACTIVE VERIFICATION OF THE RESEARCH PROJECT „INFORMATION PORTAL FOR MOBILE LEARNING AND MOBILE ACCESS TO LIBRARY SERVICES AND RESOURCES“	4092
<i>E. Tsvetkova, I. Peteva, S. Denchev</i>	

INFLUENCE OF THE COVID-19 PANDEMIC ON THE STUDENTS FROM MEDICAL UNIVERSITY OF PLOVDIV	4100
<i>A. Mihaylova, P. Kasnakova, Z. Zheleva, G. Petkova, S. Harizanova, D. Bakova, D. Davcheva, T. Deneva, E. Toseva, R. Stoyanova, A. Tosheva, D. Vicheva</i>	
STUDENT ACTIVATION IN THE EDUCATION PROCESS: THE PESTLE ANALYSIS CREATION	4105
<i>L. Vartiak, G. Jaseckova, E. Capkova</i>	
ENVIRONMENTAL COMPETENCIES AS FUNDAMENTAL 21ST CENTURY SKILLS OF STUDENTS	4111
<i>L. Vartiak, G. Jaseckova</i>	
A VISION OF ESTABLISHING A COMPREHENSIVE SYSTEM OF UNIVERSITY TEACHER EDUCATION AT UNIVERSITY – A SYSTEMATIC SEARCH FOR ANSWERS	4116
<i>J. Trabalíková, L. Hrebeňárová</i>	
WHAT DO WE NEED TO LEARN WHEN WE BECOME ADULTS?	4124
<i>K. Schneider</i>	
DEVELOPMENT OF MATHEMATICAL LITERACY IN THE TASKS OF THE NEW CONCEPT OF INFORMATICS FROM THE PERSPECTIVE OF FUTURE TEACHERS	4125
<i>J. Wossala, R. Dofková, P. Seidlová</i>	
HYBRID CLASSROOM AND LEARNING SPACE DESIGN FOR PEDAGOGICAL INNOVATION	4132
<i>M. Löhrer, J. Lemm</i>	
EXPRESSION IN DRAWING AS AN EVIDENCE OF ROMA PUPIL IDENTIFICATION WITH ENVIRONMENT IN WHICH THEY LIVE	4137
<i>L. Horňák, M. Zbojan</i>	
TURNING PAGES, SCROLLING OR SWIPING: AN EVALUATION OF INTERACTIVE PICTURE BOOK APPLICATIONS FOR ELEMENTARY SCHOOL	4144
<i>M. Schalk, E. Schmidthaler, S. Hinterplattner, B. Sabitzer</i>	
CHANGES IN THE SOCIAL RESPONSIBILITY OF UNIVERSITY STUDENTS INVOLVED IN WIKIPEDIA ARTICLE EDITION	4151
<i>E. Madrázo, A. Sarrionandía-Ibarra, G.A. Esteban, A. Peña, U. Izquierdo</i>	
REMOTE LEARNING ADAPTATION ON THE PRACTICE OF HISTOLOGY AND ANATOMY OF THE SKELETAL AND NERVOUS SYSTEMS IN THE SUBJECT OF HUMAN PHYSIOLOGY FOR STUDENTS OF HUMAN NUTRITION AND DIETETICS	4159
<i>M.C. Morán, M. Riba, M.E. Juan</i>	
AUTISM AND MATHEMATICAL CREATIVITY IN CHILDHOOD FROM THE POINT OF VIEW OF KINDERGARTEN TEACHERS	4167
<i>M. Tzohar-Rozen, A. Kasirer</i>	
A SURVEY ON PRODUCTIVITY OF HIGHER EDUCATION AND TEACHING METHODS DURING THE PANDEMIC IN TURKEY	4168
<i>B. Bulunmaz, R. Bilge, B. Coban, F. B. Uysal</i>	
SOVIET MILITARY HISTORY IN THE CURRICULUM OF THE POST-SOVIET EDUCATIONAL SPACE: NECESSITY, TOPICALITY, RECOMMENDATIONS	4177
<i>M. Burima</i>	
INFLUENCE OF THE COVID-19 PANDEMIC ON THE PHYSICAL ACTIVITY AND TRAINING OF STUDENTS AT MEDICAL UNIVERSITY OF PLOVDIV	4182
<i>P. Kasnakova, A. Mihaylova, Z. Zheleva, S. Harizanova, D. Bakova, D. Davcheva, T. Deneva, R. Stoyanova, E. Toseva, G. Petkova, A. Tosheva, D. Vicheva</i>	
ABOUT THE QUALITY AND SUSTAINABLE EDUCATION IN EUROPEAN COUNTRIES: A COMPARATIVE ECONOMETRIC ANALYSIS	4187
<i>K. Murillo, E. Rocha</i>	
CURRICULUM DEVELOPMENT FOR CLOUD SERVICES: ANSWERING THE NEEDS OF THE JOB MARKET	4197
<i>L. Aunimo, M. Brkljacic, T. Lintilä, A. Camara, L. Mrsic</i>	
BENEFITS OF USING SERIOUS GAMES IN THE ELDERLY: A SYSTEMATIC LITERATURE REVIEW	4203
<i>A. Murciano-Hueso, B.M. Gutiérrez-Pérez, A.V. Martín-García</i>	
PUTTING STUDENTS INTO TEAMS IS NOT ENOUGH TO DEVELOP THEIR TEAMWORKING SKILLS: HOW TO ENABLE, ENCOURAGE, OBSERVE AND ASSESS TEAMWORKING SKILLS	4210
<i>A. Frost</i>	

COMPARATIVE ANALYSIS OF CONCEPTUAL GUIDELINES FOR TRANSITION PRESCHOOL - PRIMARY SCHOOL <i>D. Bethere, L. Pavitola, J. Grava</i>	4211
SCHOOLWORK ENGAGEMENT AND SCHOOL BURNOUT AMONG PRIMARY SCHOOL STUDENTS IN ESTONIA <i>A.M. Näkk, I. Timoštšuk</i>	4222
THE CHALLENGES AND DIRECTION OF PRIMARY AND SECONDARY SCHOOLS' ONLINE EDUCATION IN KOREA UNDER THE COVID-19 SITUATION <i>S. Hong, S.C. Yang</i>	4227
STUDENT'S DIGITAL TRANSFORMATION DURING HIGHER EDUCATION: ENTRANCE AND EXIT DIGITAL PROFILE <i>I. Messias, A. Loureiro</i>	4234
INTEGRATING PROBLEM-BASED LEARNING INTO TEACHING SUSTAINABLE DEVELOPMENT <i>A. Balžekienė, A. Daubarienė</i>	4243
APOLLONIUS' PROBLEM PLC AND PCC IN PROSPECTIVE MATHEMATICS TEACHERS TRAINING USING ICT <i>D. Nocar, J. Vaško, T. Zdráhal</i>	4253
GENERATION OF PERSONALIZED ADVICE FOR LEARNERS FROM LOG FILES <i>L. Capus, Y.I. Nsounwoundi Mefire</i>	4263
HEALTH GERONTECHNOLOGY IN AGEING: A QUANTITATIVE STUDY <i>B.M. Gutiérrez-Pérez, A. Murciano-Hueso, J. Martín-Lucas, S. Serrate-González, P. Torrijos-Fincias, A.V. Martín-García</i>	4270
OPEN SOURCE EXPERIMENTS IN QUANTUM PHOTONICS: AN AFFORDABLE APPROACH <i>S. Ritter, J. Kretzschmar, F. Sojka, T. Kaiser, R. Geiss, T. Vogl, F. Eilenberger</i>	4278
VALIDATION OF A MEASUREMENT INSTRUMENT FOR AN E-LEARNING SYSTEM IN PROJECT MANAGEMENT AND TECHNOLOGY TRANSFER IN THE DIGITAL ERA <i>L. Babineau</i>	4279
HIGHER EDUCATION STUDENTS' PERCEPTION TOWARDS THE PORTUGUESE AND FOREIGN MEDIA SECTOR <i>N.S. Morais, J. Martins, M. Midões</i>	4283
ENHANCING ENGAGEMENT AND INCLUSIVITY THROUGH ACTIVITIES CO-DESIGNED WITH UNDERGRADUATES - A CASE OF INDUCTION WEEK FOR BUSINESS MANAGEMENT <i>L. Cunningham, C. Holtham</i>	4289
MAKING-UP FOR LOST CLINICAL TIME DURING COVID-19 BY MERGING UNDERGRADUATE NURSING FOUNDATIONS AND HEALTH ASSESSMENT CLASSES: 4 SIMINTENSIVES SESSIONS DELIVER A SEMESTER'S CURRICULUM FOR 2 COURSES <i>L. Cimino, M. Hickey</i>	4297
USEFULNESS OF THE PILOT PROJECT FOR THE IMPLEMENTATION OF THE FLIPPED CLASSROOM IN THE OFFICIAL MASTER'S DEGREE IN HUMAN NUTRITION OF THE UNIVERSITY OF GRANADA DURING THE COVID 19 PANDEMIC <i>M.T. Nestares, M. López-Frías, M. Flor-Aleman, C. Sánchez, V.A. Aparicio, J.L. Quiles</i>	4301
TRANSITION OF EDUCATIONAL PARADIGMS <i>M. Klekovska, C. Martinovska Bande, A. Kotevski</i>	4305
EPISTEMOLOGY AND EDUCATION IN THE DIGITAL AGE – A POSTPHENOMENOLOGICAL VIEW <i>M. Marom, G. Wellner, I. Levin</i>	4315
SOCIO-SPORTIVE EXPERIENCE AND INFORMAL EDUCATION OF CHILDREN AND YOUNG PEOPLE: CONTRIBUTIONS TO THE CITIZENSHIP OF NEW GENERATIONS <i>V. Ramalho, H. Belchior-Rocha</i>	4316
REIMAGINING LEARNING IN THE 21ST CENTURY-A CASE STUDY ON HYFLEX BASED APPROACH OF MIDDLE EAST COLLEGE, OMAN <i>K. Gopakumar Rajalekshmi, D. Bino, A. Srivastav</i>	4322
EXPLORING THE 'THEATERS' OF REMOTE DESIGN TEACHING <i>N. Ceccarelli, F. Arras</i>	4331
INTEGRATING VIDEOGAME DEVELOPMENT AND SOFTWARE ENGINEERING IN A COLLEGE SENIOR ELECTIVE COURSE <i>J. Sung, K. Sung</i>	4338

APPROACHING NEW TECHNOLOGIES TO AGRONOMICAL SCIENCES DEGREE STUDENTS	4346
<i>M.F. López-Climent, S.I. Zandalinas, V. Vives-Peris, J.L. Rambla Nebot, R.M. Pérez-Clemente, A. Gómez-Cadenas, C. de Ollas, V. Arbona, M. González-Guzmán</i>	
USING AN UNDERGRADUATE DECISION SCIENCE COURSE TO PREPARE BUSINESS STUDENTS FOR THE LATER STUDY OF DATA SCIENCE AND ANALYTICS	4350
<i>M. Conyette</i>	
STIMULATING EDUCATIONAL INNOVATION IN STEAM HIGHER EDUCATION: AN INTERDISCIPLINARY COLLABORATIVE TRUE STORY	4356
<i>I. Peeters</i>	
PEDAGOGICAL COMPETENCY INNOVATION FOR ELEMENTARY SCHOOL TEACHERS: NEW MODELS FOR POST COVID-19	4362
<i>V. Yuli Eriyana, A. Ghufron, H. Haryanto, F.N. Mahmudah</i>	
THE USE OF SOCIAL NETWORKS AS AN ACTIVE LEARNING STRATEGY IN PHYSIOTHERAPY STUDENTS	4363
<i>L. Suso Martí, F. Cuenca-Martínez, B. Pérez-Domínguez, F. Domínguez-Navarro, A. López Brull, M. Blanco-Díaz, J. Calatayud-Villalba, A. Herranz-Gómez, J. Casaña-Granell</i>	
POSSIBILITIES OF USING QR CODE CUBES IN PRIMARY MATHEMATICS TEACHING	4364
<i>R. Dofková, A. Najdek, J. Wossala</i>	
IMPROVING THE SCIENTIFIC SKILLS OF PHYSICAL THERAPY STUDENTS THROUGH COLLABORATIVE LEARNING	4370
<i>L. Suso Martí, F. Cuenca-Martínez, F. Domínguez-Navarro, B. Pérez-Domínguez, A. López Brull, J. Calatayud-Villalba, A. Herranz-Gómez, M. Blanco-Díaz, J. Casaña-Granell</i>	
THE DISSEMINATION OF CULTURAL HERITAGE THROUGH THE CREATION OF AN INTERACTIVE WEB REPOSITORY	4371
<i>C. Ortiz, R. Ramirez Coronel, V. Noriega</i>	
EDUCATIONAL STRATEGIES FOR BEHAVIOURAL CHANGE FOR NEUROLOGICAL PATIENTS WITH MOTOR IMPAIRMENT	4378
<i>F. Cuenca-Martínez, L. Suso Martí, F. Domínguez-Navarro, A. Herranz-Gómez, B. Pérez-Domínguez, A. López Brull, J. Calatayud-Villalba, M. Blanco-Díaz, J. Casaña-Granell</i>	
WHAT ARE SCIENCE PARKS? A REVIEW OF THE STATE OF ART, ADEQUATE TERMINOLOGY AND TYPOLOGIES	4379
<i>O. Frances, M. Palomar</i>	
EFFECTIVENESS OF PAIN NEUROSCIENCE EDUCATION (PNE) IN PATIENTS WITH PERSISTENT PAIN DUE TO FIBROMYALGIA	4388
<i>F. Cuenca-Martínez, L. Suso Martí, B. Pérez-Domínguez, F. Domínguez-Navarro, A. López Brull, J. Calatayud-Villalba, M. Blanco-Díaz, A. Herranz-Gómez, J. Casaña-Granell</i>	
M-LEARNING AT DIFFERENT STAGES OF THE TEACHING PROCESS	4389
<i>L. Klubal, P. Bohackova, K. Kostolanyova</i>	
FROM FACE-TO-FACE TO REMOTE TEACHING OF 4IR CONCEPTS	4394
<i>M. Turpin, S. Kruger</i>	
MARKETING FOR HIGHER EDUCATION INSTITUTIONS: UNLEASHING THE POWER OF PART-TIME MARKETERS	4399
<i>S. Marques, A. Estima</i>	
MATHEMATICS TEACHING AND LEARNING PROCESS: THE EFFECT OF PROBLEM-BASED LEARNING	4405
<i>P.B. Teixeira, M.J. Rodrigues, A. Gonçalves</i>	
APP ROTEIRO ENTRE-MARÉS: A PEDAGOGICAL TOOL FOR OCEAN LITERACY IN AND OUT OF THE CLASSROOM	4411
<i>D. Pacheco, C. Faria</i>	
PERCEPTIONS OF VOCATIONAL TRAINING INSTITUTE STUDENTS TOWARDS E-LEARNING PLATFORMS DURING THE PANDEMIC	4412
<i>P. Anagnostou, N. Nikolova</i>	
ACTIVE AND HEALTHY AGEING MONITORING SYSTEM (AHAMS): AN INTEGRATED HEALTHCARE SYSTEM FOR SENIORS	4419
<i>A. Buffagni, M. Frausin</i>	
LOGIC CIRCUITS: FROM PAPER TO WEB	4429
<i>S. Kristofik, A. Langova, S. Rericha</i>	
TEACHERS' TRAINING ON SOCIAL AND EMOTIONAL LEARNING (SEL): FOOD FOR THOUGHT STARTING FROM LITERATURE AT THE TIME OF COVID-19	4437
<i>L. Mortari, R. Bombieri</i>	

THE IMPACT OF PEER-TEACHING AT THE UNIVERSITY OF DERBY'S COVID-19 ASYMPTOMATIC TEST CENTRE <i>L. Fretwell, N.T. Ekumah</i>	4445
COLLABORATION BETWEEN UNIVERSITY AND DUAL TRAINING CENTER: THE CASE OF PAPER MANUFACTURING AND RECYCLING PROCESSES <i>F. Serra-Parareda, H. Oliver, Q. Tarrés, M. Delgado-Aguilar, M. Alcalà</i>	4451
AN EXPERIENCE WITH DESMOS IN THE STUDY OF THE QUADRATIC FUNCTION <i>L. Dias, M.P. Oliveira, N.R. O. Bastos</i>	4456
FUNCTIONAL, SOCIAL AND ENVIRONMENTAL PERFORMANCE OF PRIMARY SCHOOL OUTDOOR SPACES <i>S. Baptista Rosa, P. Lourenco, A. Alegre</i>	4465
HOW TO APPLY EXPERIENTIAL LEARNING IN DEVELOPING STUDENTS' LEADERSHIP COMPETENCIES? CASE OF THE MILITARY ACADEMY OF LITHUANIA <i>V. Giedraityte, R. Kazlauskaitė Markeliene</i>	4475
UA INFORMA: EDUCATION FOR SUSTAINABILITY FROM THE ACADEMIA TO THE COMMUNITY <i>L. Pombo, M. M. Marques, F. Guimarães</i>	4476
INITIAL DIAGNOSTIC OF SUSTAINABLE DEVELOPMENT GOALS IN A MASTER DEGREE OF THE INDUSTRIAL ENGINEERING SCHOOL AT UNIVERSITAT POLITÈCNICA DE VALÈNCIA <i>M.J. Verdecho, B. Andrés, J. Mula</i>	4485
THE IMPACT OF ONLINE PEER ASSESSMENT ON STUDENT LEARNING IN HIGHER EDUCATION: A SYSTEMATIC REVIEW OF LITERATURE <i>P. Loureiro, M.J. Gomes</i>	4490
ADDRESSING THE NEED FOR A MORE GENDER BALANCED PARTICIPATION IN ENGINEERING EDUCATION <i>C. Cassidy, K. O'Sullivan, N. Fitzgerald, I. Morris, F. Boyle, G. Corkery, J. Walsh</i>	4497
ECOFORMATION AND CREATIVITY IN THE EDUCATION OF BRAZILIAN YOUTH IN SOCIAL VULNERABILITY <i>V. Simao, S.M. Andrade, V.L. Silva</i>	4507
IMPACT OF EDUCATION EXPENDITURE ON ECONOMIC DEVELOPMENT IN THE BALTIC STATES <i>G. Dudzevičaitė</i>	4515
OPENESS IN EDUCATION: A TECHNOLOGICAL AND CONCEPTUAL FRAMEWORK <i>T. Minerva, M. Jana, C. Bellini, A. De Santis, K. Sannicandro</i>	4521
ME&MYCITY LEARNING ENVIRONMENT AND ENTREPRENEURSHIP EDUCATION <i>A. Ojala</i>	4527
FEEDBACK CHALLENGES IN SPRINT-BASED ASSESSMENTS <i>S. Cox</i>	4534
A LOGIC BASED AFFECTIVE TUTORING SYSTEM THAT USES REINFORCEMENT LEARNING FOR DISCOVERING TEACHING STRATEGIES <i>A. Dougalis, D. Plexousakis</i>	4535
FOSTERING STUDENT ENTREPRENEURSHIP MINDSET THROUGH THE EMBEDDING OF INTERNATIONAL STUDENT TEAMS INTO START-UPS AND THE STUDY OF COMPANY-DRIVEN OPEN QUESTIONS <i>L. Brunie, S. Ben Mokhtar, D. Brac de la Perrière, D. Fabrègue, L. Tondu, A. Cordier, V. Delplanque, A. Bertrand, O. Coueffe, H. Kosch, E. Damiani, S. Cimato, I.A. Awada, A. Olaru, R. Wossidlo, G. Fiorentino, M. Lombardo, F.S. Nucci, O. Cramariuc</i>	4544
THE PHOTODENTRO LEARNING SCENARIO REPOSITORY AND LEARNING SCENARIO DESIGNER TOOL: AN ONLINE ENVIRONMENT FOR CREATING, ORGANIZING, AND SHARING STRUCTURED LEARNING SCENARIOS AND CUSTOMIZABLE TEMPLATES <i>E. Megalou, K. Alexandris, E. Oikonomidou</i>	4550
EFFECTIVENESS OF 360° IMMERSIVE VIRTUAL REALITY FOR THE ACQUISITION OF SKILLS RELATED WITH EMPATHY IN PHYSIOTHERAPY STUDENTS: A PILOT STUDY <i>L. Rubio-Martínez, A. Bermejo-Franco, L. Martínez-Caro, M. Medina-Sampedro, M.I. Gaviña-Barroso, R. Uccero-Lozano</i>	4561
A PRELIMINARY USER INTERFACE DESIGN FOR A RHEUMATOID ARTHRITIS VIRTUAL REALITY EXPERIENCE <i>A. Richardson, C. Seals, K. Garza, T. Xie, S. Kim, S. Akula</i>	4567

LMOOC INTRODUCTION TO PORTUGUESE: DESIGN, IMPLEMENTATION, EVALUATION	4575
<i>F. Silva, J. Veloso, A.I. Fernandes, I. Martins, N. Regadas, A. Seixas</i>	
STUDENT GUIDELINES TO DO RESEARCH PROJECTS IN COLLABORATION WITH COMPANIES	4584
<i>M. Maruri, M. Barturen, J. Madariaga, J. Sanchez-Beaskoetxea, I. Basterrechea, I. Sotes</i>	
THE ROLE OF THE PEER-ASSESSMENT IN TEACHERS' EDUCATION	4593
<i>N. Nikolova, S. Ivanov</i>	
DIFFERENTIATED TEACHING - AN EFFECTIVE WAY PROMOTING STUDENTS' POTENTIAL	4602
<i>L. Tavdgiridze, N. Sherozia, I. Khasaia, D. Doborjginidze</i>	
POSSIBILITIES OF DEVELOPING READING LITERACY IN CONNECTION WITH THE SUBJECT OF PHYSICAL EDUCATION	4606
<i>K. Barancová</i>	
PLAY IN THE EARLY EDUCATION CURRICULUM	4611
<i>L. Tavdgiridze, N. Sherozia, M. Bolkvadze, K. Shotadze, D. Doborjginidze</i>	
USE OF THE KALDOR SQUARE IN WORLD ECONOMICS COURSES	4615
<i>F. El Ghali Ghorafi, M.M. Capobianco Uriarte, M.P. Casado Belmonte, E. Besorabova</i>	
LEARNING AND TEACHING EXPERIENCE THROUGH TOURISM ECONOMIC BLOGS	4623
<i>F. El Ghali Ghorafi, M.M. Capobianco Uriarte, G.M. Marin Carrillo, E. Besorabova</i>	
EMERGENCY ADAPTATION TO DISTANCE LEARNING: NO MAGIC BULLET, BUT WHERE THERE'S A WILL, THERE'S A WAY	4627
<i>C. Pulfrey</i>	
INVESTIGATING PREDICTORS OF ADOLESCENTS' INTENTION TO DONATE STEM CELLS TO LEUKAEMIA PATIENTS: A STUDY BASED ON THE THEORY OF PLANNED BEHAVIOUR	4634
<i>J. Holzer, D. Elster</i>	
RISK FACTORS IN THE RELATIONSHIPS BETWEEN PARENTS OF CHILDREN WITH DISABILITIES AND EDUCATORS	4645
<i>J. Michalík, I. Hruběšová, Z. Haiclová, L. Nováková, P. Tomalová</i>	
DEVELOPING A TRANSFORMATIVE MODEL FOR SCHOOL LEVEL DATA COMPLEX ANALYSIS TO IMPROVE STUDENT ACHIEVEMENTS	4651
<i>P. Pestovs, D. Namsone</i>	
INNOVATIVE CLASSROOM AND INFORMAL LEARNING SPACE: THE SENSE OF BELONGING AND POSITIVE LEARNING EXPERIENCE	4656
<i>L. Collina, G. Gerosa, A.G. Manciaracina</i>	
A LEXICAL ANALYSIS OF THE LANGUAGE OF SECONDARY SCHOOL EDUCATION IN NIGERIA	4664
<i>O. Bello, C. Ogbulogo</i>	
THE PIVOT ONLINE AND ITS IMPLICATIONS: A CASE STUDY FROM HOSPITALITY MANAGEMENT EDUCATION PRIORITISING THE PART-TIME LEARNER	4673
<i>A. Conway, J. Hussey, D. Melia, R. Burbach</i>	
TEACH PROGRAMMING IN MS TEAMS	4683
<i>V. Stoffova, V. Gabalová, R. Horváth</i>	
AUGMENTED AND VIRTUAL REALITY IN SCIENCE LAB TRAINING	4690
<i>T. Kaiser, J. Kretzschmar, C. Helgert, R. Geiss, T. Pertsch, A. Tünnermann</i>	
EXPLORING STUDENT ENGAGEMENT IN MUSICAL ACTIVITIES THROUGH COLLAGE	4691
<i>R. Girdzijauskienė</i>	
EMBODIED COGNITION AND MANAGEMENT LEARNING: THE NEED FOR SENSORIAL, EMOTIONAL, AND SPIRITUAL SKILLS FOR SOLVING COMPLEX MANAGERIAL PROBLEMS	4698
<i>I. Sluka, I. Ludviga</i>	
ENABLING ADAPTIVE COURSES IN MOODLE	4707
<i>M. Winterhagen, A. Hedderoth, R. Srbecky, F. Fischman, B. Wallenborn, M. Then, B. Vu, W. Fraas, J. Dettmers, M. Hemmje</i>	
BLENDED TEACHING DESIGNS BASED ON BOPPPS MODEL IN MULTICULTURAL CLASSROOM	4714
<i>Y.F. Yue, Y.Y. Chen</i>	
CITIZENSHIP EDUCATION TO PROMOTE INCLUSION	4721
<i>D. Chiusaroli</i>	

WELCOME TO UR, ATHENS AND POMPEII: A TRAVEL TIME AS AN EDUCATIONAL INNOVATION TO TRANSFORM CITIZENSHIP AND DEMOCRACY LEARNING <i>G. Gándara, A.G. Rodríguez, P. Aldape</i>	4725
INCLUSION BEYOND PREJUDICE <i>D. Chiusaroli</i>	4731
DIDACTICAL STRUCTURAL TEMPLATES ENABLING LEARNER ADAPTIVE FLOW <i>M. Winterhagen, S. Wetzler, R. Srbecky, D. Heutelbeck, B. Wallenborn, M. Hemmje</i>	4735
GAMIFICATION AND AUGMENTED REALITY IN EDUCATIONAL RESEARCH <i>G. Arduini</i>	4744
REDESIGNING FASHION DESIGN IN HIGHER EDUCATION PROGRAMS: THE STUDENT'S ROLE IN IMPROVING DIDACTIC APPROACHES <i>G. Fabro Cardoso, A. Spagnoli</i>	4749
HARMONY IN DIVERSITY: MANAGING A MULTICULTURAL LEARNER GROUP <i>Y.F. Yue, Y.Y. Chen, Z.H. Xie</i>	4757
IMPLEMENTING A COMPETENCE AND QUALIFICATIONS PROFILE COMPONENT TO SUPPORT COMPETENCE AND QUALIFICATION BASED LEARNING IN HIGHER EDUCATIONAL INSTITUTIONS <i>R. Srbecky, I. Ochsendorf, M. Then, M. Winterhagen, B. Wallenborn, M. Hemmje</i>	4765
CONCEPT FOR A SYSTEM ARCHITECTURE FOR AN APPLIED LEARNING GAME FOR A WORK TASK SIMULATION SUPPORTING TRAINING OF WORK DESIGN SKILLS DURING QUALIFICATION-BASED LEARNING <i>R. Srbecky, M. Winterhagen, B. Wallenborn, M. Then, B. Vu, W. Fraas, J. Dettmers, M. Hemmje</i>	4775
DROPOUT PHENOMENON IN A HIGHER EDUCATION INSTITUTION IN THE NORTH OF PORTUGAL, AND THE REASONS BEHIND IT <i>M. Santos Lopes, P. Sismeiro Pereira, P. Fortunato Vaz</i>	4783
INDIVIDUALIZED BOTTOM-UP LISTENING SKILLS TRAINING THROUGH SELF-ACCESS MATERIALS AND REAL-TIME INSTRUCTIONS <i>M. Yamauchi</i>	4791
"I HAVE LITERALLY NEVER THOUGHT ABOUT THE PRIVACY OF MY ACADEMIC INFORMATION LIKE THIS": PERCEPTIONS OF DATA PRIVACY IN LEARNING MANAGEMENT SYSTEMS <i>J.A. Jiang, F. Robledo Yamamoto, V. Nagy, M. Zander, L. Barker</i>	4797
MUSIC AS AN ENHANCER OF WELL-BEING IN EARLY CHILDHOOD <i>R. Monteiro, D. Noronha-Sousa, S. Sá, R. Oliveira, E. Paulo, R. Martins</i>	4798
EXPLORING CRITICAL THINKING, MORAL REASONING AND ACADEMIC SUCCESS AS IMPORTANT COMPONENTS OF PERSONAL AND SOCIAL LIFE <i>J. Knapík, M. Kosturková</i>	4799
MUSIC IN KINDERGARTEN: ERADICATING STRESS AND ENHANCING DEVELOPMENT <i>A. Costa, D. Noronha-Sousa, A. Noronha, S. Sá</i>	4804
CYBERSECURITY AWARENESS IN SAUDI ARABIA: A SYSTEMATIC LITERATURE REVIEW <i>R. Hamdi</i>	4805
LEGAL CHANGES IN THE REGULATIONS OF SOCIAL SERVICES IN BULGARIA AND THE REFLECTION ON THE SOCIAL WORK EDUCATION <i>L. Vekova</i>	4816
THE NATURE: THE EMPOWERMENT OF CHILDREN IN EARLY CHILDHOOD <i>M. Moura, S. Sá, D. Noronha-Sousa, E. Paulo, R. Martins, J. Torres</i>	4822
THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOAL OF SMES FINANCING: DOES FINANCIAL RATIOS ANALYSIS HELP? <i>A. Lucas, A. Ramires, D. Monteiro</i>	4823
SELECTED TENDENCIES OF PROSOCIAL BEHAVIOUR OF TEACHER STUDENTS MEASURED BY PTM-R METHODOLOGY <i>J. Knapík, M. Kosturková</i>	4831
CHILDREN'S FEARS IN EARLY CHILDHOOD: A PROJECT WITH PARENTS AND EDUCATORS <i>A. Xavier, S. Sá, D. Noronha-Sousa, A. Noronha, P. Silva, E. Paulo, R. Martins</i>	4835
AN ANALYSIS OF A NATIONAL PROFESSIONAL DEVELOPMENT PROGRAM FOR DEVELOPING CYBERSECURITY AWARENESS EDUCATORS <i>M. Ahmad, R.S. Ab Hamid, N. Razali</i>	4836

A SYSTEMATIC LITERATURE REVIEW ON INTEGRATING COMPUTATIONAL THINKING INTO ENGLISH LANGUAGE COURSES LEARNING AND TEACHING IN K-12 EDUCATION	4842
<i>X. Li, J. van Braak, M. Valcke, G. Sang</i>	
TRAINING OF REMOTE EMPLOYEES AND LABOR LAW	4851
<i>P. Sládek, T. Sigmund</i>	
EXPLORING THE COLLABORATIVE POTENTIAL OF TABLET DEVICES IN HOME AND SCHOOL SETTINGS	4857
<i>L. Morgan</i>	
THE EFFECT OF EMPATHY ON THE SELF-EFFICACY OF PRIMARY EDUCATION TEACHERS DEPENDING ON THE YEARS OF EXPERIENCE IN THE NECESSARY INSTRUCTIONAL TECHNOLOGY CONTEXT	4862
<i>M. Tapaskou, A. Papadopoulou, A. Giannakoulopoulos</i>	
MEASURING THE EFFECTIVENESS OF IN-SERVICE TEACHER TRAINING THROUGH AN INTERNATIONAL ENGLISH LANGUAGE TEACHING QUALIFICATION	4869
<i>H.Y. Su, J.C. Chang</i>	
THE NARRATIVE OF THE GAME SPACE: A PLAYER'S LEARNING JOURNEY	4874
<i>A. Papaoulasopoulos, A. Papadopoulou, A. Giannakoulopoulos</i>	
USE OF THE QUIZZ CELL PHONE APPLICATION IN MATHEMATICS BY 5TH GRADE STUDENTS	4882
<i>E. Sacramento, A. Soares, P. Catarino, M. Reis</i>	
ANALYSIS OF INTEGRATION STRATEGIES AND TACTICS OF TECHNOLOGY AND TECHNOLOGICAL RESOURCES IN THE EDUCATIONAL MODEL IN SPAIN (SECONDARY EDUCATION AND BACCALAUREATE)	4889
<i>J. Garcia Alonso</i>	
TECHNOLOGY INTEGRATION MODELS IN MATHEMATICS TEACHING: ANALYSIS OF QUALITY CRITERIA	4894
<i>M. Carneiro, A. Soares, P. Catarino, M. Reis</i>	
CURRICULAR PROPOSAL FOR THE INTEGRATION OF THE EDUCATIONAL TECHNOLOGY AREA IN PROGRAMS RELATED TO TEACHER TRAINING	4903
<i>J.C. Castellanos-Ramírez, S.A. Niño Carrasco, K.L. Parra Encinas</i>	
I CAN SEE CLEARLY NOW: A PEER-REVIEW POSING PROBLEMS TASK WITH FUTURE ELEMENTARY TEACHERS	4904
<i>A.P. Aires, M.M. Nascimento, P. Catarino</i>	
PROMOTING QUALITY CAREER PATHS: MPLSAP A SUCCESS STORY IN HIGHER EDUCATION	4912
<i>C. De-Pablos-Heredero, M. De-Pablos-Heredero</i>	
DEVELOPMENT OF TWO DECISION AIDS TO EDUCATE PATIENTS WITH CHRONIC KIDNEY DISEASE: A PATIENT ACCEPTABILITY SURVEY	4923
<i>R. Allen, F. Saeed</i>	
CONNECTING WOMEN WITH RESOURCES TO THRIVE: CREATING A DIGITAL APP TO EMPOWER WOMEN TO SUPPORT HEALTHY INFANTS	4924
<i>R. Allen, B. Batch, J. Roberts, A. Nakonechmyi</i>	
MAKING BY IMAGINING: PRODUCING AN EXPERIENCED BASED ARCHITECTURE IN THE ARCHITECTURAL DESIGN STUDIO	4925
<i>J. Gordon</i>	
PUBLIC HEALTH PROGRAMS IN HIGHER EDUCATION: AN ANALYSIS OF GRADUATE PUBLIC HEALTH PROGRAMS AT HISTORICALLY BLACK COLLEGES AND UNIVERSITIES	4932
<i>T. Clark, N. Brown, H. Aubrey, K. Anderson, T. Jordan, D. Hill-Eley, H. Swanson, E. Cameron</i>	
OCCUPATION REFUGE: AN EXPERIENCE IN NON-FORMAL EDUCATION FROM INTERSECTIONS BETWEEN ART, SCIENCE AND TECHNOLOGY	4937
<i>R. Nobrega, A.C. Cunha</i>	
DESIGN AND DEVELOPMENT OF AN APP TO SUPPORT THERAPISTS TEACHING TAIWANESE CHILDREN WITH WRITTEN DISORDER TO LEARN CHINESE CHARACTERS HANDWRITING	4943
<i>K.H. Lin, S.S.C. Young, C.N. Lan, T.S. Lin</i>	
IEEE STANDARDS: COVID-ERA LEARNING TECHNOLOGIES POWERING INNOVATION AND STANDARDS EDUCATION PROGRAMS	4951
<i>E. Vega Janica</i>	

INDUCTION OF NOVICE HOMEROOM TEACHERS IN CHILE: CHARACTERIZATION OF THE SUPPORT THEY RECEIVE DURING THEIR FIRST YEAR OF WORK FOR LEARNING THE PROFESSION <i>K. Moreno, R. Colomina, T. Mauri</i>	4959
STAYING OFF-CAMPUS AMONG PUBLIC UNIVERSITY STUDENTS IN MALAYSIA: CHALLENGES AND MOTIVATION <i>J.C. Lee, S. Bujang, A.S. Bin Shminan, R.U. Khan, M. Aren, K.X. Lim</i>	4960
PREPARING FUTURE SOCIAL WORKERS (STUDENTS) TO WORK WITH FORCED MIGRANTS, USING EXPERIENTIAL EDUCATION METHODS <i>V. Demidenko, V. Kondrataviciene</i>	4965
FOSTERING CREATIVITY IN EDUCATION WITH THE DESIGN OF ANIMATED SHOWS FOR CHILDREN <i>B. Hasirci, D. Hasirci</i>	4970
SOCIO-PEDAGOGICAL APPROACH FOR REAL INCLUSION IN THE EDUCATIONAL PROCESS OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS (SEN) IN BULGARIA <i>D. Spasova, T. Gerganova</i>	4975
THE PEER-TUTORING ACTIVITIES DURING THE COVID-19 PANDEMIC: HOW TECHNOLOGY, E-LEARNING, AND ONLINE ACTIVITIES PROMOTED SOCIALIZATION AND WELLBEING IN THE ACADEMIC CONTEXT <i>C. Annovazzi, D. Meneghetti, R. Rella, F. Zuccoli</i>	4984
DIGITALIZATION IN THE EDUCATION OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS (SEN) IN SUPPORT OF THEIR PERSONAL DEVELOPMENT <i>D. Spasova, T. Gerganova</i>	4993
PSYCHOMOTOR EDUCATION AS A SUPPORT FOR MATHEMATICS ACQUISITION IN PRESCHOOL EDUCATION <i>M. Bodart, M. Bruyninckx, M. Vandecassye</i>	4999
IS SMALL THE NEXT BIG THING IN HIGHER EDUCATION? KEY FINDINGS FROM THE IMPLEMENTATION OF A SPECIFIC MICROCREDENTIAL APPROACH <i>C. Friedl, S. Meier, C. Maierhofer</i>	5006
DEVELOPMENT OF UNIVERSITY TEACHERS' PROFESSIONAL COMPETENCIES <i>M. Sirotova, T. Šeben Zatlková</i>	5011
APPLICATION OF PELTIER ELEMENTS AS RENEWABLE ENERGY SOURCES <i>D. Srpak, I. Šumiga, T. Horvat, J. Nađ</i>	5020
A MOBILE TREASURE HUNT GAME FOR LANGUAGE LEARNING <i>B. Boras, T. Jagušť</i>	5029
TEACHING STATISTICS IN AGRICULTURAL ENGINEERING: PROMOTING SELF-LEARNING FOR COMPETENCY ACQUISITION <i>M. Llompарт, J. Cifre, P. Martí, F. Sanfèlix</i>	5034
STUDY ON THE PROFESSIONAL DEVELOPMENT OF PRIMARY SCHOOL TEACHERS <i>R.S. Kiru, L. Maftçi</i>	5039
PROJECT BASED LEARNING FROM K12 TO UNIVERSITY EDUCATION <i>F. Sanfèlix, P. Martí, J. Cifre, M. Llompарт</i>	5045
THE INTEGRATION OF A ROBOT INTO AN AUTOMATED ENVIRONMENT AT UNIVERSITY NORTH <i>Z. Busija, J. Srpak, S. Švoger, D. Srpak</i>	5050
AN APPROACH TO FIGHTING DISINFORMATION USING A PEER TO PEER EDUCATIONAL MODEL OF MEDIA EDUCATION: INVESTMENTS IN A SAFER FUTURE <i>I. Rotaru, I. Dragomir, L. Drinc, G. Scutaru, I. Selim</i>	5058
ADAPTIVE E-LEARNING AND ADAPTIVE ALGORITHMS FROM THE PERSPECTIVE OF M-LEARNING <i>L. Klubal, V. Gybas</i>	5068
THE USE OF COLLABORATIVE VIRTUAL ENVIRONMENTS (CVES) FOR ENGINEERING EDUCATION IN HIGHER EDUCATION INSTITUTIONS <i>J. Moolman, G. Corkery, J. Walsh, S. Morrissey-Tucker</i>	5073
ASSESSMENT OF TEACHERS' SUBJECT DIFFICULTIES AS AN IMPORTANT SOURCE OF INFORMATION ABOUT POSSIBLE BARRIERS IN THE EDUCATION QUALITY MANAGEMENT SYSTEM <i>B. Ilyukhin, N. Serbina, E. Benks, E. Lepustina</i>	5082
WHICH LECTURER TOOL IS MORE EFFECTIVE– A TABLET OR A REGULAR WHITEBOARD? <i>E. Trotskovsky</i>	5090

ASSISTING THE TEACHING OF MATHEMATICS IN PRIMARY SCHOOLS USING INTELLIGENT SOFTWARE <i>N. Annuš</i>	5096
SUSTAINABLE DEVELOPMENT PRACTICES TO FOSTER FUTURE SMES BUSINESS <i>E. Mitan</i>	5103
EXAMINATION OF PRE-SERVICE MATHEMATICS TEACHERS' ORCHESTRATION TYPES DURING TECHNOLOGY-ENHANCED LESSONS <i>S. Alan, H. Akkoc</i>	5111
PARENTS IN THE ROLE OF TEACHER'S ASSISTANTS <i>M. Šantalab, J. Lasic Lazic</i>	5120
SCHOOL PROFESSIONAL STAFF DURING DISTANCE LEARNING: (CHANGED) ROLES IN THE ONLINE ENVIRONMENT <i>J. Maravić, K. Bilić Meštrić, M. Hribar</i>	5126
EDUCATIONAL 'ESCAPE ROOM' AS A LEARNING TOOL FOR EXPERIMENTAL SUBJECTS IN CHEMISTRY DEGREE <i>M. Vergara-Barberán, A. Monleón, A. Sanz-Marco, M.J. Lerma-García, M. Beneito-Cambra, C. Vila, G. Blay, R. Gisbert, I. Fernández, M.L. Cardona, J.R. Pedro</i>	5132
VIRTUAL REALITY ACTIVITIES TO PROMOTE THE CHEMICAL ENGINEERING DEGREE TO HIGH SCHOOL AUDIENCES <i>M.J. Díaz Villanueva, J.R. Portela Miguélez, I. Caro Pina, C.J. Álvarez Gallego, L. Casas Cardoso, I. de Ory Arriaga, A.M. Blandino Garrido, C. Mantell Serrano, R. Martín Minchero, L.I. Romero García, J. Sánchez Oneto, A. Montes Herrera, D.M. de los Santos Martínez, F. Lorenzo Díaz</i>	5138
THE ROLE OF MOBILE DIGITAL LIBRARIES IN THE MODERN INFORMATION SOCIETY: EMPIRICAL STUDY AMONG STUDENTS AND LIBRARY SPECIALISTS <i>M. Garvanova, E. Tsvetkova, E. Zdravkova-Velichkova</i>	5145
APPLICATION OF SIMULATION TOOLS COMBINED WITH PRACTICAL EXERCISES IN STEM TEACHING <i>L. Havaš, J. Srpak, I. Šumiga, I. Srpak</i>	5153
DEVELOPMENT OF AN ONLINE LEARNING PLATFORM IN DESIGN THINKING EDUCATION THROUGH A DESIGN BASED RESEARCH METHODOLOGY <i>M. Örnekoğlu Selçuk, M. Emmanouil, M. Grizioti, L. Van Langenhove</i>	5161
PRACTICAL RESULTS FROM BIBLIOGRAPHY RESEARCH OF MEDIA LITERACY AND COPYRIGHT <i>K. Planska-Simeonova, E. Zdravkova-Velichkova, S. Dimitrova, E. Tsvetkova</i>	5172
STUDENTS PERSPECTIVES ON CHALLENGES IN BLENDED PROJECT-BASED LEARNING (PBL) COURSE IMPLEMENTED IN FIRST-YEAR UNDERGRADUATE ENGINEERING <i>M. Asundi, R. Kandakatla, V. Talageri, M. Vijayalakshmi</i>	5178
A EUROPEAN CROSS-COUNTRY AND INTERDISCIPLINARY NEEDS ANALYSIS FOR THE ERASMUS+ PROJECT 'DIGITALHEIGHTS' ON DIGITAL COMPETENCE IN ONLINE ASSESSMENT IN HIGHER EDUCATION <i>N. Souleles, E. Papageorgiou, M. Samdanis</i>	5188
HOW CAN INTELLIGENT SOFTWARE HELP CHECKING ESSAY-TYPE ANSWERS OF ELECTRONIC TESTS? <i>N. Annuš</i>	5197
ASSESSING THE EFFECTIVENESS OF STUDENT'S PARTICIPATION IN AN ONLINE DISCUSSION FORUM <i>U. Koppikar, R. Amashi, M. Vijayalakshmi</i>	5205
ORGANIZATIONAL LEARNING WITH CRISES – TRIPLE LOOP LEARNING IN CYBER SECURITY EXERCISES <i>G. Østby, S.J. Kowalski</i>	5215
ACCEPTANCE OF TEAM ASSESSMENT AND SELF-ASSESSMENT BY HIGH SCHOOL STUDENTS <i>Z. Kubincová, K. Kolčák</i>	5225
THE ROLE OF THE 4 C'S IN ACADEMIC PERFORMANCE OF FIRST-YEAR STUDENTS <i>J.F. Luesia, I. Benítez, P.P. Pérez, J.F. Plaza, R.M. Vilches-Cansino, M. Sánchez-Martín</i>	5232
ENGAGING UNDERGRADUATE STUDENTS IN A COURSE COMPANION WEBSITE DEVELOPMENT – AN EXPERIENCE FROM A BIODIVERSITY LABORATORY CLASS <i>K.M. Yam</i>	5237
LEVERAGING SOCIO-CULTURAL DIMENSION IN CYBER SECURITY TRAINING <i>E.M. Ciuperca, C.E. Cîrnu, A. Stanciu, I. Cristescu</i>	5242

VIDEOS AND MATLAB FOR TEACHING CONIC SECTIONS	5249
<i>C. Solares, R. Blanco</i>	
A GAMEFUL DIGITAL LEARNING TOOL TO REFLECT GENDER ISSUES AND GENDERED IDENTITY FOR MIGRANTS OF THE MENA REGION IN AUSTRIA	5250
<i>C. Schlembach, B. Krucsay, U. Schäfer, B. Bienzle, U. Röhsner</i>	
MUSICAL BIOGRAPHY OF SLOVAK TEACHERS AND EDUCATORS	5255
<i>P. Kusý</i>	
INFLUENCE OF VARIABLES ON THE ACADEMIC SUCCESS OF HEALTH SCIENCE STUDENTS DURING ORAL AND WRITTEN EXAMS	5264
<i>G. Esquivia Sobrino, M.C. Grijota Martínez, A. Cifuentes Martínez, V. Gómez Vicente, V. García Sousa, J.V. García Velasco, E. Ausó Monreal</i>	
IMPACT OF LOCATION AND SPATIAL CONDITIONS ON STUDYING FROM HOME DURING THE COVID-19 PANDEMIC - A CASE STUDY OF SLOVENIA	5268
<i>J. Breznik, M. Foški, G. Čok, G. Mrak, A. Zavodnik Lamovšek</i>	
USING AN ENSEMBLE OF TRANSFORMER-BASED MODELS FOR AUTOMATED WRITING EVALUATION OF ESSAYS	5276
<i>A. Stanciu, I. Cristescu, E.M. Ciuperca, C.E. Cîrnu</i>	
FACE-TO-FACE VERSUS ONLINE ASSESSMENT: STUDENT ACADEMIC OUTCOMES IN HEALTH SCIENCES	5283
<i>E. Ausó Monreal, R. Pérez Rodríguez, V. Gómez Vicente, G. Esquivia Sobrino</i>	
AN EXPERIMENTAL LESSON OF NEAPOLITAN CULTURE FOR A FOREIGN STUDENTS' CLASS	5288
<i>P. Pardi</i>	
BIBLIOMETRIC STUDY OF MOTIVATION FACTORS IN HIGHER EDUCATION	5298
<i>L. Canós-Darós, E. Babiloni, C. García Gallego, M. García Gallego, C. Santandreu-Mascarell, E. Guijarro</i>	
THE INSPIRATION IN FOREIGN LANGUAGE CONVERSATION ACTIVITIES	5305
<i>P. Pardi</i>	
TEACHING EMBEDDED/IOT TO ALL ENGINEERS	5314
<i>P. Ferreira, B. Malheiro, M. Silva, P. Borges Guedes, J. Justo, C. Ribeiro, A. Duarte</i>	
TRAINING FUTURE IT LEADERS IN A COLLABORATIVE AND MULTICULTURAL SETTING	5318
<i>L. Brunie, S. Ben Mokhtar, D. Brac de la Perrière, D. Fabrègue, L. Tondu, A. Cordier, V. Delplanque, A. Bertrand, O. Coueffe, H. Kosch, E. Damiani, S. Cimato, I.A. Awada, A. Olaru, R. Wossidlo, G. Fiorentino, L. Lombardo, F.S. Nucci, O. Cramariuc</i>	
OVERCOMING DIGITAL DIVIDE – A TALE OF TWO COHORTS	5322
<i>P.B. Patil, Basawaraj, M. Vijayalakshmi</i>	
THE EPS@ISEP PROGRAMME: A GLOBALISATION AND INTERNATIONALISATION EXPERIENCE	5328
<i>P. Ferreira, B. Malheiro, M. Silva, P. Borges Guedes, J. Justo, C. Ribeiro, A. Duarte</i>	
A SYSTEMATIC LITERATURE REVIEW OF LEARNING ASSESSMENT MATERIAL AUTHORIZING SYSTEMS	5334
<i>A. Cannavò, F. De Lorenzis, F. Lamberti, C. Demartini</i>	
PERCEPTION OF WOMEN IN SOCIETY GIVEN THROUGH PROVERBS AND SAYINGS	5345
<i>D. Kuzmanovska, V. Koceva, A. Vitanova Ringaceva, S. Kirova, B. Ivanova, I. Koteva, M. Todorova</i>	
DIMENDX - DIGITAL MEDIA NETWORK FOR DOCTORAL STUDIES EXPERIENCES	5350
<i>R. Raposo</i>	
OPEN SCIENCE AND OPEN DATA TOWARDS OPEN EDUCATION — PORTLINGUE: A DIGITAL HUMANITIES RESEARCH PROJECT	5357
<i>S. Araújo, M. Aguiar</i>	
COIL: WORKING WITH JAPANESE PARTNERS POST-PANDEMIC	5363
<i>S.L. Birchley, M. Takeuchi, J. Durand</i>	
COMPARISON OF PROFESSIONAL DEVELOPMENT PERSPECTIVE OF TEACHERS FROM TURKEY AND LATVIA	5372
<i>F. Uğurlu, F.E. Acar, G. Strods</i>	
COMPARING VIDEO AND INTERACTIVE LEARNING MATERIAL STYLES FOR PROGRAMMING	5381
<i>E. Ossovski, M. Brinkmeier</i>	
AN EXPERIENCE OF IMPLEMENTING AGILE PROJECT MANAGEMENT PRACTICE IN PBL COURSE AT FIRST-YEAR ENGINEERING COURSE	5391
<i>J. Gadad, V. Talageri, M. Kaushik, M. Asundi</i>	

MODE EFFECT AND ITEM EQUIVALENCE IN LARGE-SCALE INTERNATIONAL STUDENT ASSESSMENTS - A SYSTEMATIC LITERATURE REVIEW <i>J. T. Kárász, K. Széll</i>	5399
FOSTERING PRE-SERVICE SCIENCE TEACHERS' ENACTED TPACK. PRESENTATION OF A COMPREHENSIVE INTERVENTION IN TERMS OF A SPECIFIC MEDIA USE <i>A. Aumann, H. Weitzel</i>	5400
DEVELOPING STRATEGIES FOR TEACHING CRITICAL THINKING IN PHYSICAL SCIENCES LEARNERS AT SELECTED SCHOOLS IN MASHISHILA CIRCUIT IN MPUMALANGA PROVINCE, SOUTH AFRICA <i>P.O. Tagutanazoo, R. Bhagwandeem</i>	5407
PERSPECTIVES OF PREP SCHOOL STUDENTS AND TEACHERS ON HYBRID EDUCATION DURING COVID-19 <i>S. İnci</i>	5408
EDUCATIONAL ASPECTS OF MUSEUM EXHIBITION DESIGN <i>A. Strode</i>	5416
RECOGNISING POSSIBILITIES THROUGH THE "VIP-TECH-JOB: TIME 2 ACT!" PROJECT RESULTS: VISUALLY IMPAIRED PEOPLE, WORKPLACE TRAINING AND THE ENRICHMENT OF THE CURRENT LABOR MARKET <i>A. Giannakopoulou, A. David, A. Giannakopoulou, F. Hurtado, R. Vukcevic</i>	5423
CLOSED FORMULA OF REQUIRED ITEM NUMBER FOR ADAPTIVE TESTING WITH MEDIUM PROBABILITY OF ITEM SOLUTION <i>J. T. Kárász, K. Széll, S. Takács</i>	5432
LEARNING EXPERIENCES OF GRADES 10 AND 11 PHYSICAL SCIENCES LEARNERS IN THE LEJWELEPUTSWA DISTRICT, FREE STATE, SOUTH AFRICA <i>R. Bhagwandeem, A.M. Rambuda</i>	5433
TRAINING PILLS TO IMPROVE ANALYTICAL CHEMISTRY LABORATORY COMPETENCES IN NUTRITION AND FOOD MASTER'S DEGREE <i>R. Sánchez, A. Polo, A. López, S. Martínez, A. Valdés, J.L. Todolí</i>	5434
STUDENT-CENTRED DESIGN OF LEARNING DASHBOARDS <i>D. Rajanen, M. Rajanen</i>	5441
E-LEARNING OF ANATOMY: VIRTUAL PLATFORMS AS A SURROGATE FOR THE IN-PERSON ANATOMY LABORATORY CLASSROOM <i>M. Mitjans, T. Cambras, R. Martín-Venegas, I. Azagra, R. Moreno, J.M. Planas, M.J. Rodríguez-Lagunas, M.P. Vinardell</i>	5451
TWO GENERATIONS' VIEWS ON BEHAVIOUR IN A VIRTUAL ENVIRONMENT <i>H. Zelená, Z. Babulicová</i>	5458
IS THE DIGITAL DIVIDE WIDENING OR NARROWING AMONG ROMANIAN YOUTH? <i>A. Nastasa, A.B. Aldea</i>	5465
RESULTS OF THE EVALUATION OF CURRICULAR UNITS IN THE AREA OF MATHEMATICS IN HIGHER EDUCATION COURSES: A PRE AND POST- COVID-19 COMPARATIVE STUDY <i>J. Lourenço, S. Sá, N. Neves, J.C. Monteiro, J. Santos, J.C. Morais</i>	5473
INTERNATIONALIZING THE CAMPUS: LEVERAGING TECHNOLOGY, ACADEMIC DEVELOPMENT, AND AUBURN UNIVERSITY'S INTERNATIONAL PERSPECTIVES ON TEACHING AND LEARNING INITIATIVE <i>J. Groccia, L. Weisbrod, E. Sahib</i>	5478
INTERACTIVE ANIMATIONS OF MECHANISM SIMULATIONS FOR THE MECHANICAL ENGINEERING AREA: THE MECAPEDIA WEBSITE <i>J.L. Iserte-Vilar, A. Pérez-González, I. Llop-Harillo, V. Roda-Casanova, F. Sánchez-Marín, J.L. Sancho-Bru, J. Andrés-Esperanza, M.C. Mora-Covadonga, J.V. García-Ortiz, J.F. Fuentes-Ballesteros</i>	5479
VIRTUAL DIDACTIC GAME IN TEACHING CHEMISTRY <i>K. Trčková, R. Maršálek, S. Polášková</i>	5485
THE IMPORTANCE OF INTERNATIONAL INTER-DISCIPLINARY LECTURES: AN EDUCATIONAL INNOVATION SYSTEM FOR ENHANCING STUDENTS' JOB HUNTING <i>A.M. Lara-Palma, R. Brotóns-Cano, A. Jiménez, M.M. Delgado-Hurtado, O. Valencia-García, M.M. Jimeno-Bulnes, D. Matsuda</i>	5493
TRACES FROM CONSTRUCTION KITS TO EDUCATIONAL ROBOTICS IN TECHNOLOGY EDUCATION <i>M. Fislake</i>	5502

DISPERSED ASSESSMENT IN REMOTE LEARNING TO INCREASE STUDENT ENGAGEMENT IN TIMES OF CRISIS <i>Z. Thompson, H. Yoon, P. Booth</i>	5507
A BIBLIOMETRIC ANALYSIS OF ARTIFICIAL INTELLIGENCE (AI) IN EDUCATION RESEARCH <i>A. Nastasa</i>	5508
INTENTIONAL DEVELOPMENT OF COGNITIVE FUNCTIONS OF PRESCHOOL-AGED CHILDREN <i>Z. Babulicová</i>	5515
GAME-BASED LEARNING TO HELP STUDENTS TO STUDY THE MOST TYPICAL TREES AND SHRUBS SPECIES IN GARDENS, PARKS AND GREEN AREAS <i>A. Hernando, M. Gomez, L. Gonzaga García, M. Legrand, S. Martín, J. Velazquez, C. Iglesias Merchan, A. López, C. Pacual, A. García Abril</i>	5521
SATISFACTION WITH REMOTE TEACHING AND THE RETURN TO IN-PERSON TEACHING: PERCEPTION OF HIGHER EDUCATION STUDENTS <i>C. Martinho, A. Cardoso, V. Manteigas, R. Pereira Rodrigues, R. Abreu, M.J. Escudeiro</i>	5528
REDEFINING THE E-SCHOOLS CONCEPT OF TEACHING SCENARIOS FOR INTERDISCIPLINARY TOPICS <i>G. Hajdin, D. Plantak Vukovac, D. Oreski</i>	5534
MODELLING TEACHERS' INTENTION TO RE-USE DIGITAL EDUCATIONAL CONTENT <i>D. Oreski, G. Hajdin, D. Plantak Vukovac</i>	5543
A DECADE OF EXPERIENCE IN THE ORIENTATION TO THE STUDENTS AT THE FACULTY OF SCIENCES IN THE UNIVERSITY OF CÁDIZ, WITHIN THE EUROPEAN HIGHER EDUCATION AREA <i>J. Ayuso, D. Bellido-Milla, M. Carbú, L. Cubillana-Aguilera, M.D. Galindo-Riaño, C. García-Vázquez, J.M. Gómez, M.A. Moreno-Frías, A. Amores-Arrocha</i>	5551
ATTRIBUTES OF PHYSICAL COMPUTING SYSTEMS – THE PERSPECTIVE OF PEDAGOGY <i>E. Schätz, A. Martens</i>	5561
RELIABILITY OF THE SELF-ASSESSMENT TOOL WITH STUDENTS OF THE FIRST YEAR OF THE DEGREE IN FOOD SCIENCE AND TECHNOLOGY <i>M. Ortega-Heras, I. Gómez, M.D. Rivero-Pérez, M. Cavia-Saiz, M.G. Gerardi, P. Muñiz</i>	5566
THE PERKS AND PERILS OF LEARNING PROGRAMMING ONLINE: THE CASE OF TEACHER TRAINING <i>A. Fuentes Martinez</i>	5571
PUBLISH YOUR GEO-DATA AS PROFESSIONALS! <i>O. Cerba, K. Charoát, F. Zdražil, R. Berzins, I. Košková, M. Šplíchal</i>	5580
INTERACTIVE PROGRAMMING TOOLS FOR BEGINNERS IN ELEMENTARY SCHOOL INFORMATICS <i>K. Czaková, O. Takáč</i>	5588
CRITICAL THINKING OF HIGH SCHOOL STUDENTS: CASE STUDY OF THE SLOVAK REPUBLIC <i>E. Madudova, M. Majerčáková, J. Tengler</i>	5596
“WITH HANDS IN SCIENCE” EXPERIENCES FOR SECONDARY SCHOOL STUDENTS <i>I. Gómez, M. Ortega-Heras, M. Cavia-Saiz, M.D. Rivero-Pérez, M.G. Gerardi, P. Muñiz</i>	5604
EXPANDING STUDENT ENGAGEMENT IN SDG 13 ‘CLIMATE ACTION’ <i>C. Lull, J.V. Llinares, M.D. Soriano</i>	5611
METHODOLOGY FOR DEVELOPING A FRAMEWORK FOR DIGITAL COMPETENCIES OF SCHOOL PRINCIPALS IN CROATIA <i>N. Žajdela Hrustek, V. Kirinić, R. Mekovec</i>	5618
AN EXPLORATION OF GENDER ROLES BASED ON THE CONTENTS IN TAIWANESE AND KOREAN HISTORY TEXTBOOKS: FROM CROSS-CULTURAL PERSPECTIVES <i>M.H. Su, P.I. Chou, M. Valcke</i>	5626
HOW DO WE SOLVE THE CURRENT PROBLEMS OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS AT UNIVERSITY THROUGH THE COUNSELING? <i>D. Janderková</i>	5633
SELF-ASSESSMENT OF DIGITAL LITERACY SKILLS IN MICROLEARNING COURSE <i>T. Javorcik</i>	5642

AN EXAMPLE OF USING A PROJECT-BASED DESIGN IN SOLVING INTERDISCIPLINARY DESIGN PROBLEMS	5648
<i>A. Szweczenko, E. Lach, I. Chuchnowska, N. Bursiewicz, I. Benek, M. Sanigórska, K. Elsner, D. Bal, P. Czaplá, B. Stawiarz, M. Adamczyk, A. Kiełtyka</i>	
THE USE OF DIGITAL TECHNOLOGY TO IMPROVE PEDAGOGICAL PRACTICES: A CASE STUDY FROM AN INNOVATIVE PREPARATORY SCHOOL	5655
<i>V. Johansen, T. Schanke</i>	
DEVELOPMENTAL TRAUMA AND NEUROCOGNITION IN YOUNG ADULTS: A SYSTEMATIC REVIEW	5656
<i>E. Gkintoni, B. Boutsinas, E. Kourkoutas</i>	
TEACHER ASSESSMENT AND EVALUATION – WHY SHOULD WE CARE?	5663
<i>R. Mekovec, V. Kirinić</i>	
DEVELOPING LEADERSHIP IN EDUCATION	5671
<i>K. Buckley</i>	
COMPUTATIONAL THINKING TEST ADAPTATION IN GREEK CULTURE: ENSURING ITS CONTENT VALIDITY	5672
<i>P. Kakavas, F.C. Ugolini</i>	
THE ADVANTAGES OF TESTING HIGHER-ORDER THINKING IN ONLINE OPEN BOOK ASSESSMENTS	5682
<i>P. Holland, L. Mason</i>	
INSIGHTS TO SOCIAL AND DIGITAL MEDIA KNOWLEDGE OF TECHNICAL STUDENTS	5683
<i>V. Koch, E. Medic</i>	
VIRTUAL REALITY IN EDUCATION AND TRAINING WITH A FOCUS ON SAFETY AND HEALTH AT WORK	5690
<i>A. Cidlinová, M. Bárdy, A. Dadová</i>	
AN OVERVIEW OF COGNITIVE NEUROSCIENCE IN EDUCATION	5698
<i>E. Gkintoni, I. Dimakos</i>	
INCREASING ENVIRONMENTAL SCIENCES STUDENTS' AWARENESS OF THE LINK BETWEEN SOIL AND SUSTAINABLE DEVELOPMENT GOALS	5708
<i>C. Lull, J.V. Llinares, I. Bautista, A. Lidón</i>	
DESIGN OF AN EXCEL-RECORDED MACROS CURRICULUM FOR THE DEVELOPMENT OF COMPUTATIONAL THINKING SKILLS BY PRIMARY SCHOOL STUDENTS	5718
<i>P. Kakavas, F.C. Ugolini</i>	
ADAPTATION TO ONLINE EDUCATION DURING THE COVID-19 LOCKDOWN: ANALYSIS FROM THE PERSPECTIVE OF THE UNIVERSITY STUDENT IN EDUCATION DEGREES	5728
<i>C. Ferragut, H. Vila, A. Pérez-López, D. Valades, A. Abraldes</i>	
COMPARING STUDENTS' PERCEPTION OF DISTANCE AND FACE-TO-FACE LEARNING	5735
<i>A. Mezeiová, A. Bencsik</i>	
EXPERIENCE OF UNDERGRADUATE AND POSTGRADUATE STUDENTS WITH AN EDUCATIONAL GAME APP FOR SMARTPHONES FOR LEARNING DIAGNOSIS OF MALARIA	5741
<i>A. Peña-Fernández, R. Morchón, G. Torrado, M.D. Evans, M.A. Peña</i>	
EDUCATIONAL LEARNING METHODS WITH GAMIFICATION ASPECTS FOR INMATES DURING PANDEMIC	5746
<i>A. Giannoulis, H. Antonopoulou, C. Halkiopoulos</i>	
THE IMPACT OF STRESS ON THE PERSONAL AND PROFESSIONAL LIFE OF ACADEMIC STAFF TODAY	5752
<i>D. Janderková</i>	
IMPLEMENTATION OF LASER NAVIGATION WITHIN COMPUTER SCIENCE LESSONS	5760
<i>O. Takáč, K. Czaková</i>	
INVESTIGATING SCHOOL ADMINISTRATION PERCEPTIONS THROUGH THE HOLISTIC LEADERSHIP MODEL TOWARD THE INCLUSION AND INTEGRATION PROCESS OF REFUGEE STUDENTS IN THE GREEK EDUCATIONAL SYSTEM	5765
<i>V. Charisi, A. Zafeiroudi, C. Kouthouris, A. Kafa</i>	
DEVELOPMENT OF COMPUTATIONAL THINKING: GOALS AND STRATEGIES	5771
<i>T.L. da Silva, L.M. Rockenbach Tarouco</i>	

RESULTS OF AND EVALUATION OF A NOVEL SMARTPHONE APP FOR LEARNING MEDICAL PARASITOLOGY <i>A. Peña-Fernández, M.A. Peña, G. Torrado, L. Acosta</i>	5778
BLOCKCHAIN TECHNOLOGY AS AN ASSET FOR INNOVATIVE EDUCATIONAL APPLICATIONS: A SYSTEMATIC REVIEW <i>N. Kostopoulos, H. Antonopoulou, C. Halkiopoulos</i>	5783
THE EFFECT OF PROVIDING OR NOT PROVIDING SLIDES ON ACADEMIC PERFORMANCE <i>A. Perez-Lopez, H. Vila, C. Ferragut, D. Valades</i>	5790
SOCIAL NETWORKS AS ADDITIONAL TEACHING TOOL <i>K. Aleksić-Maslač, Z. Biočina, B. Sinković</i>	5794
ENHANCING STATISTICAL CONCEPTS TEACHING THROUGH INNOVATIVE INTERACTIVE APPLICATIONS <i>E.L. Cano, C. Alfaro, M.J. Algar, A. Alonso-Ayuso, J.M. Moguerza, F. Ortega</i>	5800
THE IPPOG RESOURCE DATABASE: SUPPORTING GLOBAL PARTICLE PHYSICS OUTREACH & EDUCATION <i>I. Melo</i>	5807
AN OVERVIEW OF MODERN METHODOLOGICAL APPROACHES OF IT EDUCATION <i>D. Paksi, M. Csóka, N. Annuš</i>	5812
CREATING A PRODUCTION PIPELINE FOR 360° LEARNING ENVIRONMENTS <i>D. Derichs, S. Sevón, T. Votkin, T. Kauppinen</i>	5818
STUDENT-CENTERED DESIGN AND IMPLEMENTATION OF A NEW CLINIC PRACTICE FOR LOGOPEDICS <i>M. Luoto-Ellä, L. Lintula, J. Virkki</i>	5825
RE-INVENTING HEIS TO ENHANCE STUDENT INNOVATION AND ENTREPRENEURSHIP SKILLS <i>G. Gonçalves, J. Pego, E. Costa, J. Resende, P. Hatton, M. Gandoy-Crego, D. Facal, P. Dolezel, L. Routil, J. Pospichal, E. Shevtshenko, G. Teodorescu, M. Oliveira, A. Leal, M. Duarte</i>	5830
QUESTIONING THE ASSUMPTIONS UNDERLYING PERSONALISED EDUCATION TECHNOLOGY: OVERVIEW OF CURRENT LITERATURE <i>K.J. Laak, J. Aru</i>	5837
STUDY OF PLANTS THROUGH LABORATORY TEACHING BASED ON THE SCIENTIFIC METHOD WITH PRIMARY SCHOOL CHILDREN <i>F. Bolzon, M. Bellio, E. Pietropoli, G. Santovito, P. Irato</i>	5846
SPREADSHEETS FEASIBILITY FOR MODELING IN EDUCATION <i>D. Paksi, M. Csóka, SZ. Svitek</i>	5855
PRESENTATION OF PROGRAMMING ELEMENTS USING MODERN BOARD GAMES <i>D. Solymos</i>	5862
VALIDATION OF THE READING COMPREHENSION INTERVENTION PROGRAM FOR THE ENGLISH LANGUAGE <i>M. Hornickova, E. Szabo, R. Havettova, L. Adlerova</i>	5870
AN INVESTIGATION ON THE POSITIVE ASPECTS OF THE CONTACT WITH NATURE IN DEVELOPING-AGE CHILDREN. A REVIEW OF FORMAL AND NON-FORMAL EDUCATIONAL REALITIES IN THE VENETO REGION <i>M. De Rossi, M. Bellio, E. Pietropoli, E. Piva, G. Santovito, S. Schumann, P. Irato</i>	5879
ONLINE STORIES OF INCLUSION AND EXCLUSION OF LEARNERS WITH DISABILITIES IN SOUTH AFRICA <i>L. Dalvit</i>	5888
A TEACHING GUIDE TO READING MARGINAL NOTES <i>K. Hristova-Yordanova</i>	5889
PSYCHOLOGICAL DISTRESS IN SOUTHERN ITALIAN STUDENTS DURING THE PANDEMIC AGE <i>M. Cerasuolo, F. Ciaramella, R. Nappo, R. Simeoli, A. Rega</i>	5894
REMOTE LEARNING IN A PANDEMIC: EXPERIENCES OF TEACHERS AND LEARNERS IN NIGERIA'S PUBLIC AND PRIVATE UNIVERSITIES <i>D. Adelowo, T. Allo, O. Amoo</i>	5900
THE SUPPORT OF DIGITAL TECHNOLOGY ON EDUCATION DURING THE COVID-19 PANDEMIC <i>P. Pătrașcu, I.C. Buță, E. Șuşnea</i>	5909

DIGIPHOTON – THE DIGITALIZATION OF THE INTERNATIONAL MASTER OF PHOTONICS COURSE	5915
<i>F. Sojka, J. Kretzschmar, J. Domke, C. Henkel, T. Kaiser, F. Lukas, R. Geiss, C. Helgert, T. Pertsch</i>	
GEOMETRICAL MODELLING IN ARCHITECTURE BETWEEN ORIGAMI, LASER CUT, 3D PRINT AND DIGITAL TOOLS	5916
<i>M. Pavignano, M.L. Spreafico, A. Tomalini, U. Zich</i>	
QUANTITATIVE ANALYSIS OF THE PERCEPTION AND IMPACT ON LEARNING WITH THE USE OF VIRTUAL SIMULATION PLATFORMS IN UNDERGRADUATE STUDENTS	5926
<i>B. Sáez Pizarro, E. Pérez Izquierdo, C. Andreu Vázquez, M.M. Alonso Cascón, V. Negri</i>	
TERMOLABO PROJECT: A THERMOFLUID SYSTEMS REMOTE LAB	5934
<i>S. Sanchez, J. Muñoz, A. Vanegas, F. Varela</i>	
RADIUM, AN EDUCATIONAL PROJECT IN NUCLEAR AND RADIATION SCIENCES	5943
<i>D. Mostacci, T. Savitskaya, I. Kimlenka, S. Vashenko, S. Schreurs, U. Scherer, S. Carlos, S. Compagno</i>	
EFFECT OF ANONYMOUS PARTICIPATION IN ONLINE CLASSES ON UNIVERSITY STUDENTS LEARNING	5944
<i>H. Gutiérrez Pablo, R. Lafuente Ureta, M. Francín Gallego, V. Barrachina Aguerri, M. San Miguel-Pagola</i>	
HIGHER EDUCATION INSTITUTIONS ACCESSIBILITY: A COMPARATIVE ANALYSIS OF ACCESS TO CONTENT ON INSTITUTIONAL SITES	5945
<i>N. Neves, S. Sá, J.C. Monteiro, J. Santos, J. Lourenço, J.C. Morais</i>	
THE EFFECT OF INFLUENCE-EMBEDDED PHYSICS INSTRUCTION ON STUDENT ATTITUDE, MOTIVATION, AND PERFORMANCE	5951
<i>D.A. Duque, L. Roleda</i>	
ANALYSIS OF EMOTIONAL COMPETENCES IN STUDENTS' CAREERS SUCCESS: EVIDENCES FROM HUMAN RESOURCE MASTER PROGRAM	5960
<i>J. Barrena-Martinez, M. López-Fernández, P.M. Romero-Fernandez, M. Ruiz-Rodriguez, M. Utrera-Aragon</i>	
TEACHING CODING IN SCHOOLS	5961
<i>B. Mannoia</i>	
HANDS-ON LEARNING PLATFORM FOR TEACHING POPULATION MODELS IN HIGHER EDUCATION	5968
<i>D. Paksi, N. Annuš</i>	
APPLICATION OF BUSINESS PROCESS MODELING AND NOTATION METHODOLOGY IN EDUCATION - CASE OF LECTURES IN CRISIS MANAGEMENT COURSE	5974
<i>Z. Dobrovic, I. Milic</i>	
TEACHING IN LIFE AND HEALTH COURSES DURING THE COVID-19 PANDEMIC	5982
<i>A. Velás, V. Šoltés</i>	
DEVELOPING A MOBILE LEARNING APP FOR DIGITAL LITERACIES WITH THE USER GROUP IN ONLINE ENVIRONMENTS: METHODS AND LESSONS LEARNED	5988
<i>F. Günther, R. Lorenz, N. Filz, A. Umlauft</i>	
DEVELOPING ONLINE INTERACTION AND SHARED COMMITMENT IN VIRTUAL PROJECT TEAMS	5994
<i>T. Vesala-Varttala, M. Morgado</i>	
ENGAGING LEARNING STYLES BY USING A CONFIDENCE ASSESSMENT SURVEY TO ENHANCE UNDERGRADUATE NURSING STUDENTS' PREPARATION FOR COMPREHENSIVE PHYSICAL ASSESSMENT PERFORMANCE EVALUATION	6003
<i>L. Cimino, A. Martino, T. Ocallaghan</i>	
INTERNSHIPS IN HIGHER EDUCATION: FROM FACE-TO-FACE TO VIRTUAL REALITY EXPERIENCES (THE TPM JOURNEY)	6004
<i>A. Coll, C. Ballesté, C. Blanco, E. Kondi, A. Jovic, L. Villarejo-Muñoz, M. Alier, M. Manylich, R. Valero</i>	
PARENTS' PREPAREDNESS FOR EARLY CHILDHOOD UPBRINGING, EDUCATION, AND CARE	6005
<i>S. Barnová, Z. Geršicová, S. Krásna, B. Mačová, M. Masáriková</i>	
FAMILY BUSINESS OR NONE OF MY BUSINESS: FACTORS INFLUENCING THE EMPLOYER ATTRACTIVENESS OF FAMILY BUSINESSES FOR THE GENERATION Y	6011
<i>T. Spiess, V. Voelckel, S. Kruschel</i>	
LAB BUDDY SYSTEM FOR HYBRID PRACTICAL TRAINING AND THE INTEGRATION OF ONLINE STUDENTS INTO THE STUDENT COMMUNITY	6019
<i>F. Sojka, J. Domke, C. Henkel, F. Lukas, J. Kretzschmar, R. Ackermann, C. Helgert, T. Pertsch</i>	

STUDENT-CENTRED LEARNING: EFFECTS ON GRADUATES' SATISFACTION WITH STUDY PROGRAMMES <i>A. Tecilazić</i>	6020
STUDY REGARDING THE IMPROVEMENT OF SERVICES IN PRESCHOOL INSTITUTIONS IN SIBIU COUNTY <i>L.G. Popescu</i>	6027
IDENTITY, CONTEXT AND MOBILE MEDIA: A CRITICAL DIGITAL LITERACY SERVICE LEARNING COURSE IN A SOUTH AFRICAN TOWNSHIP <i>P. Boshoff, L. Dalvit</i>	6034
HOW TO TEACH STATISTICS <i>L. Marek, S. Hronova, R. Hindls</i>	6035
LITERATURE REVIEW ON ASSESSMENT MODELS AND THEIR RELATIONSHIP TO LEARNING ANALYTICS <i>J. Llerena-Izquierdo, A.E. Guerrero-Roldán, M.E. Rodríguez</i>	6036
CONTINUOUS ASSESSMENT OF STUDENT'S KNOWLEDGE USING LMS PLATFORM MOODLE <i>M. Trnka, E. Kralova</i>	6043
GENDER-SENSITIVE PEDAGOGY FOR STEM DISCIPLINES <i>M. Manchenko, A. Parmaxi, E. Christou, A. Economides, M. Perifanou, D.M. Puente Hevia, J. Fernández Valdés, E. Loucaidou, A. Chatzikyriakou, S. Katic, S.C. Vidmar</i>	6047
INTELLIGENT TUTOR USING PERIPHERAL ARTIFICIAL INTELLIGENCE: OPPORTUNITIES AND LIMITS <i>C. Aubeuf</i>	6057
IMPROVING THE QUALITY MANAGEMENT SYSTEM IN A UNIVERSITY CULTURAL CENTER IN ROMANIA <i>L.G. Popescu</i>	6063
INNOVATIVE CONCEPT OF MEDICAL BIOPHYSICS AT THE FM CU IN BRATISLAVA <i>E. Kralova, M. Trnka</i>	6069
CURRICULAR GUIDELINES FOR ICT AND TEACHERS' DIGITAL COMPETENCE: AN EXPLORATORY STUDY IN PORTUGAL <i>F. Castro, M. Lucas</i>	6073
CONCEPTUAL DIMENSIONS IN TECHNOLOGY USE AND ACCEPTANCE MODELS <i>A. Pinheiro, A. Oliveira, B. Alturas</i>	6078
FACTOR ANALYSIS OF INDONESIAN EARLY CHILDHOOD EDUCATORS' DIGITAL COMPETENCE THROUGH ONLINE LEARNING <i>D. Jovanka, U. Kusmawan, Y. Yufiarti, E. Yetti</i>	6086
LEARNING REINFORCEMENT ACTIVITIES APPLIED TO THE SUBJECT PHYSIOLOGY AND PATHOPHYSIOLOGY III IN THE PHARMACY DEGREE OF THE UNIVERSITAT DE BARCELONA: THE OPINION OF THE STUDENTS <i>C. Pelegrí, R. Martín-Venegas, J. Del Valle, Á. Franch, M.E. Juan, L. Miró, J. Olloquequi, J. Vilaplana, R. Ferrer</i>	6094
BUSINESS SCHOOL SERVICE-LEARNING: PROFIT AND NON-PROFIT COMMUNITY PARTNERS' PERCEPTIONS OF BENEFITS <i>D. Cyr, G. Kemp</i>	6102
LEARNING SCENARIOS EXPERIENCES: A CASE STUDY <i>N. Quina, M. Cardoso</i>	6103
DISTANCE TEACHING DURING THE COVID-19 PANDEMIC IN SLOVAKIA AND ITS EVALUATION BY PARENTS <i>S. Barnová, S. Krásna, G. Gabrhelová</i>	6107
IS INTENSIVE BLOCK TEACHING SUCCESSFUL? <i>T. Williams, L. Davies, S. Evans, E. Spender</i>	6112
HISTOZOOMER: AN INTERACTIVE TOOL TO VISUALIZE MICROSCOPIC TISSUE SECTIONS <i>R. Martín-Venegas, M. Riba, J. Campo-Sabariz, J. Del Valle, L. Miró, J. Olloquequi, C. Pelegrí, R. Ferrer, J. Vilaplana</i>	6120
FROM DIGITAL LITERACY TO DIGITAL LITERACIES: MAPPING CONSENTS AND DISSENTS WITHIN THE SCHOOL LIBRARY <i>T.M. Loureiro Cardoso, P.M. Gonçalves</i>	6125
BRINGING INDUSTRIAL INTERNATIONAL STANDARDS TO ICT HIGHER UNIVERSITY EDUCATION <i>G. Sharkov, M. Stoeva</i>	6131

TOWARDS A EUROPEAN IDENTITY: YOUNG PEOPLE'S VIEWS ON IDENTITY FORMATION IN THE CONTEXT OF FORMAL AND INFORMAL EDUCATION <i>A. Romanovska</i>	6139
3D GREEK SIGN LANGUAGE CLASSIFIERS AS A LEARNING OBJECT IN THE SL-REDU ONLINE EDUCATION PLATFORM <i>G. Sapountzaki, E. Efthimiou, S.E. Fotinea, K. Papadimitriou, G. Potamianos</i>	6146
ON ONLINE SELF-CHECKERS OF KNOWLEDGE FROM THE INTRODUCTORY MATHEMATICAL SUBJECT IN THE 1ST SEMESTER OF UNDERGRADUATE PROFESSIONAL STUDIES IN ELECTRICAL AND CIVIL ENGINEERING <i>M. Orlić Bachler, L. Marohnić, B. Kovačić</i>	6154
VIDEO LECTURE IN DISTANCE LEARNING DURING COVID-19 PANDEMIC <i>D. Kurtić</i>	6160
TANGIBLE MODELS FOR SCIENTIFIC DISSEMINATION AND PUBLIC ENGAGEMENT: FROM THEORY TO PRODUCTION (ERN AND TORINO SHARPER 2020-2021) <i>U. Zich, M. Pavignano, M. Di Salvo</i>	6161
THE GENRE OF PARODY IN LITERATURE IN PUBLIC AND HIGHER EDUCATION <i>Á. Tárkányi</i>	6171
EARLY STUDENT DETECTION FOR IMPROVEMENT OF ACADEMIC RESULTS USING MACHINE LEARNING MODELS <i>C. Lancho, M. Cuesta, I. Martín de Diego, E.L. Cano, A. Fernández-Isabel, J. Gómez Miguel</i>	6177
THE NEXT GENERATION CLASSROOM RE-CONCEIVED <i>P. Lane, R. Lafferty</i>	6186
THE PROFESSIONAL PORTFOLIO AS A LEARNING STRATEGY - PREPARATION FOR SELECTIVE RECRUITMENT PROCESSES <i>D. Baptista, S. Pita</i>	6191
USING VIDEOS TO ENHANCE FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE <i>S. Pita, D. Baptista</i>	6198
PROMOTING SUSTAINABLE DEVELOPMENT IN CHEMISTRY DEGREE: IMPLEMENTATION OF AN E-LEARNING PLATFORM <i>I. Ruiz de Larramendi, B. Artetxe, U. Uria, E. Goikolea, S. Perez-Yañez, L. Prieto, M.L. Carrillo, G. Beobide, J.L. Vicario, A. Luque, O. Castillo, J.M. Gutierrez-Zorrilla, E. Reyes</i>	6204
THE FINANCIAL LITERACY COMPETENCY MAP OF LIBRARIANS <i>P. Kiszl</i>	6209
REMOTE LEARNING AS THE ACTUALITY OF THE PANDEMIC (COVID-19) SITUATION: THE HIGHER SCHOOL LECTURERS' ATTITUDE <i>R. Kazlauskaite Markeliene, V. Giedraityte</i>	6219
SOCIAL AND DIGITAL MEDIA IN EDUCATION <i>T. Limba, L. Lelešienė, S. Novogreckas</i>	6220
ATTITUDES OF PRESCHOOL TEACHERS AND ASSISTANTS TOWARDS INCLUSIVE EDUCATION IN SLOVAKIA <i>V. Kušnírová, I. Rochovská, M. Čarnická</i>	6227
SELECTED FAMILY CHARACTERISTICS IN RELATION TO THE CHOICE OF THE CHILD'S PRESCHOOL EDUCATION <i>L. Kremenkova, J. Kvintová, J.S. Novotný, R. Cuberek, J. Petrová</i>	6235
IMPLICATIONS ON STUDENT TRAINING AND DEVELOPMENT AS A RESULT OF MULTIGRADE SCHOOLING <i>I. Acatrinei, D. Opriş</i>	6244
VIRTUAL IMMERSIVE SIMULATIONS TO PROMOTE PRACTICE READINESS TO FULL SCOPE FOR PHARMACY AND PHARMACY TECHNICIAN STUDENTS: A COLLABORATIVE APPROACH <i>A. Bjelajac Mejia, L. Singh, F. Fan, R. Keay</i>	6251
COORDINATED DIDACTIC APPROACH FOR THE DISCIPLINES OF ARCHITECTURE <i>R. Franchino, C. Frettoloso, N. Pisacane</i>	6252
THE ROLE OF ENVIRONMENTAL DESIGN FOR THE RESILIENT CITY: EDUCATIONAL EXPERIENCES <i>R. Franchino, C. Frettoloso, S. Rinaldi</i>	6262
REFLECTIONS ON ONLINE TEACHING IN CZECH SCHOOLS DURING THE COVID-19 PANDEMIC <i>A. Jůvová, O. Duda</i>	6272

INNOVATION IN TOURISM HIGHER EDUCATION: A PROJECT-BASED APPROACH TO VILLAGE TOURISM <i>C. Melo, C. Mouta, P. Pereira</i>	6283
ONLINE TEACHER TRAINING AND SUPPORT: LESSONS LEARNT FROM A COLLABORATIVE DIGITAL LEARNING PROJECT <i>N. Nguyen Thi Hong</i>	6289
PROMOTING ORAL INTERACTION OF YOUNG LEARNERS: A TASK-BASED APPROACH <i>I. Ferreira, M. Morgado, C. Guimarães</i>	6293
USE OF CLOUD SERVICES IN THE EDUCATION PROCESS AT THE UNIVERSITY OF ZILINA <i>J. Tengler, E. Madudova, M. Müller, A. Kostal</i>	6302
ANALYSING INCLUSIVE GROUPS' PEER INTERACTIONS USING MOBILE EYE TRACKING IN EDUCATIONAL CONTEXT <i>C. Suero Montero, B. Çağıltay, K. Dindar, E. Kärnä, A. Kilpiä, K. Pihlainen, A. Kämäräinen</i>	6303
GLOBAL OPPORTUNITIES FOR ACADEMIC COOPERATION: PRACTICAL ASPECTS <i>E. Zdravkova-Velichkova, T. Trencheva, S. Denchev, E. Nencheva</i>	6313
EMERGING ADULTHOOD IN THE LIFE OF YOUNG PEOPLE <i>T. Hormandlová</i>	6319
THE TRIPLE HELIX MODEL IN SPAIN: RELATIONSHIPS BETWEEN UNIVERSITY, INDUSTRY AND GOVERNMENT <i>E.C. Dittmar, D. López Jiménez</i>	6324
KEEPING STUDENTS ENGAGED – FINDING TECHNIQUES TO KEEP STUDENTS' ATTENTION DURING ONLINE LEARNING <i>N. Stalmasekova, J. Fabus</i>	6325
ANALYSIS OF TEACHING AND LEARNING RESOURCES USED BY TERTIARY EDUCATION STUDENTS AND CHARACTERISTICS LEADING TO THE DEVELOPMENT OF THE STUDENTS' CRITICAL THINKING SKILLS <i>J. Kojdecká, A. Hrušková, I. Červenková, M. Václavík</i>	6331
TEACHING MICRO-ARCHITECTURE <i>D.S. Opincariu, A. Pop, A.E. Voinea</i>	6332
WORKPLACE ETHICS AND EQUALITY WITHIN THE ACADEMIA: THE #METOO STORIES FROM ICELAND <i>S.L. Einarsdóttir, E. Svansson</i>	6340
ORGANIZATIONAL LEARNING STRUCTURES CONTRIBUTING TO SUCCESSION PLANNING: ACTION RESEARCH IN FAGOR AUTOMATION S.COOP <i>N. Sánchez Urien, J.L. Alonso Andreano, U. Castaño Benito</i>	6341
MONDRAGON ZTIM-HUB: THE COLLABORATIVE NETWORK FOR THE DEVELOPMENT OF STEM VOCATIONS <i>M. Anaya, J. Iriondo, M. Vivar, M. Otaegi, P. González, A. Bilbao, N. Errasti</i>	6351
SPECIAL NEEDS TEACHERS AND THEIR PERSPECTIVE OF INCLUSIVE EDUCATION <i>T. Hormandlová, T. Čech, S. Dobešová Čakirpaloglu</i>	6359
ARCHITECTURE EDUCATION: A PLACE OF IDENTITY TRANSITION AND PROFESSIONAL TRANSFORMATION <i>A.E. Voinea</i>	6363
FORMATIVE EVALUATION FOR IMPROVING DEEP LEARNING ON SOCIAL AND EMOTIONAL COMPETENCES: A CASE STUDY OF AN IN-SERVICE TEACHER TRAINING <i>S. Patera</i>	6371
WE WANT TO BE ENGIN@RS: EARLY STAGE STEM MOTIVATING ACTIONS <i>R. Vilanova, C. Fernández-Córdoba, J. Lopez Vicario, A. Espinosa Morales</i>	6381
ACADEMIA-INDUSTRY COOPERATION FOR THE THERAPY OF ALZHEIMER AND MILD DEMENTIA: A SHARED TRAINING AND RESEARCH PROJECT <i>M.E. Romero, G. Borgia, M. Bresciani</i>	6389
USAGE OF DIGITAL PLATFORMS FOR E-LEARNING DURING THE COVID-19 PANDEMIC: THE CASE OF ECUADOR <i>A. Pérez Avellaneda, D. Cueva, M. Martínez-Gómez</i>	6396
DESIGN THINKING AND CREATIVITY IN DEVELOPING DIGITAL COMPETENCIES IN PUBLIC ADMINISTRATION <i>M. Bogdanova, E. Parashkevova</i>	6401

REMOTE WEB CONTROL OF AC MOTOR BY ESP8622	6410
<i>D. Zlatanski, N. Vakrilov</i>	
SERVICE-LEARNING IN PHARMACOLOGY AND TOXICOLOGY AS A STRATEGY FOR THE SELF-PROCESS OF LEARNING ABOUT THE KNOWLEDGE OF MEDICINES AND DRUGS OF ABUSE	6415
<i>A. Bocanegra, A. Garcimartín, A. García-Aguilar, L.M. Bedoya Del Olmo, J.A. Guerra Guirao, J.J. Merino Martín, R. Redondo-Castillejo, M. Hernández-Martín, I. Ureña-Vacas, F.J. Manzano-Lista, E. González Burgos</i>	
DESIGN RESEARCH METHODOLOGY: INNOVATION FROM ACADEMY TO MARKET	6422
<i>S. Testa, A. Cappellieri, L. Tenuta, B. Rossato, F. Antinarelli Freitas</i>	
APPLIED SYSTEMS THINKING AS A LEVER TO IMPROVE LEARNING IN THE COMPLEX SYSTEMS AND COMPLEXITY STUDIES FIELDS	6428
<i>G.L. Dugarte-Peña, E. Muñoz-García, C.G. García-Rodríguez</i>	
ADVERSE IMPACT OF DISTANCE LEARNING ON STUDENTS' ACHIEVEMENT DURING THE COVID-19 PANDEMICS	6434
<i>E. Turska, M. Kowalski</i>	
VIRTUAL EXCHANGE AS AN INSTRUCTIONAL DESIGN APPROACH TO PROMOTING CRITICAL SKILLS IN HIGHER EDUCATION: A CASE STUDY OF PROJECT-BASED COLLABORATION ON "SOCIAL ROBOTS IN EDUCATION"	6435
<i>I. Buchem, M. Leiba</i>	
CRITICAL THINKING: AN EXPERIENCE WITH PRE-SERVICE TEACHERS	6441
<i>L. Fonseca</i>	
EDUCATIONAL TOOLS FOR BIBLIOGRAPHICAL RESEARCH IN COLLABORATION WITH STUDENTS	6447
<i>P. Mukanova</i>	
THE IMPACT OF LEARNING MANAGEMENT SYSTEMS ON STUDENT ACHIEVEMENT AND ENGAGEMENT IN ONLINE CLASSROOMS	6451
<i>I. Pesovski, A. Klashninovski, A.M. Makeska, V. Trajkovic</i>	
FOSTERING STUDENT AGENCY IN TOURISM EDUCATION: EXAMPLES FROM THE TOURISM AND HOSPITALITY FIELD	6457
<i>S. Vasconcelos, A. Melo, C. Melo, C. Mouta</i>	
PYTHAGOREAN THEOREM IN CLASSROOM THROUGH A LEARNING OBJECT	6462
<i>M. Teixeira, A.P. Aires, H. Campos</i>	
GENDERED CAREER PATHWAYS OF DOCTORATE HOLDERS: A SYSTEMATIC LITERATURE REVIEW	6470
<i>C. Soares, T. Carvalho</i>	
USUAL OR VIRTUAL PROTRACTOR? A STUDY WITH 5TH GRADE STUDENTS	6480
<i>E. Sacramento, H. Campos, A.P. Aires</i>	
ANALYSIS OF THE USEFULNESS OF PHARMACOLOGY VIDEOS TO ENCOURAGE ACTIVE LEARNING AND KNOWLEDGE TRANSFER	6485
<i>A. García-Aguilar, A. Bocanegra, E. González Burgos, L. García-García, M.S. Fernández-Alfonso, I. Ureña-Vacas, M. Hernández-Martín, R. Redondo-Castillejo, F.J. Manzano-Lista, A. Garcimartín</i>	
THE CONTINUING PROFESSIONAL DEVELOPMENT OF TEACHER-EDUCATORS AS RESEARCHERS	6490
<i>N. Chamo, D. Patkin</i>	
VIRTUAL PATIENT: A WEB-BASED PLATFORM FOR THE TRAINING OF MEDICAL STUDENTS IN PATIENT CONSULTATION DURING A LOCKDOWN	6491
<i>I.A. Awada, A. Sorici, M. Drăgoi, A.M. Florea, A. Scafa-Udriște</i>	
ADAPTATION OF THE RESEARCH TOOL MEASURING CRITICAL THINKING IN UNIVERSITY ENVIRONMENT	6498
<i>I. Koribská, Š. Chudý, J. Plischke</i>	
ESCAPE GAME AS A METHODOLOGICAL TOOL FOR TRAINING THE LAY POPULATION IN FIRST AID	6499
<i>C. Nóvoa Fernandes, L. Vasconcelos Barreto de Carvalho, J. Teixeira Nicolosi, A. Bongiovani, N. Alencar Salmeron</i>	
TESLA COIL – CONSTRUCTION PROJECT – EDUCATIONAL APPLICATION	6504
<i>S. Skok, L. Havaš, T. Horvat, A. Šumiga</i>	
SOLIDS AR VERSUS GEOMETRY AR: AUGMENTED REALITY TO TEACH GEOMETRY	6511
<i>C. Fernandes, H. Campos, A.P. Aires</i>	
EMPLOYABILITY SKILLS: ENHANCING THE KNOWLEDGE ABOUT MARKETING JOB ADVERTISEMENTS POSTED ON LINKEDIN	6520
<i>I. Machado, C. Neves, M. Ferreira</i>	

DESMOS A DIGITAL RESOURCE TO LEARN LINEAR FUNCTION	6525
<i>M. Carneiro, A.P. Aires, H. Campos</i>	
THE EFFICIENCY OF USING GAMES IN THE TEACHING AND LEARNING PROCESS ABOUT BURN VICTIMS	6534
<i>C. Nóvoa Fernandes, L. Ferreira Marcolan, S. Rodrigues Rosado</i>	
CITATION USAGE AS A PREDICTOR OF ACADEMIC PERFORMANCE IN STUDENT ACADEMIC WRITING	6540
<i>E. Walsh, E. Nikolaou</i>	
THE RELATIONSHIP BETWEEN PARENTS AND OLDER ADOLESCENTS: A PARENTAL VIEW	6547
<i>R. Petani</i>	
WEARING NATURE'S COLORS: FROM RESEARCH TO EDUCATIONAL EXPERIMENTATION	6557
<i>A. Violano, M. Cannaviello, M. Merola</i>	
SOLVING PROBLEMS USING THE ENGINEERING DESIGN PROCESS THROUGH A STEAM PERSPECTIVE	6565
<i>I. Vale, A. Barbosa, A. Peixoto, F. Fernandes</i>	
MEASURING THE EFFECT OF USING PSEINT AS A TOOL TO IMPROVE THE INTRODUCTION OF STUDENTS TO PROGRAMMING: TWO COMPARATIVE SCENARIOS	6572
<i>C.G. García-Rodríguez, G.L. Dugarte-Peña</i>	
AWARENESS RAISING THROUGH THE USE OF TECHNOLOGICAL MEDIA IN HIGHER EDUCATION	6573
<i>S. Montañez, E. Flores</i>	
THE BIG FIVE AND TEACHING PREFERENCES IN NATURE-HUMAN-SOCIETY	6578
<i>R. Tschiesner, A. Pahl</i>	
HOW STUDENTS' LEARNING STYLES AFFECT THEIR PERCEPTIONS ON THE ASYNCHRONOUS MODE OF A MECHANICAL ENGINEERING COURSE	6587
<i>P. Zalimidis, K. Papanikolaou, V. Spitas, L. Gomatos, G. Vasileiou</i>	
OPEN DISTANCE TEACHING PRACTICES IN PANDEMIC TIMES: DEVISING A SIMPLIFIED VIRTUAL PEDAGOGIC MODEL FOR THE UNIVERSITY OF SAINT JOSEPH IN MACAU, CHINA	6593
<i>A. Fernandes-Marcos</i>	
QUALITY ASSURANCE AS A TOOL TO ENHANCE STUDENT-CENTRED LEARNING IN MILITARY HIGHER EDUCATION – CASE STUDY IN PORTUGUESE NAVAL ACADEMY	6604
<i>J. Ricardo, I. Soares</i>	
SENSATION SEEKING AND COPING IN YOUNG ADULTS	6608
<i>R. Tschiesner, M.E. Moretti, J. Happacher</i>	
DISTANCE LEARNING. FRIEND OR FOE?	6615
<i>R. Tammaro, A. Notti, I. Stasio, R. Scarano</i>	
THE EVOLUTION OF E-ME DIGITAL EDUCATIONAL PLATFORM AND EXPERIENCES FROM ITS NATION-WIDE USE IN SCHOOLS DURING COVID-19 PANDEMIC	6619
<i>E. Megalou, Y. Tsilivigos, C. Kaklamanis, A. Politi</i>	
EDUCATION AS AN AVENUE FOR STUDENTS' ETHICAL BEHAVIOR	6629
<i>S. Gomes, M. Nogueira, C. Neves, F. Pinto dos Santos</i>	
LOOKING FOR THE ADDED VALUE OF VAR FOR TEACHERS' LEARNING GOALS	6638
<i>A. Weizman</i>	
DEVELOPMENT OF DIGITAL COMPETENCES IN BIOLOGY EDUCATION IN PRIMARY AND SECONDARY SCHOOLS	6639
<i>A. Mišianiková, A. Lešková, Z. Boberová, I. Slepáková, K. Kimáková</i>	
EXPLORING THE POTENTIAL OF EDUCATIONAL ANIMATION TO IMPROVE THE LEARNING PROCESS IN MECHANICAL ENGINEERING COURSES	6640
<i>P. Zalimidis, K. Papanikolaou, L. Gomatos, V. Spitas, G. Vasileiou</i>	
INSTRUCTIONAL DESIGN FOR HIGH SECURE SOFTWARE	6648
<i>A. Aleksieva-Petrova, M. Petrov</i>	
EXPERIENTIAL LEARNING OF CROATIAN PUBLIC RELATIONS' GRADUATE STUDENTS BY DOING ETHNOGRAPHIC RESEARCH IN THE HELPING PROFESSIONS	6655
<i>I. Ivancevic, K. Samec, Z. Bagaric</i>	

GOOD PRACTISE OF EDUCATION IN THE FIELD OF CLIMATE CHANGE <i>M. Titko, J. Studená</i>	6664
THE ART OF TEACHING AND THE METHODOLOGICAL EXPERTISE OF TEACHERS AND TRAINERS <i>R. Tammaro, A. Notti, I. Stasio, D. Gragnaniello</i>	6670
MODELING COMPUTATIONAL THINKING TEACHING THROUGH CREATIVE LEARNING <i>A. Weizman</i>	6674
ANALYSIS OF THE POSSIBILITIES OF IMPLEMENTING THE RESULTS OF RESEARCH ACTIVITIES INTO THE TEACHING OF THE MODERNIZED STUDY PROGRAM CRISIS MANAGEMENT <i>S. Strelcová, A. Kelíšek, M. Titko, V. Moricová</i>	6675
SCHOOL SPEECH AS A SPECIFIC COMMUNICATION DISCOURSE IN THE OPTICS OF CORPUS LINGUISTICS <i>K. Rysová</i>	6681
LEADERSHIP AND COMMUNICATION DEVELOPMENT IN ACADEMIC CONTEXT: CASE STUDY AT PORTUGUESE NAVAL ACADEMY <i>F. Rodrigues, I. Soares</i>	6689
ALGORITHMIC THINKING AND CREATIVITY: A DECK OF CARDS FOR EARLY CHILDHOOD EDUCATION <i>M. Figueiredo, V. Alves, D. Gomes, S. Amante, C. Sousa, H. Gomes, R.P. Duarte, C. Gomes, B. Rego, I. Gencel</i>	6696
FOSTERING AUTONOMY OF UNIVERSITY STUDENTS IN THE ACQUISITION OF FRENCH LANGUAGE SKILLS THROUGH ASSESSMENT AND PERSONALISED TUTORING <i>A. Ruyffelaert</i>	6706
DETERMINING THE LEVEL OF READING LITERACY OF PRIMARY SCHOOL PUPILS IN THE CONTEXT OF THE CURRICULUM IN THE CZECH REPUBLIC <i>M. Fasnerová, J. Petrová</i>	6711
MIDDLE SCHOOL MATHEMATICS TEACHERS' PROFESSIONAL NOTICING: THE CASE OF REPRESENTATION OF FRACTIONS ON THE NUMBER LINE <i>F.I. Karataş Aydın, M. Işıksal-Bostan, R. Tekin-Sitrava, S. Yemen-Karpuzcu</i>	6716
HIGH-TECH AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC): A LONGITUDINAL STUDY ON THE USING VERSUS ABANDONMENT OF AN AAC SYSTEM <i>S. Vita, J. Peluso, A. Mennitto, L. Iovino</i>	6722
UNIVERSITY STUDENTS' PREFERENCES OF USING VERBAL AND NONVERBAL COMPONENTS WHEN LEARNING FROM TEXT <i>I. Červenková, J. Kojdecká, A. Hrušková, Z. Sikorová</i>	6729
CITIZEN EMPOWERMENT OF IMMIGRANT WOMEN IN BELGIUM THROUGH DIGITAL LITERACY <i>D. Cauchie, M. Bruyninckx, C. Balfroid</i>	6738
EXPERIENCES TO KEEP UNIVERSITY STUDENTS ENGAGED AND AVOID STUDENT DROP-OUT: SOME BEST PRACTICE EXAMPLES FOR FRENCH STUDIES <i>A. Ruyffelaert</i>	6746
AI LITERACY IN K-12 INFORMATICS EDUCATION <i>S. Mladenovic, B. Lisnic, D. Krpan</i>	6752
SUPPORT FOR SCHOOL LEADERS AND DIGITAL COORDINATORS IN THE FIELD OF LEADERSHIP AND PERSONAL DEVELOPMENT <i>A. Mišianiková, V. Hubeňáková, V. Grohová, D. Šveda, M. Kireš</i>	6758
EXPERIMENTING WITH FORM. TEACHING ARCHITECTURE STUDENTS DESIGN BASICS THROUGH A REAL PROJECT <i>L. Patachi, A.E. Voinea, L. Vartic</i>	6759
AXT@TEEN: EVOLVING AN IT LOCAL SUMMER CAMP INTO A NATION-WIDE TECHNOLOGY AND ASPIRATIONAL TRAINING DURING COVID 19 PANDEMIC, A MEXICAN CASE OF STUDY FOR DIGITAL TRANSFORMATION IN EDUCATION <i>S. Ramirez-Ramirez, O.M. Barron-Cano, P. Zambrano-Robledo, L.R. Salgado-Garza, S. Barrera-Aldana</i>	6764
SUCCESSFUL E-TEACHING: INSIDERS' VIEWPOINTS <i>M. Petrova, A. Zhuchenko</i>	6772
LEARNING FROM THE STUDENTS. AN ANALYSIS OF THE FEEDBACK ON OUTGOING ERASMUS MOBILITIES <i>L. Patachi</i>	6777

THE TAXONOMY OF INFORMATICS TEACHERS COMPETENCIES	6782
<i>S. Mladenovic, A. Granic, M. Mladenovic</i>	
AI IN DEVELOPING THE METACOGNITIVE SKILLS IN ENGINEERING EDUCATION- A LITERATURE REVIEW	6788
<i>J. Gadad, M. Vijayalakshmi</i>	
ONE SIZE FITS ALL? FUTURE SKILLS IN HIGHER EDUCATION – LESSONS LEARNED	6793
<i>Y. Sedelmaier, E. Erculei, D. Landes</i>	
PROGRAMME FOR NUTRITION EDUCATION: DEVELOPMENT OF SCIENTIFIC COMPETENCE BY HIGH SCHOOL STUDENTS	6804
<i>M. Vázquez-Polo, G. Perez-Junkera, S. Matías, L. Cantero, A. Lasa, M.A. Bustamante, O. Martínez, J. Miranda, I. Larretxi, E. Simón, I. Txurruka, V. Navarro</i>	
THE PEDAGOGICAL VARIATION MODEL (PVM, ROGERS, 2013): OVERCOMING ATTRITION RATES BY INCREASING RETENTION OF AN ORGANIC CHEMISTRY CLASS BY REMOTE LEARNING IN POST-PANDEMIC TIMES	6811
<i>M.S. Rogers, A. Grunewald Nichele</i>	
JUST BEFORE INTERNSHIP PRE-SERVICE TEACHER PEDAGOGICAL ISSUES	6821
<i>R. Peled, S. Hardof-Jaffe</i>	
APPLYING ITIL PRINCIPLES AT UNIVERSITY	6823
<i>K. Kaloyanova</i>	
COMPUTATIONAL THINKING AND MATHEMATICS LEARNING: AN EXPERIENCE IN A PRE-SERVICE TEACHERS COURSE	6831
<i>S. Martins</i>	
CASE STUDY ON STUDENTS' PERCEPTION OF ONLINE LEARNING DURING THE COVID-19 PANDEMIC: CHALLENGES AND INTERFERENCES	6841
<i>A. Zhuchenko</i>	
PERSONALITY DEVELOPMENT BY IMPLEMENTING THE PHILOSOPHY FOR CHILDREN PROGRAMME	6846
<i>S. Borisová, G. Pintes</i>	
REMOTE SCHOOLING AND DISABILITIES: PERCEPTION AND ROLE OF THE FAMILIES DURING THE COVID-19 PANDEMIC EMERGENCY	6852
<i>V. Benigno, M. Allegra, G.P. Caruso, A. Chifari, M. Gentile, G. Fulantelli, L. Ferlino</i>	
DESIGNING AN INNOVATIVE MOBILE-ENABLED CONTINUOUS PROFESSIONAL DEVELOPMENT SOLUTION FOR TEACHERS	6862
<i>A. Gohar</i>	
IMPACT OF COVID-19 ON LEARNING IN HIGHER EDUCATION ACCORDING TO TEACHING MODALITY	6868
<i>J. Palacé López, M.I. López Rodríguez, D. Palacé-López</i>	
COMPETENCY BASED AND TECHNOLOGICALLY ENHANCED TEACHING AND LEARNING: COLLABORATIVE VIRTUAL ENVIRONMENT AND TUNING METHODOLOGY	6874
<i>G. Zakirova, S. Rakhmetulayeva, Y. Daineko</i>	
MILAGE LEARN+: PERSPECTIVE OF TEACHERS	6882
<i>L. Almeida, M. Figueiredo, M.H. Martinho</i>	
IMPACT OF THE HEALTH ALARM ON THE TEACHING-LEARNING PROCESS IN UNDERGRADUATE AND POSTGRADUATE STUDIES	6888
<i>M.I. López Rodríguez, J. Palacé López, D. Palacé-López</i>	
TRANSFORMATION OF FAMILY EDUCATION AND PARENT EDUCATION IN SLOVAKIA	6894
<i>D. Dvorská, S. Dončevová, Z. Hrcán, J. Medvedová, S. Barnová</i>	
DYNAMIC E-SKILLS DEVELOPMENT FOR FOREIGN LANGUAGES EDUCATION IN THE EMERGENCY DIGITIZATION PARADIGM	6900
<i>R. Makhachashvili, I. Semenist</i>	
PRACTICAL TRAINING IN COMMUNICATION SCIENCES - AN IMPORTANT FACTOR IN EXPANDING THE COMMUNICATION CAPACITY OF STUDENTS	6908
<i>M. Atanasova</i>	
DEVELOPING FOREIGN-LANGUAGE SOCIOCULTURAL COMPETENCE OF LEARNERS: POSSIBILITIES OF INTERDISCIPLINARY STUDY COURSES	6912
<i>I. Dvorceka, A. Stankeviča</i>	
EVOLUTION OF CORPORATE SOCIAL RESPONSIBILITY IN SPAIN: CONNECTION WITH THE EDUCATION SECTOR	6916
<i>D. López Jiménez, E.C. Dittmar</i>	

A CURRENT LOOK AT THE PLANNING OF THE 1978-1979 SCHOOL YEAR OF A PRIMARY SCHOOL TEACHER <i>P. Catarino, A. Soares, A. Andrade</i>	6917
RESHAPING NARRATIVE OF SCHOOLING IN PAKISTAN THROUGH TECHNOCENTRIC DISCOURSE: AN ANECDOTAL THOUGHT <i>A. Gohar</i>	6927
ADAPTATION PROCESS OF PUPILS AFTER STARTING PRIMARY SCHOOL <i>J. Petrová, M. Fasnerová, J. Kvintová, L. Křeménková</i>	6932
THE RELATIONSHIP BETWEEN CRITICAL THINKING AND MORAL REASONING IN THE CONTEXT OF THE 'PHILOSOPHY FOR CHILDREN' PROGRAMME <i>S. Borisová, G. Pintes</i>	6939
CREATIVITY IN THE COMMUNITY FOR HEALTH AND WELL-BEING: SOCIAL PRESCRIBING "ART-ON-PRESCRIPTION" <i>M.S. Rogers, J.P.D. Rogers, H. Tilley</i>	6944
ADULT EDUCATION AS A POSSIBLE DIRECTION FOR THE DEVELOPMENT OF SOCIAL WORK EDUCATION <i>L. Veková</i>	6953
EDUCATIONAL AND TECHNOLOGICAL SOLUTIONS TO SUPPORT "SMALL SCHOOLS" IN DISTANCE LEARNING SETTINGS: EVIDENCE FROM THE ITALIAN CONTEXT <i>E. Dalla Mutta, V. Benigno, C. Fante, G. Mangione</i>	6959
LEARNING WITH MOOCS: LEARNERS' EXPERIENCE IN A BLENDED MASTER'S PROGRAM USING MITX MICROMASTERS COURSES <i>G. Stump, N. Castro, B. Muramatsu</i>	6968
INTEGRA BIOFIS 5.0, A COLLABORATIVE, PARTICIPATORY AND INTERDISCIPLINARY EXPERIENCE FOR UNDERGRADUATES IN NURSING <i>N. Rodríguez-Henche, L. Calleros, M. Saura, I.D. Román, L. Muñoz-Moreno, A.M. Bajo</i>	6977
VIRTUALIZED LABS WITH XR ENDPOINTS FOR PRACTICAL TRAINING IN PHOTONICS <i>J. Kretzschmar, F. Sojka, J. Domke, C. Henkel, C. Helgert, T. Pertsch</i>	6983
PROPOSAL OF METHODOLOGY FOR TEACHING SUBJECTS RELATED TO PROGRAMMING SKILLS IN THE CASE OF ONLINE TEACHING <i>A. Radovan, B. Mihaljević, D. Petrović, M. Piškor</i>	6988
ADAPTING COLLABORATIVE HANDS-ON ACTIVITIES FOR REMOTE LEARNING <i>J. Mullen, L. Milechin</i>	6992
ANALYSIS AND COMPARISON OF THE EFFICIENCY OF THE HIGHER EDUCATION SYSTEM OF EUROPEAN COUNTRIES USING DATA ENVELOPMENT ANALYSIS <i>A. Marcikic Horvat, B. Radovanov, O. Sedlak, Z. Ciric, R. Korhec</i>	7002
EDUCATION FOR THE VALUE OF RULE OF LAW IN THE EUROPEAN UNION <i>M.M. Silva, D. Alves</i>	7008
VIRTUALIZATION OF COMPUTER NETWORK LAB EXPERIMENTS TO OVERCOME LIMITATIONS OF SOCIAL DISTANCE <i>R. Silveira, G. Bressan, C. Margi</i>	7015
HERBARIUM AS EDUCATIONAL AND INTERDISCIPLINARY RESOURCES: UTAD BOTANICAL GARDEN <i>A. Andrade, P. Catarino, A. Soares</i>	7021
DEMOCRATIZATION OF KNOWLEDGE IN SOCIAL WORK EDUCATION WHILE EMBEDDING SERVICE-LEARNING <i>M. Gruslyté</i>	7029
ON THE USE OF REALISTIC ENVIRONMENTS BASED ON LOW-COST HARDWARE DEVICES FOR LABORATORY PRACTICES <i>Y. Blanco Archilla, A. Pérez Yuste, D. Luengo García, J.D. Oses Del Campo</i>	7035
CREATION OF A SERIOUS VIDEOGAME PROTOTYPE "THE ENGINEER" IN THE DIGITAL AGE TO PROMOTE ENGINEERING ENGLISH IN HIGHER EDUCATION <i>C. Girón-García, R. Casañ-Pitarch, C. Holgado-Sáez, J. Haba-Osca</i>	7044
COMPARISON OF WEB ACCESSIBILITY TEACHING IN DIFFERENT HIGHER EDUCATION INSTITUTIONS <i>S. Luján-Mora, C. Cachero, S. Meliá</i>	7052
THE NEED FOR TRAINING IN TRACKING AND LOCALIZATION SYSTEMS FROM A SECURITY PERSPECTIVE <i>M. Boroš, A. Velas, Z. Zvakova</i>	7062

VISUAL LITERACY IN PRESCHOOL	7067
<i>P. Josefsson</i>	
EMOTONGUE, AN APPLICATION FOR SMARTPHONES DESIGNED TO MEASURE EMOTIONS IN NATURAL CONTEXTS	7072
<i>L. Bruno, A. Iborra Cuéllar</i>	
TEACHING SOFTWARE SKILLS USING A FREELY ACCESSIBLE LEARNING SPACE - AN OER APPROACH	7073
<i>A.K. Mertineit, K. Schaper, C. Bohrmann-Linde, D. Burdinski, B. Zulauf, N. Meuter, H. Hackradt, R. Kremer</i>	
THE INTRODUCTION OF DIDACTIC MATERIALS FOR PHILOSOPHY TEACHING AIMED AT THE STUDENT'S UNDERSTANDING AND CRITICAL THINKING DEVELOPMENT	7082
<i>Z. Cieslarová, M. Číhalová, T. Hubálek</i>	
STUDY OF THE IMPACT OF TECHNOLOGY IN PRIMARY AND LOWER SECONDARY SCHOOL	7089
<i>T. Tonova, S. Ivanov</i>	
TEACHING 'SEXUALITY, CONSENT AND RELATIONSHIP' IN BIOLOGY CLASS - SWEDISH TEACHER EDUCATION, YEARS 4-6	7096
<i>A. Didon, P. Josefsson</i>	
BUILDING OUR FUTURE, A COLLABORATIVE, PARTICIPATORY AND MOTIVATING EXPERIENCE FOR UNDERGRADUATES IN CHEMISTRY	7097
<i>I.D. Román, A. Domingo, C. Menor-Salván, L. Muñoz-Moreno, A.M. Bajo</i>	
STEM STUDENTS SOLVING ACTUAL PROBLEMS FROM BUSINESS, INDUSTRY, AND GOVERNMENT	7102
<i>M. Dorff, S. Weekes</i>	
SOCIAL REPRESENTATION ON ENGLISH, RUSSIAN AND NATIVE LANGUAGES IN INTERNATIONAL UNIVERSITY STUDENTS	7103
<i>A. Berisha, N. Berisha, I. Novikova, A. Novikov, A. Barkhudarov</i>	
PUPILS WITH DYSLEXIA IN THE EDUCATIONAL PROCESS	7109
<i>J. Petrová, M. Fasnerová</i>	
THE AMAZING RACE TO KNOWLEDGE: TEAM-BASED GAMES AND CREATIVITY IN THE CURRICULUM OF MEDICINE STUDIES	7117
<i>M. Gouzman Allouche</i>	
THE SOUND OF SCIENCE(S): A SOUND-BASED PROJECT FOR INCLUSIVE STEAM EDUCATION AND SCIENCE COMMUNICATION	7130
<i>G. Eramo, V. Rossini, S. Pastore, A. Muschitiello, A. Monno, E. Mesto, V. Tomaselli, R. Wagenommer, M. De Tullio</i>	
A SKETCH TO STIMULATE THE MIND: EDUCATIONAL EXPERIMENTATION FOR THE AWARE DESIGN	7135
<i>A. Violano, A. Maio, C. Tosato</i>	
CRITICAL AREAS IN THE TEACHING OF PHILOSOPHY – THEIR CAUSES AND OPTIONS OF SOLUTION	7142
<i>Z. Cieslarova, M. Číhalová, T. Hubálek</i>	
USING EDUCATIONAL NEUROSCIENCE AND CULTURALLY RELEVANT TEACHING PRACTICES IN STEM EDUCATION: CASE STUDY ON BRIDGING THEORETICAL LECTURES TO EXPERIENTIAL EXPERIENCE	7149
<i>R. Darville, S. Doukakis, S. Nikiforos, M. Magiouladitis, M. Niari</i>	
DYNAMIC ASSESSMENT OF VOCABULARY DEVELOPMENT THROUGH INTERACTIVE BOOK READING IN LOWER ELEMENTARY SCHOOL GRADES	7157
<i>S. Vanparys, H. Van Keer</i>	
EMPOWERING THE EUROPEAN WORKFORCE THROUGH VIRTUAL SKILLS TRAINING ON INDUSTRIAL IOT: THE SKOPS PROJECT	7165
<i>A. Behravan, N. Bogonikolos, M. Bohlouli, C. Cachero, P. Kaklatzis, B. Kiamanesh, S. Luján-Mora, S. Meliá, M. Mirhaj, R. Obermaisser</i>	
A GENRE-BASED APPROACH TO SPECIALIZED TRANSLATION TRAINING: THE CASE OF A WINE-FOCUSED WORKSHOP	7175
<i>M. Pascual Cabrerizo</i>	
AN EE SENIOR DESIGN LAB PROJECT WITH A FULL PRODUCT CYCLE AMID THE COVID-19 PANDEMIC	7176
<i>L. Lam</i>	

GAMIFICATION IN HIGHER EDUCATION - BECAUSE GAMES KNOW NO AGE LIMIT!	7182
<i>M. Pascual Cabrerizo</i>	
PROBLEM OF USING AUGMENTED REALITY IN SELECTED TASK IN MONGE PROJECTION	7183
<i>V. Ferdiánová, J. Poruba, M. Procházková</i>	
TRANSITIONING E-LEARNING PLATFORM SUBSCRIPTION MODEL TO FLEXIBILITY – SPLIT TEST ANALYSIS ON A NORWEGIAN E-LEARNING PLATFORM	7193
<i>D. Petrović, B. Mihaljević, M. Žagar, A. Radovan</i>	
EMPTY SPAIN AND VERNACULAR ARCHITECTURE. AWARENESS AND CONSERVATION FROM THE TEACHING OF ARCHITECTURAL RESTORATION	7203
<i>J.L. Baró Zarzo, V. Cristini, C. Mileto, M.J. Balaguer Dezcallar, P. De Dato, L. García-Soriano, M. Lidón De Miguel, S. Manzano-Fernández, M. Caruso, F. Trizio, F. Vegas López-Manzanares</i>	
FEEDBACK AND WRITTEN MATHEMATICS COMMUNICATION – A PEN PAL EXCHANGE	7209
<i>A. Barbosa, I. Vale</i>	
AN E-TRAINING PLATFORM DEVELOPED TO IMPROVE SKILLS AND KNOWLEDGE OF ELDERLY WITH REDUCED MOBILITY IN USING ASSISTIVE TECHNOLOGIES	7215
<i>C. Ciobanu, J. Wielga, D. Mantziari, M. Karaqianni, N. Samar Brenčić</i>	
DIGITAL TRANSFORMATION OF HIGHER EDUCATION INSTITUTIONS - APPLYING MODELS FROM ENTERPRISES	7223
<i>I. Ogrizek Biškupić, M. Banek Zorica, K. Šiber Makar</i>	
USE OF COMPUTATIONAL SIMULATION AND LABORATORY EXPERIENCE ON LEARNING THE PHOTOELECTRIC EFFECT – 12TH CLASS	7233
<i>E. Macuácuá, P. Catarino, A. Soares</i>	
PROBLEM SOLVING SKILL: THE ROLE OF ACTIVE TEACHING METHODOLOGIES	7240
<i>G. Vincenti</i>	
CONTRIBUTION OF PARTICIPATION IN EDUCATIONAL SIMULATION WORKSHOPS FOR DEVELOPING OPTIMAL COMMUNICATION SKILLS AND SOCIO-EMOTIONAL AWARENESS AMONG PRE-SERVICE ENGLISH AND MATH TEACHERS	7250
<i>A. Fattun, A. Rasslan-Sharif, J. Mussa, E. Salman</i>	
THE PERHEART PROJECT, A LEARNING EXPERIENCE FOR BOTH END-USERS AND DEVELOPERS	7255
<i>K. Bierwirth, I. Mocanu, O. Cramariuc</i>	
CORPORATE SOCIAL RESPONSIBILITY IN EDUCATIONAL PROCESS OF STUDY PROGRAM AT THE UNIVERSITY OF NOVI SAD	7263
<i>S. Stojanovic, O. Sedlak, Z. Ciric, D. Stojic, R. Korhec</i>	
IMPACT OF COVID-19 PANDEMIC ON LEARNING AND TEACHING: A COMPARATIVE STUDY IN A PORTUGUESE ENGINEERING DEGREE COURSE	7270
<i>P. Carvalho</i>	
INTEGRATING ONLINE TECHNOLOGY AND TRADITIONAL PEDAGOGY: CHALLENGES AND SOLUTIONS DURING THE COVID19 LOCKDOWN	7275
<i>C. Gurau</i>	
RESEARCH ON FLT UNDER THE MOBILE LEARNING AND TASK-DRIVEN MODE OF SMARTPHONE	7276
<i>Y.X. Sun</i>	
TRAINING THE TRAINERS IN WATER SPORTS TOURISM FOR SUSTAINABLE DEVELOPMENT AND RESILIENCE IN COASTAL REGIONS	7282
<i>F. Galatsopoulou, C. Kenterelidou</i>	
DIGITAL TECHNOLOGIES IN THE PERFORMANCE OF THE TEACHER’S WORK – INNOVATION AND FLEXIBILITY IN THE TEACHING PROFESSION	7283
<i>S. Treľbová, E. Beňová, A. Kačmariková</i>	
USE OF EMBEDDED SYSTEMS IN INDUCTION HEATING	7291
<i>M. Knedlik, P. Kucera</i>	
THE USE OF TEACHING AND LEARNING RESOURCES IN ENGLISH LANGUAGE AT LOWER SECONDARY SCHOOLS	7295
<i>I. Červenková, N. Porubová, Z. Sikorová</i>	
UNIVERSITY/COLLEGE STUDENTS’ CHOICE: HYFLEX LEARNING	7305
<i>S. Laurian Fitzgerald, C. Fitzgerald</i>	

STUDENT ONLINE ASSESSMENT: A QUANTITATIVE SNAPSHOT OF TEACHERS' CHALLENGES AND VIEWPOINTS IN THE CONTEXT OF DIGITALISATION <i>O. Mosoiu, L. Popa</i>	7313
ANALYSIS OF BIOLOGY TEXTBOOKS FOR LOWER SECONDARY SCHOOL PUPILS IN RELATION TO THE INCLUDED SCAFFOLDING COMPONENTS <i>N. Porubová, I. Červenková</i>	7321
MAKING IDEAS VISIBLE: DESIGN APPROACH IN TEACHING ABSTRACT CONCEPTS THROUGH HANDS-ON ACTIVITIES <i>V.M. Iannilli, M. Di Iorio</i>	7322
REMOTE LEARNING EXPERIENCE OF HIGH-SCHOOL STUDENTS DURING COVID-19 <i>M. Činjarević, L. Turulja, A. Kapo, A. Alić</i>	7330
PERCEPTION OF GAME-BASED LEARNING: EXAMINING ESCAPE ROOM EDUCATION IN HIGHER EDUCATION <i>A. Daunoriene, A. Daubariene</i>	7339
THE RELATIONSHIP BETWEEN MATHEMATICS AND MUSIC EDUCATION – PRACTICAL EXPERIENCES <i>P. Otilová, S. Svitek</i>	7344
A CALCULUS COREQUISITE DESIGNED TO INCREASE EQUITY AND INCLUSION <i>J. Ross, N. Spear</i>	7350
SEARCHING FOR ARGUMENTS TO CONFRONT FAKE NEWS <i>M. Minguela, N. Castells, E. Nadal</i>	7351
DEVELOPMENT OF SECONDARY SCHOOL STUDENTS' ATTITUDES TOWARDS DISTANCE LEARNING DURING THE COVID-19 PANDEMIC <i>S. Barnová, S. Krásna, G. Gabrhelová, D. Petriková, S. Brunovský</i>	7355
THE APPLICATION OF ICT TECHNOLOGY IN FOREIGN LANGUAGE ONLINE TEACHING MODE <i>Y.X. Sun</i>	7360
TRANSITIONING FROM ONLINE TO CLASSROOM LEARNING - DIGITAL EDUCATION IMPACT ON FUTURE EDUCATION <i>R. Kulhánek, S. Trellová, M. Kovár</i>	7366
TEACHING AND LEARNING IN A PANDEMIC <i>S. Laurian Fitzgerald, C. Fitzgerald</i>	7367
REFLECTIONS OF REMOTE LEARNING IN HIGHER EDUCATION – A CASE STUDY FROM A UK UNIVERSITY <i>N. Ratnayake</i>	7375
CHILDREN'S LITERATURE, FAMILIES AND EARLY CHILDHOOD EDUCATION: WAYS OF EXPERIENCING THE COVID-19 PANDEMIC <i>M. Figueiredo, M. Alves, I.A. Matos</i>	7376
ENHANCING TRANSDISCIPLINARITY IN HIGHER EDUCATION PROBLEM-BASED LEARNING: THREATS AND OPPORTUNITIES FROM THE VIEWPOINT OF FACULTY MEMBERS <i>F. Pinto dos Santos, C. Neves, S. Gomes, P. Oliveira, M. Nogueira</i>	7377
DIGITALIZATION OF TEACHING AT VOCATIONAL SCHOOLS: WHAT REQUIREMENTS ARE PLACED ON TEACHERS? <i>N. Lemke, J. Siemon, A. Augsdörfer</i>	7384
EDUCATIONAL EXPERIENCES OF STUDENTS DEVELOPED STREAM PROJECTS <i>N. Cibulskaitė, A. Augustinovič</i>	7385
THE EVOLUTION OF CYBER-BULLYING DURING THE COVID-19 PANDEMICS IN HUNGARIAN SCHOOLS IN SLOVAKIA <i>Z. Árki, T. Berta, G. Kiss</i>	7393
3D PRINTERS IMPACT ON THE FUTURE OF CONSTRUCTION <i>A. Jaouherikhah, M. Valiente Lopez, M. Fernandez Alvarez</i>	7401
E-LEARNING SUCCESS DURING COVID TIME: ORGANIZATIONAL, INSTRUCTOR AND STUDENT PERSPECTIVES <i>A. Šemić, A. Kapo, M. Činjarević, L. Turulja, A. Alić</i>	7408
GENDER AND REPRESENTATIONS OF THE VETERINARY PROFESSION DURING EDUCATION. AN EXPLORATORY STUDY AMONG UNIVERSITY STUDENTS <i>A. Ricci</i>	7417

OVERCOMING TECHNOLOGICAL AND CULTURAL CHALLENGES OF INTERNATIONAL STUDENTS IN HYBRID ONLINE CLASSES FOR QUALITY EDUCATION <i>G. Tusch</i>	7423
DESIGN OF AN ANDROID APP TO ADAPT PRACTICAL LABORATORY ACTIVITIES TO A REMOTE MODALITY <i>M. Garcia-Bosque, A. Naya, C. Sánchez-Azqueta</i>	7430
THE EFFICIENCY OF ALBANIAN ONLINE LEARNING <i>D. Shoraj, E. Kadiu</i>	7435
THE LMOOC4SLAV PROJECT: ACADEMIC DISCOURSE FOR ACADEMIC MOBILITY <i>F. Silva, I.M. Duarte, B. Samu, Á. Carvalho</i>	7442
AN EXPERIENCE OF BLENDED LEARNING IN MARKETING: THE EFFECT OF ALUMNI TESTIMONIALS ON STUDENT MOTIVATION <i>A. Estima</i>	7450
DESIGN AND IMPLEMENTATION OF A WORKSHOP FOR THE LEARNING OF NUMERICAL SERIES BASED ON COMPETENCE ASSESSMENT THROUGH THE USE OF TECHNOLOGICAL APPLICATIONS AND COMPUTATIONAL MATHEMATICS <i>M. Dádamo, S. de Federico</i>	7455
SOCIOECONOMIC AND CULTURAL CONDITION TO ACCESS HIGHER EDUCATION IN MOZAMBIQUE: THE POTENTIAL OF DISTANCE EDUCATION IN RURAL AREAS <i>P. Cuanba, A. Moreira, A.C. Amaro</i>	7463
ADOPTING BEST PRACTICES FOR BUSINESS COURSES IN TIMES OF CRISIS: AN EXPLORATORY CASE STUDY IN LA RIOJA, SPAIN <i>L.M. Cerdá Suárez</i>	7469
SOCIAL AND ECOLOGICAL SUSTAINABILITY IN SOCIAL WORK TRAINING <i>H. Belchior-Rocha, I. Casquilho-Martins, J. Ferreira</i>	7476
SELF ASSESSMENT METHOD FOR PRODUCT DESIGN STUDENTS <i>M.E. Romero, M. Frausin, G. Borga, M. Bresciani</i>	7484
MORE ACCESSIBLE E-LEARNING: ADAPTING E-LEARNING MATERIALS FOR STUDENTS WITH SPECIAL NEEDS <i>N. Lazić, M. Banek Zorica, J. Klindžić</i>	7490
TEACHING ARCHITECTURAL DRAWING AT THE ETSEM ESCUELA TÉCNICA SUPERIOR DE LA EDIFICACIÓN, UNIVERSIDAD POLITÉCNICA DE MADRID <i>M. Valiente Lopez, S. Diez Sanz, M.C. Sanz Contreras</i>	7494
ASSESSMENT OF THE IMPACT OF RESOURCE MANAGEMENT MECHANISMS ON THE EDUCATIONAL RESULTS OF THE SCHOOL <i>I. Khudorozhkov, B. Ilyukhin, E. Benks, N. Serbina</i>	7504
IMPROVING DIGITAL SKILLS IN THE TEXTILE AND CLOTHING INDUSTRY THROUGH ONLINE COURSES <i>C. Hertleer, A. Terziev, B. Malengier, H. Saeed, S. Ercegovic Razic, A. Dimov</i>	7511
VIRTUAL LABORATORY OF COMPUTER SCIENCE AT PRIMARY SCHOOL <i>V. Stoffova, M. Zboran</i>	7516
STEM IN CHILDHOOD EDUCATION: A LITERATURE REVIEW <i>M. Azevedo, C. Ribeiro, C. Mesquita, M. Vara Pires</i>	7522
RIGHTS-BASED PEDAGOGY AND EARLY CHILDHOOD EDUCATION PRACTICES <i>C. Ribeiro, C. Mesquita, J.C. Hernández Beltrán</i>	7530
CHANGES IN THE TEACHING LEARNING PROCESS AFTER COVID: WHAT ARE THE CHALLENGES FOR STUDENTS AND TEACHERS IN RETURNING TO A “NEW NORMALITY”? <i>M. Ferreira, S. Bandeira, I. Machado, C. Neves, A. Vieira, A. Aragonez</i>	7539
CODEVAL: IMPROVING STUDENT SUCCESS IN PROGRAMMING ASSIGNMENTS <i>A. Agrawal, A. Jain, B. Reed</i>	7546
ACTIVITIES WITH DESMOS AND GEOGEBRA FOR FORMATIVE AND AUTOMATIC FEEDBACK <i>V. Santos, N.R. O. Bastos</i>	7555
PEDAGOGICAL DOCUMENTATION IN CHILDHOOD EDUCATION: A REVIEW OF CONCEPTS <i>M. Azevedo, C. Mesquita, I. Mociño-González</i>	7560
THE IMPACT OF ONLINE ASSESSMENT ON THE PERFORMANCE OF BUSINESS SCIENCE COURSES’ HIGHER EDUCATION STUDENTS <i>C. Martinho, J. Caldeira</i>	7568

TEACHING BUSINESS INFORMATICS AT HIGHER EDUCATIONAL LEVEL TO DIGITAL NATIVES: HAS COVID-19 CAUSED CHANGES IN THE PERCEIVED USEFULNESS AND THE RESULT OF TEACHING?	7576
<i>D. Suša Vugec, A.M. Stjepić</i>	
ASSESSING THE LEVEL OF SLOVAK UNIVERSITY STUDENTS' INTERPRETATIVE SKILLS	7587
<i>Z. Sucháňová</i>	
SPIKE UP PRIME INTEREST IN MATHEMATICS	7588
<i>P. Petrovič</i>	
DEVELOPMENT OF GRADUATE EMPLOYABILITY SKILLS WITH REGARDS TO DREAM JOB USING MOBILE APP	7598
<i>M. Iqbal, A. Abbas, S.A. Petersen</i>	
EARLY IMITATION AND FOREIGN LANGUAGE LEARNING	7608
<i>A. Frolli, F. Cerciello, S. Ciotola, B. Bertin, C. Esposito, M.C. Ricci</i>	
STUDENTS' ENGAGEMENT IN SOLVING MATHEMATICAL TASKS INVOLVING CONNECTIONS: AN OUTDOOR EXPERIENCE IN PRIMARY EDUCATION	7612
<i>F. Fernandes, I. Vale</i>	
FOOD SUSTAINABLE EDUCATION: A SYSTEMATIC LITERATURE REVIEW	7622
<i>C. Ribeiro, M. Azevedo, C. Mesquita, M.J. Rodrigues, M. Vara Pires</i>	
USING MICROCONTROLLERS FOR EDUCATIONAL ROBOTICS IN UNDERGRADUATE UNIVERSITY STUDY PROGRAM	7631
<i>P. Petrovič</i>	
SYSTEMS FOR KNOWLEDGE TESTING AND ASSESSMENT	7642
<i>V. Stoffova, O. Horváthné Habodás</i>	
MAPPING THE SLOVAK UNIVERSITY STUDENTS' ATTITUDES TOWARDS LITERATURE COURSES AND EXTENSIVE READING IN ENGLISH	7652
<i>Z. Sucháňová</i>	
IMMERSIVE AND INTERACTIVE DIGITAL NARRATIVES AND THE SOCIAL APPROPRIATION OF SCIENCE: COCREATIVE PROCESSES TO CREATE AN OPEN-AIR SCIENCE PARK THAT ADDRESSES EVOLUTIONARY BIOLOGY	7657
<i>R. Nóbrega, C.A.M. Russo</i>	
STUDENT SELF-EFFICACY AND IMPACT OF COVID-19 ON ACTIVE LEARNING IN COLLEGE ALGEBRA THROUGH CALCULUS COURSES	7661
<i>M. Bode, S. Devi, J. Ross, A. El Sabbagh, K. Pooler</i>	
CURRICULAR ARTICULATION IN HIGHER EDUCATION: AN EXPERIENCE IN INITIAL TEACHER EDUCATION	7671
<i>A.R. Aguiar, F. Fernandes</i>	
ENHANCING LEARNING OF INTERACTION DESIGN AND WEB APP DEVELOPMENT THROUGH INTERDISCIPLINARITY: A PEDAGOGICAL EXPERIMENT	7677
<i>R. Hernández-Ramírez, J. Estima, M. Boavida</i>	
AN AWARENESS-RAISING PINBALL: DESIGNING AND PROTOTYPING A SERIOUS GAME WITH PRODUCT DESIGN STUDENTS	7684
<i>M.E. Romero, M. Frausin, G. Borga, M. Bresciani</i>	
TEACHING MATHEMATICS TO ADULT STUDENTS TO PROMOTE HIGHER EDUCATION ACCESS	7690
<i>H. Belchior-Rocha, R. Mauritti, J. Monteiro, L. Carneiro, J. Mendes</i>	
EDUCATIONAL SYSTEM FOR LEARNING SPECIFIC AND ATTITUDINAL COMPETENCES THROUGH HYBRID EDUCATION STRATEGIES WITH INTERACTIVE COLLOQUIUM CHALLENGES AND USE OF BRAINSTORMING	7697
<i>S. de Federico, M. Dadamo</i>	
DEVELOPMENT OF ONE GAME IN SCRATCH TO ASSIST IN TEACHING COMPUTATIONAL THINKING	7707
<i>T.L. da Silva, G.S. dos Santos</i>	
SOUND ENGINEERING IN INFORMAL LEARNING ENVIRONMENT - SOUND EXPERIMENTS IN AN IMPROVISED RECORDING STUDIO	7711
<i>P. Stefanova, P. Stefanov</i>	
THE SPANISH POPULATION UNDER THE FRAMEWORK OF FINANCIAL COMPETENCE FOR ADULTS SET BY THE EU/OECD IN 2022	7716
<i>M. Bosch-Princep, M.A. Pons Cardell, J. Sarrasí Vizcarra</i>	
DIGITAL TRANSFORMATION AS UNIVERSITY COURSE - DEVELOPMENT AND IMPLEMENTATION	7725
<i>I. Pihir</i>	

BLENDED MOBILITY IN JEU: AN EVALUATION	7730
<i>C. Arragon, H. Bollaert, M. Beczkowski, M. Connolly, F. Ederer, J. Ides, P. Milczarski, J.C. Monteiro, J.C. Morais, P. Possemiers, D. O'Reilly, H. Schulze</i>	
IDENTIFYING RISK IN READING AND WRITING IN THE 2ND YEAR OF SCHOOLING: A STUDY IN NORTHERN PORTUGAL IN THE CONTEXT OF THE COVID-19 PANDEMIC	7737
<i>P. Fortunato Vaz, V. Gonçalves, C. Teixeira</i>	
STARTING OVER THROUGH DIFFERENT LEARNING AREAS	7743
<i>H. Belchior-Rocha, M. Sampayo, R. Mauritti, C. Granjo, M. Rodrigues</i>	
BREAKOUT ROOMS: A COLLABORATIVE SPACE THAT WORKS	7749
<i>N.R. O. Bastos</i>	
CULTURAL HERITAGE AND EDUCATION: WHAT RELATIONSHIP?	7755
<i>M. Louro Felgueiras, O. Tymoshchuk, S. Saborano, I. Breia, M. Resende</i>	
USING CANVAS LMS ANALYTICS AS A MEANS TO SUPPORT ALL STUDENTS	7765
<i>C. Prado, T. Barros</i>	
USE OF DESMOS TO ENGAGE STUDENTS IN CALCULUS	7766
<i>N.R. O. Bastos</i>	
COLLABORATION BETWEEN EDUCATIONAL INSTITUTIONS: INTERINSTITUTIONAL CREATIVE MUSIC ELABORATION OF PEDAGOGICAL RESOURCE	7772
<i>P. Stefanova, P. Stefanov</i>	
FOREIGN STUDENTS IN HIGHER EDUCATION INSTITUTIONS IN PORTUGAL, EXPECTATIONS AND REALITY - A CASE STUDY	7776
<i>R. Mauritti, S. Pintassilgo, H. Belchior-Rocha, J. Mendes, D. Ramos</i>	
EDUCATIONAL CASE STUDIES FOR DIGITAL TRANSFORMATION	7783
<i>I. Pihir</i>	
CREATING CRISIS READJUSTMENT BEST PRACTICES (CRBP): STRATEGIES FOR DEVELOPING EDUCATIONAL TRANSITIONAL PRACTICES DURING ENVIRONMENTAL READAPTATION OF HUMAN CAPITAL	7792
<i>B. Barrett</i>	
IMPACT OF SOCIAL MEDIA PLATFORMS IN ENHANCING ACADEMIC LEARNING	7798
<i>S. Shaaban-Nejad</i>	
PREPARING FOR THE FUTURE FOR ALL: THE STATE OF ACCESSIBILITY EDUCATION AT TECHNICAL UNIVERSITIES	7799
<i>H. Snarberg, A. Pantigoso Velasquez, K. Falkenberg, S. Johansson</i>	
ANGLOPHONE LITERATURE AND CULTURE IN LITERARY EDUCATION OF FUTURE TEACHERS	7806
<i>J. Hrinak</i>	
USING THE UNESCO 2030 SUSTAINABLE DEVELOPMENT GOALS FOR A FOUR COURSE SEQUENCE	7811
<i>P. Lane, R. Lafferty</i>	
SOCIAL ENTREPRENEURSHIP AND INCLUSIVE ENTREPRENEURSHIP RESEARCH: EXPLORING UNDERSTANDING OF BUSINESS AND MANAGEMENT STUDENTS	7818
<i>A. Mirakyan</i>	
INCREASING SOCIETY 5.0 SKILLS ELEMENTARY SCHOOL STUDENTS BY GAWI MANUNTING LEARNING MODEL	7824
<i>A.R. Agusta, A. Suriansyah, D.A. Pratiwi, N. Noorhapizah, S. Hussin</i>	
SUSTAINABILITY COMPETENCE-BASED ENGINEERING EDUCATION AT HIGHER EDUCATION INSTITUTIONS: INTRODUCING THE DESIGN FOR A MODULARIZED "SUSTAINABILITY BUSINESS ECONOMICS LAB"	7835
<i>A. Omazic, B. Zunk, C. Pacher</i>	
VIDEOS TO REPLACE FACE-TO-FACE CLASSES	7841
<i>A.A. Mendoza-Amador, M.A. Carballo-Ontiveros, A.N. Castañeda-Sortibrán</i>	
A SPANISH PROJECT BASED ON THE CONCEPT OF CULTURAL HERITAGE	7845
<i>C. Silva</i>	
THE EFFECTIVENESS OF ELEMENTARY SCHOOL LEARNING MATERIAL BASED ON SOUTH KALIMANTAN LOCAL WISDOM TO INCREASE STUDENTS HIGH ORDER THINKING SKILLS AND GAWI MANUNTING CHARACTER	7849
<i>A.R. Agusta, A. Suriansyah, D.A. Pratiwi, N. Noorhapizah, S. Hussin, I. Sin</i>	

REMOTE ACCOMPANIMENT AND EDUCATIONAL HELP AMONG UNIVERSITY STUDENTS: THE CASE OF A PEER TUTORING PROGRAM DURING COVID-19 TO KEEP STUDENTS ENGAGED	7861
<i>S.A. Niño Carrasco, J.C. Castellanos-Ramírez, E. Vilorio</i>	
INNOVATIVE WAYS TO COMMUNICATE RESEARCH IN THE HUMANITIES: COMIC STRIPS	7862
<i>K. Salvador-Cisneros, W. Wonsang</i>	
INNOVATIVE ASSESSMENT TOOLS AND THE USE OF THE PROJECT METHOD IN TEACHING SCIENCES AND MATHEMATICS IN PRIMARY SCHOOLS	7872
<i>Z. Árki, T. Berta, L. Jaruska</i>	
FORMATION OF COMMUNICATIVE COMPETENCE AT EDUCATIONAL PRACTICE OF PEDAGOGICAL UNIVERSITY STUDENTS	7880
<i>I. Balandina, L. Yuzdova, T. Moskvitina, N. Parshukova, I. Kozlova, L. Makhmutova</i>	
HOW COVID-19 PANDEMIC AFFECTED THE EDUCATIONAL DECISIONS? CASE STUDY ON ROMANIAN YOUTH	7886
<i>C. Mocanu, A.M. Zamfir</i>	
YOUTH EMPLOYABILITY DURING COVID-19 PANDEMIC IN CENTRAL AND EASTERN EUROPE	7892
<i>C. Mocanu, R.M. Molea</i>	
AGENDA 2030 FOR SUSTAINABLE DEVELOPMENT AND THE FUTURE OF ADULT LEARNING IN EUROPE	7893
<i>F. Rebelo, A. Guimarães</i>	
POTENTIAL EFFECTS OF AN ACTIVE VIDEO GAME ON PHYSICAL EDUCATION AND ON MATHEMATICAL LEARNINGS	7897
<i>P. Fargier, V. Cece, N. Burel, C. Roure, V. Lentillon-Kaestner</i>	
EXPLORING SELF-REGULATION IN MALAYSIAN REMOTE LEARNING ENVIRONMENT: A CASE STUDY	7904
<i>A.A. Mohd Kasim</i>	
DIGITAL TRANSFORMATION AND INNOVATION IN THE EDUCATION INDUSTRY: DEMOCRACY VERSUS POLITICAL ECONOMY	7905
<i>P. Ray</i>	
COMPUTATIONAL THINKING FROM EARLY CHILDHOOD EDUCATION	7909
<i>J. Casas</i>	
CRITERIA FOR DEVELOPING EDUCATIONAL DIGITAL GAMES	7914
<i>P. Hitkova, P. Hitka</i>	
CREATING A BETTER FUTURE FOR MEDICINE: DEVELOPING A MEDICAL/ HEALTH HUMANITIES LEARNING COMMUNITY IN UNDERGRADUATE MEDICAL EDUCATION	7915
<i>P. Brett-MacLean</i>	
SOCIAL MEDIA AS A TEACHING RESOURCE AND STRATEGIC COMMUNICATION TOOL DURING AN ERASMUS+ MISSION	7925
<i>J. Gonçalves, F. Rodrigues, F. Gonçalves, A. Pissarra, H. Engrácio</i>	
NEW PATHS OF TEACHING AND LEARNING – HOW COVID 19 E-LEARNING EXPERIENCE SHAPED THE LEARNING PROCESS AND COMPETENCES OF COMMUNICATION STUDENTS IN POLYTECHNIC OF GUARDA	7932
<i>J. Gonçalves, H. Engrácio, F. Rodrigues, J. Brigas, F. Gonçalves</i>	
LEVERAGING STEM CAREER PATHS THROUGH ROLE MODEL INTERACTION	7940
<i>D. Kilian, P. Mirski, S. Kruschel, A. Rottensteiner</i>	
THE INFLUENCE OF GENDER COMPOSITION OF MENTORING RELATIONSHIPS ON MENTORS' AND MENTEES' EXPECTATIONS TOWARDS ACADEMIC MENTORING PROGRAMS	7944
<i>P. Mirski, D. Kilian, S. Kruschel, A. Rottensteiner</i>	
"ENTREPRENEURIAL STUDY TOURS RETHOUGHT" A FRAMEWORK FOR DESIGNING VIRTUAL STUDY TOUR EXPERIENCES	7950
<i>P. Mirski, S. Kruschel, A. Rottensteiner</i>	
SCHOOL PREVENTION METHODOLOGISTS AND THEIR WORK WITH STUDENTS DURING DISTANCE EDUCATION	7955
<i>D. Cibáková, M. Krajiňáková, T. Čech</i>	
CREATION OF AN APP PROTOTYPE FOR THE RŪTA'S CHOCOLATE MUSEUM	7961
<i>P. Cantante, R. Pocevičienė, M. Carvalho, S. Martins</i>	
DISTANCE LEARNING DURING PANDEMIC: WAS IT REALLY SO BAD?	7971
<i>A. Molinari, P. Bouquet</i>	

CREATING A DIGITAL COMMUNITY OF PRACTICE	7976
<i>A. Cardoso, J. Souza</i>	
COMPARISON OF IMPACTS OF THE COVID-19 PANDEMIC ON COMMUNICATION AND RESPIRATION OF CHILDREN BETWEEN SELECTED REGIONS OF THE CZECH REPUBLIC	7985
<i>E. Šlesingrová, K. Vitásková</i>	
DIGITAL LITERACY DURING REMOTE TEACHING IN PUBLIC SCHOOL – NATAL/RN, BRAZIL	7994
<i>K.S. Soares, M.A.C. Aguirre, S.M.S. Leôncio, J.D. Pachito, A.F. Souza, G.R.M. Oliveira, W.S.C. Silva, J. Campos</i>	
CHINESE AND EUROPEAN STUDENTS IN THE EUROPEAN HIGHER EDUCATION AREA: ACCOUNTS OF SOCIAL AND ACADEMIC EXPERIENCES	8004
<i>M. Fuentes Agustí, M. Plans Ponsa, M.C. Espín García</i>	
THE PRESENCE OF CHINESE INTERNATIONAL STUDENTS IN EUROPEAN UNIVERSITIES	8005
<i>E. Doval Dieguez, A. Gutierrez Marcenaro, N. Mayer</i>	
PROPOSAL OF IMAGINED INTERVIEW SCRIPT CONSTRUCTION METHOD THAT ENHANCES EMPATHIC UNDERSTANDING OF HOSTILE STAKEHOLDERS IN GENERATION OF PERSUASIVE MESSAGES	8006
<i>H. Suzuki, H. Funaoi, Y. Kubota, H. Kato</i>	
CONTRIBUTIONS OF A SPECIFIC TUTORIAL ACTION PLAN FOR CHINESE INTERNATIONAL STUDENTS IN THE EUROPEAN HIGHER EDUCATION AREA	8012
<i>M.C. Espín García, I. Kaur, M.E. Suarez Ojeda</i>	
FUSE STUDIOS: A NEW, SCALABLE MODEL FOR LEARNING AND TEACHING IN SCHOOLS	8013
<i>R. Stevens</i>	
THE IMPACT OF CULTURAL SENSITIVITY AND EMOTIONAL SELF-CONCEPT ON THE ACADEMIC SUCCESS OF CHINESE INTERNATIONAL STUDENTS	8014
<i>N. Mayer, S. Kammler, P. Valdivia Vizarreta</i>	
REAL ENTREPRENEURIAL PRACTICES TO SUPPORT MULTILINGUAL LEARNERS	8015
<i>C. Prado, C. Gomes</i>	
IMPORTANCE OF TEACHING PRACTICE AND EDUCATIONAL RESOURCES FOR THE INCLUSION AND ACADEMIC SUCCESS OF CHINESE INTERNATIONAL STUDENTS IN HIGHER EDUCATION	8021
<i>N. Gomes, M.P. Cardinal Cruz Das Neves, E. Batoco Constante de Brito, M. Fuentes Agustí</i>	
DATA VISUALISATION FOR TEACHERS: HOW TO READ, INTERPRET AND SHOW DATA CORRECTLY	8022
<i>F. Ramos, D. Iskandaryan, I. Koribska</i>	
THE COMMUNICATIONS OF ‘GERTRUDES’ WITH RURAL-GEOGRAPHICALLY-LOCATED STUDENTS DURING COVID-19 NEW NORMAL IN SOUTH AFRICA AND NIGERIA	8023
<i>O. Ige, T. Wale-Fadairo</i>	
REPRESENTATION OF ALUMNI ENGAGEMENT IN UNIVERSITY COMMUNITY ON HOMEPAGES OF BALTIC UNIVERSITIES: VISIBILITY AND FORMS	8024
<i>M. Burima</i>	
PROCESSES, INTERACTIONS AND DEVELOPMENT IN A PROFESSIONAL LEARNING COMMUNITY OF SCIENCE AND TECHNOLOGY TEACHERS DURING COVID-19 PANDEMIC	8032
<i>Y. Shwartz, A. Salman, Z. Scherz</i>	
CASE-BASED TEACHING IN AN INTRODUCTORY EXCEPTIONAL CHILD COURSE: GETTING STUDENTS TO THINK CRITICALLY ABOUT TEACHING AND LEARNING	8033
<i>T. Herring</i>	
PERCEPTIONS OF LEARNERS REGARDING FACTORS THAT PROMOTE SUSTAINABLE LEARNING ENVIRONMENT IN GRADE 12 PHYSICAL SCIENCE CLASSROOMS IN NORTH WEST PROVINCE	8034
<i>M. Senoelo, A.C. Olufemi, M. Rankhumise, O.N. Mafa-Theledi</i>	
LEARNING DIARY AS A TOOL FOR DEVELOPING UNIVERSITY EDUCATION PROCESS: INTEGRATIVE EVALUATION AND ASSESSMENT OF STUDENTS’ LEARNING	8043
<i>P. Lopez-Fresno, T. Savolainen, L. González-Díaz</i>	
THE ROLE OF E-LEARNING FOR THE FUTURE HEALTH CARE: METACOGNITION OR CRITICAL THINKING	8052
<i>P. Lopez-Fresno, F. Fernández-González</i>	

STAY HOME, STAY SAFE: UNDERGRADUATE STUDENTS' PERCEPTIONS OF ENGAGEMENT AND ADAPTABILITY TO ONLINE LEARNING AND ASSESSMENT DURING THE COVID-19 PANDEMIC <i>A. Alsagoafi</i>	8053
SCHOOL ONLINE IMAGE CONSTRUCTION DURING COVID-19 LOCKDOWN <i>J. Kasperiuniene, Z. Bastiene, D. Bocullo</i>	8059
COLEARNITT: A MODEL FOR INITIAL TEACHER TRAINING <i>G.E. Petre</i>	8066
EMPATHY IN THE DESIGN PROCESS: A WORKSHOP EXPERIENCE ON TEMPORARY AND SITUATIONAL DISABILITIES WITH DESIGN STUDENTS <i>M. Frausin</i>	8076
USE OF UNCONVENTIONAL ELEMENTS IN HIGH JUMP PRACTISING DURING PHYSICAL EDUCATION IN SCHOOLS <i>V. Salcman, J. Moudrá</i>	8083
THE EFFECT OF THE QUALITY OF VISUAL FUNCTIONS ON CO-ORDINATION ABILITIES OF UPPER LIMBS IN PRIMARY SCHOOL-AGED CHILDREN <i>V. Salcman, P. Šíma</i>	8090
THREE PROGRAMMING ENVIRONMENTS FRIENDLY TO BLIND STUDENTS IN LOWER SECONDARY EDUCATION <i>L. Jašková</i>	8099
CONTRASTIVE STUDY OF LAWS AND REGULATIONS ORGANIZING THE EDUCATIONAL SYSTEMS IN ROMANIA AND REPUBLIC OF MOLDOVA <i>A. Nastas, G.A. Necula</i>	8109
FOUNDATION PHASE TEACHERS' BELIEFS ABOUT THE VIABILITY OF RESPONSE TO INTERVENTION IN THE SOUTH AFRICAN CONTEXT <i>S. Bester, M. Graham, M. Gardner</i>	8115
LEARNING ANALYTICS FOR CORRELATION BETWEEN GAMIFICATION AND STUDENT ENGAGEMENT ON MASSIVE OPEN ONLINE COURSE ENVIRONMENT <i>S. Sulaiman, E. Yunus, Y.L. Wong, N. A. Shukor, N. Md Noor</i>	8124
STUDY COUNSELLING AND SOCIAL SUPPORT IN HIGHER EDUCATION - A CASE STUDY FROM SLOVAKIA <i>T. Šeben Zatlková, V. Michvocíková</i>	8132
KO2-DILAN-P1: IMPLEMENTATION OF DIGITAL COMPETENCIES IN PHYSICS TEACHER TRAINING COURSES <i>E. Kremser, C. Thyssen, J. Huwer</i>	8142
TEACHING LAB ACTIVITIES EFFECTIVELY DURING TIMES OF DISRUPTION BY FOSTERING ADAPTIVE AND DIGITAL RESILIENCE: THE CASE OF COLLEGE-LEVEL INTRODUCTORY BIOLOGY DURING THE COVID-19 PANDEMIC <i>P. Papadopoulou</i>	8151
TEACHING ARTIFICIAL INTELLIGENCE TO LIFELONG LEARNERS USING GAMES AND DIALECTICS <i>J. Loeckx</i>	8161
MYTHESIS: AN ONLINE SYSTEM FOR THE MANAGEMENT OF UNIVERSITY DIPLOMA THESES <i>S. Kolovos, E. Papaioannou, C. Kaklamanis</i>	8169
THE BOLOGNA REFORM: NATIONAL STUDY ON THE PERCEPTION AND OPINION OF PORTUGUESE HIGHER EDUCATION TEACHERS <i>S. Antunes, A. Guedes, J.P. Lousado, P. Santos</i>	8179
EXPLORING THE SUSTAINABLE EDUCATION THROUGH MOOCS: TO 21ST-CENTURY ONLINE LEARNER <i>N. Samaranayake</i>	8189
HARNESSING THE POTENTIAL OF MICRO LEARNING - AN INNOVATIVE APPROACH TOWARDS CONTINUOUS PROFESSIONAL DEVELOPMENT <i>L. Gottschling-Knudsen, M.H. Dahm</i>	8196
ISRAELI PRESCHOOL TEACHERS' ATTITUDES TOWARD THE ROLE OF PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER <i>B. Gavish, A. Fleischmann</i>	8205
IMPLICATIONS OF THE PANDEMIC ON THE TRANSITION TO ADULT LIFE: AN EXPLORATORY STUDY OF YOUNG ADULTS' OPINIONS <i>V. Vamvooura, G. Diamantopoulou, E. Kyriakidou, L. Kartasidou</i>	8206

COMPUTER-AIDED QUANTITATIVE CONTENT ANALYSIS IN THE ASSESSMENT OF THE COGNITIVE DEMAND LEVEL OF DIGITAL MATHEMATICS TEXTBOOKS <i>H. Silfoerberg</i>	8213
FORMATIVE ASSESSMENT AS AN INSTRUMENT TO IMPROVE STUDENT LEARNING <i>J. Flores, M. Alcivar</i>	8221
THE EDUCATION IN GEOMATICS: DESIRABILITY OF VIRTUAL FORMAT <i>L. Kukliene, D. Jankauskiene, I. Kuklys, B. Ruzgiene</i>	8226
A LITERATURE REVIEW ON OPEN-WORLD GAMES TO METAVERSE TRANSITION FROM MORAL EDUCATION ANALYSING PERSPECTIVE <i>S. Li, M. Valcke, X. Li</i>	8234
IMMERSIVE VIRTUAL TECHNOLOGIES FOR LEARNING PHYSICS IN HIGHER EDUCATION <i>D. Olmedo, T. Tene, A. León, C. Chamba-Chamba, P. Santillán, V.F. Proaño, C. Vacacela Gomez</i>	8240
THE EFFECT OF UNIVERSITY STUDENTS' ATTITUDES TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGIES ON THEIR TENDENCY TOWARDS INNOVATION <i>G. Sart, H.F. Sezgin</i>	8248
STATISTICAL EVALUATION OF UNIVERSITY STUDENTS' ATTITUDES AND OPINIONS TOWARDS DISTANCE EDUCATION CARRIED OUT DURING THE COVID-19 PANDEMIC <i>G. Sart, H.F. Sezgin</i>	8256
DIGITAL TEAMWORK AND PROTOTYPING IN THE VIRTUAL FAB LAB <i>A. Mihai, R. Souto, C. Vaz de Carvalho, A. Seul</i>	8263
AMBIDEXTROUS LEADERSHIP IN THE MOBILE GAMING INDUSTRY <i>F. Sánchez Coll, C. Donaldson, J. Villagrasa</i>	8273
PEDAGOGICAL AND TECHNICAL FACTORS THAT INFLUENCE THE DESIGN AND EDUCATIONAL ADOPTION OF A GAMIFIED APP IN PRIMARY EDUCATION <i>E. Vázquez-Cano</i>	8282
ANALYSIS OF THE SOCIO-EDUCATIONAL PROFILE OF THE PRIMARY EDUCATION STUDENTS ACCORDING TO THE POSSESSION AND USE OF VIDEO GAMES <i>E. Vázquez-Cano</i>	8283
SOME ASPECTS OF GEOMETRY EDUCATION DURING THE PANDEMIC SITUATION <i>V. Ferdianová, J. Gunčaga, Y. Ashimov</i>	8284
RETHINKING DATA SCIENCE PEDAGOGY WITH EMBEDDED ETHICAL CONSIDERATIONS <i>V. Janeja, M. Sanchez</i>	8292
ENGAGING INDIGENOUS LEARNERS IN EXPERIENTIAL LEARNING: VIRTUAL REALITY AS A LEARNING STRATEGY FOR MALAYSIAN ORANG ASLI STUDENTS <i>L.S. Ng, M. Neo</i>	8299
DESIGNING A BLENDED LEARNING ENVIRONMENT FOR ENHANCED LEARNER ENGAGEMENT: THE EQUAD FRAMEWORK <i>M. Neo</i>	8304
VALIDATING THE SFUMATO METHOD FOR THE TEACHING OF READING TO DYSLEXIC PRIMARY SCHOOL PUPILS <i>I. Simkova, H. Havlisova, J. Jost</i>	8310
ENHANCING HEALTH AND WELL-BEING WITH BUDDHISM YOGA PROGRAM FOR AUTISTIC'S STUDENTS: A CASE STUDY OF RAMKHAMHAENG UNIVERSITY DEMONSTRATION SCHOOL (SECONDARY EDUCATION) <i>W. Bootpo, P. Putsorn, C. Getmaro, W. Bhungob</i>	8316
IDENTIFICATION OF STUDENT MISTAKES AS A FUNDAMENTAL INFORMATION IN THE CREATION OF MASTERY LEARNING MODULES <i>V. Ďuriš, D. Gonda, G. Pavlovičová, A. Tirpáková</i>	8324
GAMIFICATION ACTIVITIES FOR THE CONTINUOUS EVALUATION OF THE SUBJECT AERONAUTICAL TECHNOLOGY <i>A. Sanchez-Carmona, R. Martínez-Val Peñalosa, E. Pérez Cobo, C. Cuerno Rejado</i>	8332
STUDENTS' SATISFACTION WITH DISTANCE LEARNING: INFLUENCE OF TECHNOLOGICAL SKILLS, ACADEMIC INVOLVEMENT AND RESISTANCE TO CHANGE <i>A. Monteiro, C. Pereira, R. Bertuzi, R. Soares</i>	8339

THE IMPACT OF UTILIZING CNC ON ARCHITECTURAL ENGINEERING AND INTERIOR DESIGN PEDAGOGIES <i>I. Alhoutary, H. Karoui</i>	8348
INTERACTIVE CONTENT DELIVERY IN ENGLISH-MEDIUM UNIVERSITIES: IMPLICATIONS FOR NON-NATIVE SPEAKING LECTURERS AND STUDENTS <i>M. Ismailov</i>	8358
WHY ARE OUR TEACHERS SILENT? EXPLORING SELF-DETERMINATION IN POST-GLASGOW SUSTAINABILITY AND CLIMATE CHANGE EDUCATION <i>M. Ismailov</i>	8363
A VIRTUAL EXCHANGE PROJECT ENHANCES DIGITAL LITERACIES AND INTERCULTURAL COMPETENCE <i>K. Korkealehto</i>	8368
STUDENT ENGAGEMENT IS ESSENTIAL IN BLENDED AND ONLINE LANGUAGE LEARNING <i>K. Korkealehto</i>	8373
PERSUADING THE READER - A CASE STUDY OF INSIGHTS INTO EFL WRITING <i>K. Yambay de Armijos</i>	8377
IMMERSIVE TEACHING IN INTERCULTURAL NEGOTIATIONS FOR SALES PERSONNEL IN MANAGEMENT STUDIES – THE CASE OF GLOBAL AUTOMOTIVE DISTRIBUTOR APPOINTMENT <i>M. Stirzel</i>	8387
AN ITALIAN UNIVERSITY DASHBOARD: A TOOL FOR MONITORING LEARNING <i>E. Bortolotti, G. Paoletti</i>	8393
LABORATORY VIRTUALIZATION DURING THE COVID19 PANDEMIC AT THE NATIONAL UNIVERSITY OF COLOMBIA <i>F. Olarte, L.K. Herrera-Quintero</i>	8399
SCAFFOLDING VOCATIONAL STUDENT TEACHERS' COMPETENCE DEMONSTRATION ON THEIR EPORTFOLIOS <i>A.M. Korhonen</i>	8400
'LOCKDOWN' AGILITY OF ACADEMIC STAFF: EXPERIENCES AND PERSPECTIVES <i>D. Cranfield, I. Venter, R.J. Blignaut, A. Tick</i>	8405
COMPLIANCE AND STRATEGIES FOR THE DEVELOPMENT OF CRITICAL THINKING AS PREDICTORS OF LEARNING OUTCOMES OF UNIVERSITY STUDENTS <i>M. Berinšterová, M. Kosturková, J. Kapová</i>	8415
A LEARNING-PHYSICAL ENVIRONMENT AND LEARNING FUNCTIONS AMONG STUDENTS FROM THE POINT OF VIEW OF TEACHERS <i>J. Abu Hussain</i>	8421
AN INTERNATIONAL COLLABORATION IN A DESIGN POSTGRADUATE <i>M. Alcalà, F. Séculi, F. Julián, F.X. Espinach</i>	8422
KITCHENS UTENSILS FOR GIRLS, CARS FOR BOYS? GENDER STEREOTYPES IN PRESCHOOL EDUCATION IN LITHUANIA <i>I. Stonkuviene, G. Purvaneckiene</i>	8428
CHALLENGES EXPERIENCED BY TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING COLLEGES IN PRODUCING SKILLED WORKFORCES IN SOUTH AFRICA: IMPLICATIONS FOR CONTINUOUS PROFESSIONAL DEVELOPMENT <i>M. Makgato</i>	8429
LEARNING ABOUT COMPUTER PROGRAMMING WITH COMPUTER GAMES <i>C. Angeli, K. Tortouri</i>	8436
NEUROMARKETING AND BUSINESS: A MATTER OF INVESTMENT IN THE IBERIAN PENINSULA <i>A. Costa, J. Pires, M. Mendes, A. Vazzoler-Mendonca, V. Capellini, C. Costa-Lobo</i>	8437
PROPOSAL OF AN AGILE METHOD FOR THE DESIGN OF THEMED HIGH EDUCATION PRACTICAL ACTIVITIES <i>P. Pernias Peco, M. Marco Such, A. Sanchez Diaz, D. Tomás Díaz, F.B. Navarro Colorado, G. Candela Romero</i>	8446
FORMATIVE DIALOGUE (HYBRID) FOSTERS ACTIVE LEARNING? TWO CASE STUDIES <i>A. Soeiro</i>	8452
EDUCATION IN CROATIA DURING A COVID-19 LOCKDOWN <i>M. Mladenović</i>	8457

IMPLEMENTING QUALITY STEM EDUCATION IN TIMES OF SOCIAL DISTANCING <i>M. Caplan</i>	8463
EXPERIENCE-BASED METHODOLOGY: AN APPLICATION IN A LEADERSHIP COURSE IN A HUMAN RESOURCES MASTER'S PROGRAM <i>H. Torrez Meruvia, M. Vilà, J. Azcue</i>	8473
SOFTWARE DEVELOPMENT PROCESS IN HEALTHCARE INFORMATICS – A DIGITAL EDUCATION EXPERIENCE <i>K. Stoeckelmayr, M. Tesar</i>	8474
THE STUDIO-BASED APPROACH TO SUSTAINABLE FASHION: PRACTICES OF FASHION DESIGN STUDENTS IN THE INDIAN CLASSROOM <i>X. Lin, M.O. Ingaramo</i>	8480
A COMPARATIVE ANALYSIS OF STUDENT PERFORMANCE BETWEEN THE PRE AND POST-COVID DELIVERY OF THE PROGRAMMING MODULES <i>J. Adhikari, A. McGowan, P. Sage</i>	8490
A PROFESSIONAL DEVELOPMENT TEACHER TRAINING IN DESIGN THINKING APPROACH FOR HIGHER STUDENTS' ACADEMIC SUCCESS <i>M. Tramonti, A.M. Dochshanov</i>	8495
DIGITAL STORYTELLING AND GAMES TO STEM SKILLS DEVELOPMENT <i>A.M. Dochshanov, M. Tramonti</i>	8503
STAFF PERCEPTION OF ISO 9001 STANDARD BASED QUALITY MANAGEMENT SYSTEM AT A HIGHER EDUCATION INSTITUTION <i>M. Seppälä</i>	8512
MEASURING THE EFFECTS OF A DYNAMIC SENTIMENT ANALYZER WITHIN ONLINE SOCIAL NETWORKING SOFTWARE DURING COVID-19 <i>B. Thoms, E. Eryilmaz</i>	8521
THE EFFECT OF PANDEMIC ON THE TEACHERS' PERCEPTION OF TEACHING AND LEARNING IN ONLINE ENVIRONMENT <i>S. Kučina Softić, J. Lasić-Lazić, V. Tropša</i>	8531
TIME TO DEGREE AND COMPLETION RATE IN GRADUATE STUDY PROGRAMMES ON FACULTY OF INFORMATICS AND STATISTICS - PRAGUE UNIVERSITY OF ECONOMICS AND BUSINESS <i>M. Maryska, P. Doucek, L. Nedomova</i>	8538
AN ACTIVE LEARNING METHOD BASED ON PEER ASSESSMENT EXPERIENCE WITH FEEDBACK PROCESS <i>A. Nardi-Ricart, M. Oliva Herrera, R.M. Aparicio Pelegrín, A. Viscasillas Clerch, E. Cano García, L. Halbaut Bellowa</i>	8545
EVALUATION OF DIGITAL SKILLS FOR MARITIME STUDENTS <i>A. Sharma</i>	8552
DEVELOPMENT OF RESOURCES FOR BLENDED LEARNING: DESIGN OF SIMULATORS IN SCIENTIFIC-TECHNICAL EDUCATION <i>M.T. García, M.S. Carmona, J. Frades, M.A. Alonso, A. Carnicer, M.C. Lopez, C.M. Fernandez Marchante, L. Rodriguez-Benitez</i>	8560
MOTOR SKILLS IN RELATION WITH PERCEPTUAL MATURITY IN FIRST GRADERS <i>Z. Rehtik, L. Miklánková, M. Pugnerová, A. Navrátilová</i>	8567
AGILE METHODOLOGY IN THE DIGITISATION PROCESS OF EDUCATIONAL ACTIVITIES <i>M. Recchioni, G. Racinelli</i>	8573
REVERSE TENDENCIES IN READING AND WRITING IN THE CONTEXT OF A CHILD MOTOR SKILLS LEVEL <i>L. Miklánková, M. Pugnerová, Z. Rehtik, N. Navrátilová</i>	8580
THE ISSUE OF PREREQUISITES FOR READING IN RELATION TO THE DEVELOPMENT OF PERCEPTION AND MOTOR SKILLS IN THE CONDITIONS OF PRIMARY SCHOOL <i>M. Pugnerová, L. Miklánková, Z. Rehtik, M. Skoupilová</i>	8587
INITIATIVES TO PROMOTE SCIENCE CAPITAL AMONG SECONDARY EDUCATION STUDENTS <i>A. Picallo-Perez, P. Sarriugarte, J.M. Sala-Lizarraga, D. Solabarria</i>	8593
LEVEL OF READINESS TO READ IN CHILDREN AFTER STARTING COMPULSORY SCHOOL ATTENDANCE <i>M. Otavová, M. Pugnerova, Z. Rehtik, M. Skoupilová</i>	8599

INSPIRE: FOURTH INDUSTRIAL REVOLUTION TEACHING IN THE CLASSROOM A MULTI-DISCIPLINARY COLLABORATIVELY DESIGNED PILOT PROJECT <i>O. Howson, P. Charlton, F. Iniesto, W. Holmes</i>	8604
VIRTUALLY LEARNING... OR NOT? <i>O. Howson</i>	8614
RECONSIDERING WHAT IS 'ACADEMIC' IN THE ACADEMIC WORD LIST <i>J. Noguchi, N. Kunioshi, K. Tojo</i>	8621
MATCH OR MISMATCH? LESSONS LEARNT FROM USING THIRD-PARTY E-LEARNING ONLINE PLATFORMS ALONGSIDE EXISTING VIRTUAL LEARNING ENVIRONMENT IN THE DELIVERY OF A FIRST-YEAR UNDERGRADUATE COURSE <i>C. Ciachir, A. Holland</i>	8628
BUILDING ABSTRACTION LAYERS FOR MACHINE SUPPORTED TEACHING <i>E.G. Haffner</i>	8636
SERVICE-LEARNING FOR UNIVERSITY STUDENTS: A MINING EDUCATION PROPOSAL FOR THE COMMUNITY <i>B. Salgado-Almeida, J. Mendez-Ruiz, P. Campoverde Muñoz, P. Romero-Crespo, S. Jiménez-Oyola</i>	8642
INCLUSION OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS WITHIN HIGHER EDUCATION IN HONG KONG: CHALLENGES AND ACCOMMODATIONS DURING COVID-19 PANDEMICS <i>V. Lee, G. Chao</i>	8650
APPLICATION OF THE SPC MODEL FOR THE DEVELOPMENT OF EMPATHY IN UNIVERSITY CLASSROOMS <i>A. Aguelo, C. Sanz, T. Coma, P. Álvarez, S. Baldassarri</i>	8651
THE RC CIRCUIT AS A BRIDGE FOR LEARNING THE ELECTROTONIC CONDUCTION IN AXONS <i>J.M. Bergues, D. Acebes de la Arada</i>	8655
PEDAGOGICAL APPROACHES TO SUPPORTING MULTILINGUALISM IN THE FIRST-YEAR WRITING CLASSROOM <i>A. Emanuel Smith, A. Chang, E.R. Smith</i>	8660
ZERO WASTE PROJECT: CIRCULARITY IN ARCHITECTURAL DESIGN <i>J. Mosquera González, J. Ullargui Agurruza, S. de Miguel García, R. Delso Gutiérrez, I. Collado Baillo, N. Montenegro Mateos, C. Palacios Rodríguez, M. Pascual García, L. Villalba Rubio, J. de Andrés de Vicente, L.E. Porcar Pérez, T. Martínez López, C. Rubio Zugadi</i>	8666
DIGITAL STRATEGIES IN HIGHER EDUCATION – FROM DIGITAL COMPETENCES TO DIGITAL TRANSFORMATION <i>I. Ogrizek Biškupić</i>	8675
THE CHALLENGES AND BENEFITS OF INSIDER RESEARCH WITHIN A PROFESSIONAL DOCTORAL STUDY – AN EXPLORATION OF EXPERIENCE AND REVIEW OF CURRENT LITERATURE <i>D. Bell</i>	8685
METHODOLOGY FOR THE DESIGN OF SOCIALLY RESPONSIBLE CURRICULUM <i>A. Jose, L. Cardoso, G. Marques, M.J. Varadinov, M.C. Guerra, J. Swietoniowska, M. Vignoli, E. Guerci</i>	8691
ACHIEVE SUSTAINABILITY GOALS THROUGH INNOVATIVE TEACHING AND LEARNING PRACTICES IN SHORT-CYCLE HIGHER TECHNICAL COURSES: THE CASE OF THE MARKETING DISCIPLINE <i>S. Filipe</i>	8692
THE CHALLENGE OF TRANSITION FROM FACE-TO-FACE TO REMOTE LEARNING IN MOROCCAN RURAL SCHOOLS <i>J. Alladatin, I. Al-Chikh</i>	8693
TYPOLOGY OF HEADTEACHER'S INITIAL TRAINING <i>J. Alladatin, I. Al-Chikh</i>	8694
EVALUATION OF THE DIGITAL SKILLS OF MOROCCAN RURAL FAMILIES <i>I. Al-Chikh, J. Alladatin, A.K. Toko</i>	8695
FROM FACE-TO-FACE TO REMOTE LEARNING CHALLENGES <i>I. Pkhakadze, T. Kordzadze</i>	8696
IMPLEMENTATION OF SERVICE LEARNING AND "LIVING LIBRARIES" CONCEPTS AS A KEEPING OF STUDENTS IN CAREER EDUCATION OF SOCIAL PEDAGOGY THROUGH DISTANCE TEACHING DURING THE PANDEMIC COVID-19 PERIOD <i>K. Liberčanová</i>	8697
A FRAMEWORK FOR APPROACHING CHATBOTS IN PROJECT-BASED LEARNING <i>A. Sanchez Diaz, M. Marco Such, M.D. Sáez, M.P. Escobar, A. Mate, J.L. Vicedo, J.C. Trujillo</i>	8707

GROUP WORK ON MIDTERM AND FINAL EXAMS IN THE REMOTE TEACHING AND LEARNING CONTEXT AND BEYOND <i>L. Chen</i>	8715
THE RELATIONSHIP BETWEEN THE TEACHER'S SENSE OF SELF-EFFICACY AND THE ASSIMILATION OF INNOVATIVE TECHNOLOGY AMONG TEACHERS IN SECONDARY SCHOOLS <i>E. Wasserman, H. Nizan</i>	8724
UNLEARNING LEARNING: A 5TH GRADER'S PERSPECTIVE OF LEARNING DURING THE PANDEMIC <i>S. Abdul-Aziz, L. Adams</i>	8725
BENEFITS OF THE IMPLEMENTATION OF A LEARNING-TEACHING PROCESS BASED ON THE WEBQUEST IN OCCUPATIONAL THERAPY STUDENTS: A RANDOMIZED CONTROLLED TRIAL <i>F. Artacho-Cordón, M.I. Núñez</i>	8732
THE APPLICATION OF NEW METHODOLOGIES IN HYBRID TEACHING: LEARNING FROM COVID-19 <i>J. Vena-Oya, A. Calahorro-López, A.B. Mudarra-Fernández, D. Fernández-Uclés</i>	8738
AUGMENTED REALITY FOR IMMERSIVE UNIVERSITY LEARNING <i>A.B. Mudarra-Fernández, D. Fernández-Uclés, J. Vena-Oya, A. Calahorro-López</i>	8739
IMPLEMENTATION OF VIRTUAL LABORATORIES WITH JUPYTER NOTEBOOKS: PRACTICAL EXPERIENCES IN COMPUTER SCIENCE AND MATHEMATICS <i>A. Cobo, R. Rocha, M. Collantes, J.E. Espinola, E. Mora</i>	8746
DESKTOP VIRTUAL REALITY ENVIRONMENTS FOR SPATIAL ORIENTATION SKILL TRAINING <i>C. Carbonell-Carrera</i>	8754
IRRATIONAL AND RATIONAL FOOD BELIEFS AND THE BENEFITS OF A CROSS-CUTTING ACTIVITY IN UNDERGRADUATE STUDENTS: A PILOT STUDY IN OCCUPATIONAL THERAPY STUDENTS <i>F. Artacho-Cordón, M.I. Núñez</i>	8759
CREATING PEDAGOGICAL MATERIAL FOR THE 21ST CENTURY: ANALYSIS OF AN INTERDISCIPLINARY COURSE WITHIN THE SCOPE OF THE ERASMUS+ PROGRAMME <i>L. Dantas, D. Franco, I. Canhoto, E. Estrela, M. Calvet-Ricardo, M. Gonçalves, O. Sousa, J. Brás, B. Koppe</i>	8765
TO END GLOBAL EDUCATION CRISIS, GOVERNMENTS HAVE TO BECOME AWARE AND SENSITIVE TO WHAT STOPS ABOUT 50% OF THE GLOBAL STUDENTS POPULATION FROM GOING TO SCHOOL: A SNAPSHOT OF A REPLICABLE MODEL IN INDIA <i>S. Bose</i>	8766
INSTITUTIONAL ACCREDITATION ACROSS EUROPE: DO ASSESSMENT CRITERIA MIRROR HIGHER EDUCATION'S MISSIONS? <i>O. Tavares, C. Sin</i>	8776
NAVIGATION USER EXPERIENCE IN A 3D VIRTUAL ENVIRONMENT <i>C. Carbonell-Carrera</i>	8781
EXPLORATORY FACTOR ANALYSIS OF THE SPANISH VERSION OF THE BELIEFS ABOUT PEER-FEEDBACK QUESTIONNAIRE <i>N. Ruiz-Robledillo, N. Albaladejo-Blázquez, V. Clement-Carbonell, J. Vela-Bermejo, M. Rubio-Aparicio, I. Portilla-Tamarit, B. Costa-López, R. Ferrer-Cascales</i>	8787
EMPOWERING TEACHERS WHILE ENGAGING STUDENTS <i>K. Eini</i>	8794
FROM BLENDED TO REMOTE AND BACK TO HYBRID: A NEW LANGUAGE TEACHING PARADIGM <i>N. Radić</i>	8795
A CONVERSATION WITH MY PEERS ON LEARNING AND TEACHING PROGRAMMING <i>T. Tran, G. Torrisi-Steele</i>	8796
VOCATIONAL EDUCATION & TRAINING (VET) AND THE FOURTH INDUSTRIAL REVOLUTION (4IR): SUGGESTIONS TOWARDS A SUCCESSFUL EMBRACEMENT <i>S. Pitsikalis, C. Vitsilaki, D. Gouvias</i>	8803
OPPORTUNITIES AND CHALLENGES FOR VR-MEDIATED EDUCATIONAL RESOURCES: AN EDUCATORS' PERSPECTIVE <i>R. Sims, A. Karnik</i>	8810

HOW TO EFFECTIVELY INTEGRATE AUGMENTED REALITY IN SECONDARY EDUCATION IN THE FIELDS OF STEM <i>I.E. Lasica, M. Meletiou-Mavrotheris, K. Katzis</i>	8820
LEARNING BY DOING: PROMOTING ENVIRONMENTAL AND SUSTAINABLE EDUCATION THROUGH GAME-CREATION ACTIVITIES <i>P. Beça, M. Aresta</i>	8825
THE IMPORTANCE OF THE EXPERIMENTAL METHOD IN BIOLOGY TEACHING IN THE HIGH SCHOOL - APPLICATION ASPECT <i>V. Županec, T. Lazarević, T. Pribičević</i>	8832
INCLUSION OF ADULTS IN LEARNING BIOLOGY THROUGH APPLICATION OF PROBLEM-BASED LEARNING <i>V. Županec, A. Bakić, T. Lazarević, T. Pribičević</i>	8838
NEW FORMS OF PRESENTING ASSIGNMENTS: PRE-RECORDED VIDEOS AS AN ALTERNATIVE TO ORAL PRESENTATIONS IN THE “ANIMAL BREEDING” COURSE <i>A. Suárez-Vega, H. Marina, L.F. de la Fuente, Y. Bayón, J.J. Arranz, B. Gutiérrez Gil</i>	8847
INVESTIGATING THE EFFICACY OF RETRIEVAL PRACTICE: A STUDY WITH UNDERGRADUATE NURSING STUDENTS <i>L. Messineo, M. Gentile, M. Allegra</i>	8851
IMPROVING ACADEMIC PERFORMANCE THROUGH THE COMBINATION OF CANVAS AND BLACKBOARD LEARN PLATFORMS IN MASTER'S DEGREE STUDENTS <i>S. Rubio-Arraez</i>	8856
GAME-BASED LEARNING THROUGH THE SOCRATIVE DIGITAL TOOL TO IMPROVE THE MOTIVATION OF POSTGRADUATE STUDENTS <i>S. Rubio-Arraez</i>	8863
MEDIA LITERACY IN ELT PRE-SERVICE TEACHER TRAINING <i>T. Harakchiyska</i>	8870
PERTUS - A SOFTWARE SYSTEM FOR PERSONALIZED TEACHING AND ASSESSMENT <i>J. Fonseca</i>	8878
INCREASING STUDENT ENGAGEMENT IN TURBULENT TIMES: TWO MINI-CASES FROM ICELAND <i>G. Oskarsson, E. Svansson</i>	8883
BARRIERS THAT HINDER INCLUSIVE ONLINE EDUCATION AND THE GOOD PRACTICES IN DIGITAL PEDAGOGY <i>A. Samarakkody, C. Malalgoda, D. Amaratunga, R. Haigh</i>	8884
TEACHING HEALTH, NOT DISEASE, TO STUDENTS IN THE HEALTH CARE PROFESSIONS <i>S. Elgelid</i>	8892
COMBINING PROBLEM-BASED LEARNING AND ROLE-PLAY TO TEACH INTERNATIONAL ECONOMIC POLICY <i>J.C. Palacios Cívico</i>	8893
APPLICATION OF AN ONLINE INTERACTION MODEL IN WIDE GROUPS BASED ON COLLECTIVE INTELLIGENCE MODELS TO IMPROVE LEARNING THROUGH THE THINK-UP PLATFORM <i>M.P. García Pardo, S. Orejudo Hernández, B. Masluk, F. Eguinoa, P. Villarrocha</i>	8897
HOW DO SCHOOL LEADERS ENGAGE WITH AND INFLUENCE THEIR STAFF TO MAXIMISE THE IMPACT OF LEARNING NETWORKS? <i>L. Devlin, R. Morgan-Guthrie, T. Wallis</i>	8898
ABILITY TO READ AND INTERPRET FOOD LABELS: TRAINING PROJECT IN A HIGH SCHOOL IN THE CITY OF TURIN, ITALY <i>D.M. Bianchi, C. Ferraris, C. Tramuta, L. Decastelli</i>	8906
ANALYSIS OF STUDENT PERFORMANCE IN FACE-TO-FACE VERSUS STIMULATED ONLINE LEARNING <i>O. Anđjelic, P. Lakcevic, Z. Rakicevic, M. Radojicic</i>	8907
DISCOVER AND EXPERIENCE MATH. DYNAMIC CLASSROOM MODEL APPLICATION IN TEACHING AND LEARNING PRIMARY SCHOOL MATH <i>R. Papancheva</i>	8913
DESIGNING LEARNING ENVIRONMENTS IN EARLY CHILDHOOD: EDUCATIONAL PRINCIPLES AND PEDAGOGICAL CRITERIA IN REGGIO CHILDREN APPROACH <i>E. Palomba</i>	8923

HOW TO BEAT GENDER STEREOTYPES IN EARLY CHILDHOOD EDUCATION: GUIDELINES ON TEACHING PRACTICES <i>E. Palomba</i>	8930
THROUGH THE EYES OF AN INTERN: REFLECTING THE ROLES OF LEARNING DESIGNER IN THE TRANSITION FROM FACE-TO-FACE TO ONLINE LEARNING <i>W. Prasetyawati, D. Gannaway</i>	8939
AN EXPLORATORY STUDY ON THE PROMOTION OF INFORMATION LITERACY AMONG SECONDARY SCHOOL PUPILS IN THE CONTEXT OF THEIR FIRST CONTACT WITH SCIENTIFIC RESEARCH <i>P. Druschke, S. Al-Diban</i>	8946
A NEW ONLINE DOCTORAL DEGREE FOR WORKING ENGINEERING PROFESSIONALS <i>T. Mazzuchi, S. Sarkani</i>	8957
A SURVEY RESEARCH ON THE MORAL JUDGMENT OF PRE-SERVICE TEACHERS IN TAIWAN: A PILOT STUDY <i>T.H. Peng, T.H. Wang</i>	8958
FROM BLOCKS TO SCRIPT. SOME ACCENTS AND EXAMPLES OF CODING COMPETENCIES DEVELOPMENT AT SCHOOL LEVEL <i>R. Papancheva, T. Glushkova</i>	8962
CHALLENGES IN TEACHERS' WORK IN FACILITATING THE LEARNING OF THE LATVIAN LANGUAGE DURING COVID-19 RESTRICTIONS <i>D. Markus, A. Tauriņa, T. Zīriņa</i>	8969
VIRTUAL INTERNSHIPS: CHANGING THE CAREER TRAJECTORY OF UNDERREPRESENTED POPULATIONS <i>M. Dugo</i>	8977
TEACHERS' PERCEPTIONS ON IMPLEMENTING MOBILE AR FOR THE TEACHING OF ITALIAN AS ANOTHER LANGUAGE <i>M. Manna</i>	8978
DEVELOPING STUDENTS' DIGITAL COMPETENCIES - 21ST CENTURY TEACHING SKILLS: BASED ON SELF-ASSESSMENT OF HIGHER EDUCATION TEACHERS <i>L. Luić</i>	8979
INTEGRATING SUSTAINABILITY DEVELOPMENT OBJECTIVES IN A UNIVERSITY SUBJECT <i>R. Chalmeta, M. Palop-Belloch, J. González-Darder</i>	8989
EXPERIENCES IN THE DEVELOPMENT OF A GENDER AND HUMAN RIGHTS COURSE <i>M. Palop-Belloch, R. Chalmeta, J. González-Darder</i>	8993
DISTANCE NOT DISTANT – AN EXPLORATION OF EXPERIENCES AND STUDENT PERCEPTIONS OF PERSONAL ACADEMIC TUTORS FOR INDEPENDENT DISTANCE LEARNING TRAINEE TEACHERS <i>D. Ross, D. Bell</i>	8999
A COMPARATIVE ANALYSIS ON TWO DIFFERENT DIDACTICAL APPROACHES TO THE REMOTE TEACHING EXPERIENCE <i>F. Brevi, K. Bettin</i>	9000
TEENAGERS INSTAGRAM USE AND ITS RELATIONSHIP WITH ANXIETY LEVELS AND EMOTIONAL REGULATION, DIFFERENCES BY SEX <i>C. Sisí, M.P. Fernández, A. Escalona, M. Redondo, E. Ruiz, R. Reyes</i>	9001
PROFESSIONAL AND PEDAGOGICAL LEARNING ABOUT VIRTUAL TEACHING DEVELOPED BY PRE-SERVICE TEACHERS DURING THE PANDEMIC <i>J.M. Garrido-Miranda, G. Contreras-Perez, S. Catalan-Henriquez</i>	9010
SHADOWS AND MARKS: THE POTENTIAL NARRATIVE OF CHILDREN ABOUT WAR <i>A. Pereira, I. Freire-Ribeiro, E. Mesquita</i>	9019
INCLUSION OF ICT SKILLS, DIGITAL LITERACY AND OPEN SOURCE PLATFORMS IN THE TEACHING OF INDUSTRIAL DESIGN APPLIED TO SMART AGRICULTURE <i>A. Faoro, M.E. Romero, M. Frausin</i>	9027
INTEGRATED SCIENCE (IS) FOR MIDDLE SCHOOL VIA INTERACTIVE DIGITAL BOOK <i>K. Intiaz, N. Mahmood</i>	9032
A TRANSCRIPTION-BASED LEARNING ENVIRONMENT FOR A TONE LANGUAGE <i>P. Zongo, T.F. Ouedraogo, L. Capus</i>	9042

INTERGENERATIONAL CHALLENGES: A CASE STUDY ON THE AUTOMOTIVE INDUSTRY	9050
<i>M. Amorim, M. Ferreira Dias, M. Almeida</i>	
INTERNATIONAL EXPERT COURSE AS AN EXAMPLE OF COLLABORATION BETWEEN EUROPEAN UNIVERSITIES, RESEARCH CENTERS AND THE INDUSTRY FOR THE DEVELOPMENT OF THE ESSENTIAL OILS SECTOR AND ENTREPRENEURSHIP	9055
<i>C. Calderón-Guerrero, J.L. García, M.C. Giménez, C. Cordón</i>	
APPLICATION OF NATURE-BASED SOLUTIONS AND USE OF MONITORING AIR&WATER POLLUTION SENSORS THROUGH LOW-COST MINI-PORTABLE MEASUREMENT STATIONS TO PROMOTE ENVIRONMENTAL AWARENESS IN SECONDARY EDUCATION	9063
<i>C. Calderón-Guerrero, M. Almestar, M. Marchamalo, S. Sastre, M. Martínez</i>	
MINDFULNESS AND TECHNOLOGY: CAN THEY BE TWO SIDES OF THE SAME COIN?	9074
<i>K. Karadjova-Kozhuharova, R. Baker</i>	
INTEGRATION OF EDUCATIONAL RESOURCES FOR ELECTRICAL CIRCUITS	9083
<i>G. Mata Hernández</i>	
CMU CS ACADEMY: A TEXT-BASED PROGRAMMING LANGUAGE APPROACH FOR HIGH SCHOOL COMPUTER SCIENCE EDUCATION	9091
<i>M. Taylor, E. Cawley, S. De Jesus, M. Stehlik, D. Kosbie</i>	
AWARENESS OF ACADEMIC INTEGRITY IN SOCIAL SCIENCE STUDENTS AT REGIONAL HIGHER EDUCATION INSTITUTIONS IN LATVIA	9101
<i>A. Pīpere, S. Zariņa, D. Iliško, I. Kokina, J. Davidova</i>	
SPATIAL MOBILITY AND ACCESS TO SPECIALIZED EDUCATIONAL SERVICE: STUDENTS WITH DISABILITIES IN THE NORTHEAST REGION OF BRAZIL	9111
<i>A.T. Araújo de Almeida, W. Fusco, J. Campos, A.A. Sousa Fontoura, M. Calle Aguirre</i>	
THE CELL COLLECTIVE EXPERIENCE: BUILDING COMPUTATIONAL MODELS TO UNDERSTAND BIOLOGICAL SYSTEMS	9120
<i>G. Tang, Z.Z. Lieu</i>	
WHAT DO SYSTEMATIC LARGE SCALE ASSESSMENT TESTS ANALYSIS IN MATHEMATICS SHOW?	9127
<i>M. Mikite, G. Burgmanis, I. France, D. Namsone</i>	
TEACHERS' BELIEFS ABOUT MEDIA LITERACY AS A COMPONENT OF AGENCY	9133
<i>L. Valdmāne, S. Zariņa</i>	
MUSEUM AS AN IMPORTANT EDUCATIONAL RESOURCE FOR STUDENTS OF HISTORY AND CULTURAL HERITAGE IN RUSSIA AND SPAIN	9140
<i>M. Moseykina, K. Filimonova, E. Kargovskaia, V. Kuznetsova</i>	
E-LEARNING IN ORTHOPAEDIC SURGERY POSTGRADUATE TRAINING	9145
<i>P. Molchovski, K. Tokmakova</i>	
EDUCATIONAL PROGRAMS OF THE COLLECTION OF THE RUSSIAN MUSEUM IN MALAGA AS A WAY OF BILATERAL INTERCULTURAL DIALOGUE IN THE NEW CENTURY	9149
<i>K. Filimonova, M. Moseykina, E. Kargovskaia, V. Kuznetsova</i>	
HOW CAN ROBOTICS AND PROGRAMMING AFFECT CHILDREN'S COMPUTATIONAL THINKING SKILLS THROUGH REAL LIFE SCENARIOS?	9153
<i>E. Xerou, C. Angeli</i>	
POST-STROKE REHABILITATION THROUGH FUNCTIONAL ELECTROSTIMULATION: PATIENT EXPERIENCE AS THE FOCUS OF DESIGN PROCESS	9160
<i>G.F. Patellaro, M.E. Romero, M. Frausin</i>	
A CONCEPT OF A DIGITAL ASSISTANT TO SUPPORT PRACTICAL PHASES IN (COOPERATIVE) STUDIES: HOW DIGITALIZATION AND PERSONALIZATION STRENGTHEN THE LINK BETWEEN THEORY AND PRACTICE	9165
<i>O. Resch, A. Yankova</i>	
USING EXCEL FOR CREATING MULTIPLE VERSIONS OF AN EXAM	9174
<i>N. Carson</i>	
NURSES' ATTITUDES TOWARDS ACADEMIC DISHONESTY	9175
<i>U. Kõrgemaa</i>	
WILLING SUSPENSION OF SCHIZOPHRENIA: LEARNING FROM LUDO-NARRATIVE DISSONANCE IN COMPUTER GAMES	9182
<i>B. Kampmann Walther</i>	

SURVEY FINDINGS ON THE SPREAD OF DESIGN THINKING IN ARAB COUNTRIES: THE EDUCATIONAL SECTOR AS A DRIVING FORCE, AND ITS CURRENT CHALLENGES	9188
<i>H. Traifeh, J. von Theinin, R. Abou Refaei, C. Meinel</i>	
THE IMPACT OF VIRTUAL REALITY (VR), SOCIAL MEDIA AND GAMIFICATION ON LEARNER ENGAGEMENT: RE-IMAGINING AN ONLINE STUDY SPACE FOR UNIVERSITY STUDENTS	9198
<i>D. Degiorgis, D.T. Ivan, S. Mudgal, I. Oosterloo, H. Pouranian, P. Prabhav, D. Vlachopoulos</i>	
CURRENT STATE OF INITIAL PRESCHOOL TEACHER TRAINING IN BULGARIA AND THE BALKAN REGION COUNTRIES	9205
<i>G. Georgieva</i>	
KEY COMPETENCES IN INITIAL PRESCHOOL TEACHER TRAINING - THE ROLE OF ETWINNING AND ERASMUS+	9211
<i>G. Georgieva</i>	
HIGHER EDUCATION STRATEGY TO REDUCE AN ORGANIZATION'S DIGITAL CARBON FOOTPRINT DERIVED FROM CYBERSECURITY POLICIES	9218
<i>I. Bandara, F. Ioras</i>	
LECTURERS' PERSPECTIVES ON FIRST-YEAR ACCOUNTING STUDENTS' ADJUSTMENT TO UNIVERSITY LIFE AT A SOUTH AFRICAN UNIVERSITY OF TECHNOLOGY	9229
<i>M. Mokhampanyane</i>	
WEEKLY PREDICTION OF AT-RISK STUDENTS USING DATA MINING	9230
<i>M. Jawthari, V. Stoffova</i>	
SPACED REPETITION SYSTEM FOR LEARNING MATLAB IN ENGINEERING	9237
<i>I. Bailera, M. Bailera, B. Peña</i>	
CONSEQUENCES OF SOCIAL MEDIA USE ON PSYCHOLOGICAL WELLBEING IN YOUNG ADULTS OVER THE LAST 10 YEARS: A SYSTEMATIC REVIEW	9238
<i>C. Sisí</i>	
LEARNING AND OCCUPATION OF CHILDREN'S LEISURE TIME: CRISSCROSSING SCHOOL AND NON-SCHOOL EDUCATION	9249
<i>E. Mesquita, I. Freire-Ribeiro, A. Sanches, C. Carlos</i>	
WHAT CAN WE LEARN FROM THE COVID-19 EXPERIENCES OF ONLINE LEARNING IN VOCATIONAL EDUCATION FROM THE BRITISH ISLES?	9256
<i>D. Dabbous, K. Emms, A. Laczik, H. Henderson</i>	
AN EXPLORATORY STUDY ON SUPPORTING COLLABORATIVE KNOWLEDGE CREATION ONLINE	9257
<i>E. Siu, S. Wong</i>	
CHATBOT AS A TOOL TO CONNECT SOCIAL NEEDS WITH LEARNING FOR PHYSICAL THERAPY STUDENTS	9265
<i>M. San Miguel-Pagola, A. Buesa-Estellez, J. Echeverría, P. Roldán-Pérez</i>	
SCHOLARLY PAPERS AS A TEACHING TOOL IN COMMUNICATION DESIGN EDUCATION	9266
<i>M. Qunghiutto, C.S. Galasso</i>	
EVALUATION OF GAMIFICATION APPROACH USING VAR FOR DIGITAL CULTURAL HERITAGE	9271
<i>D. De Luca, N. Rimella, E. Bussi, M. Del Giuduce, A. Osello</i>	
FORESIGHT AND SUSTAINABLE FUTURES IN LIFELONG LEARNING - PROFESSIONAL DEVELOPMENT IN ADULT EDUCATION	9279
<i>C. Sjödin, M. Riska, K. Westerén, P. Linderbäck</i>	
NOVEL DISTANCE-LEARNING METHODS TO OVERCOME CHALLENGES CAUSED BY COVID-19 IN UNDERGRADUATE PROGRAMMING COURSES	9284
<i>S.P. Neshaei, A.M. Namjoo, P. Chavoshian, P. Saremi, M.T. Jahani-Nezhad, A. Kousheshi, M.A. Fazli</i>	
ONLINE EVALUATION OF REGULATED EDUCATION IN FINANCE AFTER THE COVID PANDEMIC	9291
<i>M. Vercher-Ferrandiz, F. Salas-Molina, D. Pla-Santamaria, A. Garcia-Bernabeu</i>	
USING EEG TO EXPLORE THE COGNITIVE LOAD OF STUDENTS WITH DIFFERENT MATHEMATICAL ABILITIES INVOLVED IN ANSWERING MATHEMATICS QUESTIONS	9292
<i>S.W. Chen, J.F. Wang, T.H. Wang</i>	
TEACHING OPERATIONS MANAGEMENT TO LAWYERS	9293
<i>F. Salas-Molina, M. Vercher-Ferrandiz, D. Pla-Santamaria, A. Garcia-Bernabeu</i>	

LESSONS LEARNED FROM COVID-19 PANDEMIC REMOTE TEACHING: A CASE STUDY OF THE IMPROVEMENT AND ADJUSTMENT OF THE EDUCATION PROCESS DURING AND AFTER PANDEMIC AT FM TUL <i>L. Kosková Třísková, J. Vraný, I. Kopetschke</i>	9300
A TRAINING FRAMEWORK FOR CYBERSECURITY <i>E. Mitan</i>	9309
DEVELOPING COMPUTATIONAL THINKING AND PROBLEM-SOLVING SKILLS IN EARLY CHILDHOOD AND PRIMARY SCHOOL <i>F. Casasso, C. Fissore, V. Fradiante, M. Marchisio</i>	9316
DATA DRIVEN LEARNING ACTIVITIES IN ENGLISH ON THE SPECIALIZED LANGUAGE OF MATHEMATICS IN SECONDARY SCHOOL <i>C. Fissore</i>	9326
ACADEMIC RESEARCH PROJECTS AS A VEHICLE FOR SUSTAINABILITY <i>M.L. Lara Ortiz</i>	9334
ENHANCING DIGITAL ASSESSMENT THROUGH ARTIFICIAL INTELLIGENCE <i>S. Bezzina, A. Pfeiffer, A. Dingli, T. Wernbacher</i>	9339
OPEN SOURCE PLATFORM ENRICHMENT FOR IMPROVING THE LEARNING PROCESS IN DRUG DISSOLUTION MODELS AND DISSOLUTION PROFILES COMPARISON <i>V. Mangas Sanjuan, I. Usach, R. Talens, A. Nacher, V. Merino-Sanjuan, M. Merino-Sanjuan</i>	9345
ENHANCING ENGLISH LEARNING MOTIVATION THROUGH THE USE OF ROBOT AND VIRTUAL REALITY TECHNOLOGIES <i>Y.L. Chen, C.C. Hsu, H.H. Hsu, W.C. Lien, C.Y. Lin</i>	9352
INTERDISCIPLINARY RESEARCH OF GLAGOLITIC MANUSCRIPTS – NEW APPROACHES TO CULTURAL HERITAGE STUDIES PROJECT KII-06-H60-09/2021: “INTERDISCIPLINARY METHODS AND TOOLS FOR RESEARCH OF MANUSCRIPT HERITAGE” <i>I. Dimitrova</i>	9356
POST PANDEMIC LEARNING: WHAT ABOUT HYFLEX APPROACH? <i>J. Juhary</i>	9361
COMPARING THE COGNITIVE LOAD OF FIELD-DEPENDENCE AND FIELD-INDEPENDENCE STUDENTS IN ANSWERING MATHEMATICS QUESTIONS: FROM THE BEHAVIOR AND EEG EVIDENCE <i>S.W. Chen, J.F. Wang, T.H. Wang</i>	9369
APPLICATION OF THE FINITE ELEMENT METHOD TO THE UNDERSTANDING OF A NON-STEADY STATE HEAT TRANSPORT PROBLEM <i>D. Tarrazó-Serrano, S. Castiñeira-Ibáñez, E. Sánchez-García, M. Gasque, A. Uris, C. Rubio</i>	9370
SUSTAINABLE DEVELOPMENT GOALS AND THEIR IMPLEMENTATION IN PHYSICS <i>S. Castiñeira-Ibáñez, D. Tarrazó-Serrano, M. Gasque, C. Rubio, A. Uris</i>	9378
EDUCATION AND PLAY IN OUTDOOR ENVIRONMENT - PRESCHOOL TEACHERS' VIEWS <i>T. Bahchevanova, E. Kamenova</i>	9384
INTRODUCING MASTER’S STUDENTS INTO GENOMIC SCIENTIFIC REASONING THROUGH AN INTERACTIVE PROBLEM-BASED LEARNING LANDSCAPE: THE CHALLENGE OF IDENTIFYING THE CAUSAL MUTATION OF A SHEEP HEREDITARY DISEASE <i>A. Suárez-Vega, M. Alonso-García, H. Marina, R. Pelayo, J.J. Arranz, B. Gutiérrez-Gil</i>	9390
COMPARING LEARNERS’ MOTIVATIONAL LEVELS FOR TRADITIONAL READING AND ONLINE READING <i>N. Boakye</i>	9396
IMPROVING SKILLS OF PROCESSING AND MAPPING CADASTRAL INFORMATION BY AN INNOVATIVE QGIS PLUGIN WITH TEACHING PURPOSES <i>B. Martín, R. Molinero-Parejo, N. Shurupov, A. Ariza-Álvarez, E. Ortega, M. Navarro-Ligero, M.E. López-Lambas, F. Aguilera-Benavente, J.A. Soria-Lara</i>	9397
ADDRESSING THE “LEAKY PIPELINE”: A REVIEW AND CATEGORISATION OF ACTIONS TO RECRUIT AND RETAIN WOMEN IN COMPUTING EDUCATION <i>A. Berry, S. McKeever, B. Murphy, S.J. Delany</i>	9405
COMMUNICATION DESIGN AND COMPUTATIONAL APPROACHES: OPPORTUNITIES AND CRITICALITIES IN A DISCIPLINARY TRANSFORMATION <i>M. Quaggiotto</i>	9417

DEVELOPMENT OF A TEACHING VIDEO GAME: REVIEWING THROUGH NUMERICAL EXERCISES	9422
<i>K.U. Antela, E. García-Fabre, R. Sáez-Hernández, I. Adam-Cervera, C. Belenguer-Sapiña, A. Pastor, A.R. Mauri-Aucejo, M.L. Cervera, A. Morales-Rubio</i>	
GAME-BASED LEARNING AND CHEMICAL ANALYSIS: AN EXAMPLE FOR ANALYTICAL PRACTICES	9427
<i>K.U. Antela, E. García-Fabre, R. Sáez-Hernández, I. Adam-Cervera, C. Belenguer-Sapiña, A. Pastor, A.R. Mauri-Aucejo, M.L. Cervera, A. Morales-Rubio</i>	
EMERGING FROM THE BLACK BOX: THE TRANSITION FROM ONLINE TO IN-PERSON STUDENT ATTENDANCE	9433
<i>E. Spender, S. Eoans</i>	
ITALIAN UNIVERSITY STUDENTS AND DISTANCE LEARNING CAUSED BY THE PANDEMIC, AN OVERVIEW	9440
<i>E. Mattarelli</i>	
UPDATE OF THEORY ASSIGNMENT: ENGAGING STUDENTS IN COURSE DEVELOPMENT	9448
<i>G. Oskarsson</i>	
ENHANCEMENTS FOR DIGITAL TEACHING - PREPARATION AND ADAPTATION OF COURSES FOR DIGITAL TEACHING AND LEARNING BASED ON THE MODULE "DIGITAL MEDIA IN SCHOOL"	9449
<i>F. Funke, S. Hofmann</i>	
TEACHING ADMINISTRATIVE LAW FOR SUSTAINABILITY	9456
<i>M.L. Lara Ortiz</i>	
THE RELATIONSHIP BETWEEN TEACHERS' AUTONOMY SUPPORT AND STUDENTS' MOTIVATION, ACHIEVEMENT AND WELL-BEING	9463
<i>S. Germani, T. Palombi, M. D'Amico</i>	
INTERACTIVE MATH CLASS APPLICATION - BRIDGE BETWEEN TEACHER AND STUDENTS	9470
<i>P. Vondráková, P. Beremlijski</i>	
THE USE OF AUGMENTED REALITY APPLICATIONS IN PORTUGUESE SHOPPING CENTRES: A DOCTORAL THESIS BRIDGING UNIVERSITY AND INDUSTRY	9476
<i>F. Oliveira, R. Raposo</i>	
THE ANALYSIS OF INTERCONNECTIONS BETWEEN SCHOOL CULTURE FEATURES AND TEACHER JOB SATISFACTION	9481
<i>V. Dacienė, R. Bubnys, A. Kazlauskienė</i>	
STUDY ABOUT METHODS AND IMPACT OF INNER DIFFERENTIATION IN BIOLOGY LESSONS OF 9TH GRADERS	9491
<i>M. Ternieten, D. Elster</i>	
PEER MENTORING MODEL IN SAPIENZA UNIVERSITY OF ROME: FIRST RESULTS	9501
<i>P. Sposetti, G. Szpunar, G. Vincenti, E. Mattarelli, S. Gabrielli, M.G. Rionero</i>	
DEVELOPING COHERENT BEHAVIOR THROUGH HUMANOID ROBOT NAO IN PRESCHOOL EDUCATION	9509
<i>K. Liberčánová</i>	
SAVE DR. ARNOLD: A LAB-BASED CHEMICAL ENGINEERING ESCAPE ROOM	9519
<i>C. Herrera, M.A. Larrubia, M. Cortes-Reyes, S. Molina-Ramirez, R. Gonzalez, M.V. Dominguez, L.J. Alemany</i>	
PROFESSIONAL DEVELOPMENT OF UNIVERSITY TEACHERS AS A RESULT OF CAPACITY BUILDING IN THE MACICT PROJECT OF THE ERASMUS+ PROGRAMME	9524
<i>S. Piashkun, J. Mäkiö</i>	
TOWARDS A TRANSITION FROM EMERGENCY REMOTE TEACHING TO ONLINE LEARNING IN THE NEW NORMAL	9530
<i>M. León-Urrutia, S. White, M. Eradze</i>	
THE VALIDATION OF A TIME-EFFICIENT MEASURE FOR ASSESSING CHILDREN'S SOCIAL ISOLATION AT SCHOOL	9540
<i>F. Alivernini, E. Cavicchiolo, S. Manganelli, S. Germani, A. Chirico, T. Palombi, M. D'Amico, F. Albarello, F. Lucidi</i>	
TEACHING CYBER-PHYSICAL-SOCIAL-SYSTEMS THROUGH PROJECTS BASED LEARNING	9541
<i>D. Kataria, G. Sanchez, J.P. Naidu</i>	
LOOKING FOR ARGUMENTS TO PROMOTE CRITICAL THINKING IN SECONDARY EDUCATION STUDENTS	9551
<i>N. Castells, J. Luna, M. Minguela, E. Pérez</i>	

PHOTOGRAMMETRY WITH LIDAR IPAD PRO	9555
<i>A. Vlachos, A. Polyzou, A. Economides</i>	
CHALLENGE-BASED LEARNING: A PROFESSIONAL EXPERIENCE THROUGH BUILDING MONITORING	9564
<i>C. Morón, D. Ferrández, A. Zaragoza, M. Álvarez</i>	
SMART GLASS APPLICATION TESTING FOR AUGMENTED REALITY	9569
<i>A. Vlachos, A. Economides, M. Perifanou</i>	
BLOCKCHAINS IN TOURISM – CASE STUDY	9578
<i>M. Cerna, A. Borkovcová</i>	
FREE SOFTWARE FOR APPLICATION IN TEACHING: SMATH STUDIO AS A TOOL FOR ENGINEERING STUDENTS	9586
<i>J.P. Diaz, D. Ferrández, E. Yedra, C. Morón</i>	
WHERE ARE MY STUDENTS? DISTANCE LEARNING AND DROP-OUT DURING THE FIRST ITALIAN LOCKDOWN DUE TO THE COVID-19 PANDEMIC	9591
<i>A. Ricci, A. Ciani</i>	
CHANGING PRACTICES FOLLOWING THE COVID-19 PANDEMIC: A NEW ERA IN ACADEMIA	9596
<i>V. Kalogerou</i>	
FOSTERING THE DEVELOPMENT OF TEACHERS' DIGITAL LITERACY WHILST PROMOTING NEW PEDAGOGICAL STRATEGIES: CREATING TANGIBLE EDUCATIONAL RESOURCES	9606
<i>S. Ribeiro, P. Beça, M. Aresta</i>	
METACOGNITIVE STRATEGIES - OPPORTUNITY IN CURRICULUM DEVELOPMENT	9613
<i>D. Mara</i>	
ENHANCING STUDENT-TEACHER INTERACTION IN ONLINE CLASS: THE ROLE OF TEACHER AND VISUALISATION	9617
<i>S. Gopinathan</i>	
RECONFIGURING PEDAGOGICAL PRACTICE IN INITIAL TEACHER TRAINING	9624
<i>L. Mara</i>	
USING SPANISH VERSION OF MATH4U PORTAL FOR CZECH-SPANISH BILINGUAL MATHEMATICS EDUCATION	9629
<i>P. Beremlijski, P. Vondráková, I. Skybová</i>	
LACK OF INFORMATION ABOUT CAREER OPTIONS FOR CAREER DECISIONS DURING THE ERA OF TECHNOLOGY AND DIGITALIZATION	9637
<i>G. Sart, A.E. Aslan</i>	
COMMUNICATION SKILLS IMPROVEMENT FOR CHEMICAL ENGINEERING MASTER'S STUDENTS	9646
<i>A.R. de la Osa, F. Dorado, J. Lobato, C.M. Fernández-Marchante, J.F. Rodríguez, M.L. Sánchez-Silva, P. Sánchez</i>	
LEARNING FROM THE PATIENTS	9651
<i>A.V. Penati, C.E. Standoli</i>	
DEVELOPMENT OF AUDIOVISUAL RESOURCES FOR PRACTICAL ACTIVITIES IN PILOT PLANT IN THE SUBJECT OF INTEGRATED PROCESS AND PRODUCT LABORATORY IN THE CHEMICAL ENGINEERING DEGREE	9659
<i>C.M. Fernández-Marchante, J.M. García-Vargas, J. Llanos, A. de Lucas-Consuegra, I. Fernández Mena, M.A. Montiel, A.R. de la Osa, A.M. Borreguero, E. Lacasa, M. Muñoz, M.L. Sánchez-Silva, M.T. García</i>	
MULTIMODALITY AND TECHNICAL COMMUNICATION IN THE ENGLISH FOR SPECIFIC PURPOSES CLASSROOM	9664
<i>S. Vasconcelos, A. Balula</i>	
SELF-EFFICACY IN THE CREATIVE APPROACH OF THE RESOLUTIVE DESIGN AS A WAY TO IMPROVE THE ACADEMIC PERFORMANCE IN MATHEMATICS	9668
<i>G. Havârneanu</i>	
USING THE COACHING APPROACH IN DEVELOPING STUDENTS' ENTREPRENEURIAL COMPETENCIES IN A TECHNICAL UNIVERSITY	9678
<i>A. Constantinescu-Dobra, V. Maier, M.A. Cotiu</i>	
COVID-19 PANDEMIC: THE E-LEARNING EXPERIENCES OF FIRST YEAR UNIVERSITY OF TECHNOLOGY STUDENTS IN SOUTH AFRICA	9684
<i>M.S. Motsoeneng</i>	
EXPERIENCES IN EDUCATION: BETTER UNDERSTANDING HOW TO PREDICT THE OUTCOMES OF ADULT LEARNERS ON RESKILLING INITIATIVES	9688
<i>S. Creaner, G. Creaner, C. Creaner</i>	

HIGHER PROFESSIONAL TECHNICAL COURSES: STUDENTS' PROFILE AND MATHEMATICS SELF-CONCEPT <i>J. Mendonça, C. Pinto, L. Babo</i>	9695
GAMIFICATION OF CHILDREN'S ACQUAINTANCE WITH THE PROFESSIONS OF THE FUTURE <i>L. Kudinova, R. Chumicheva</i>	9703
FUTURE TEACHERS' VISION TOWARDS TECHNOLOGIES IN EDUCATION <i>M.R. Patrício</i>	9711
THE COMPETENCY FOR FAMILY ASSESSMENT IN PRE-SERVICE TEACHER EDUCATION <i>T. Turzak, V. Kurincova</i>	9716
PREPARING FOR (FUTURE) WORK? SUPPORTING SOFT SKILL DEVELOPMENT IN THE CONTEXT OF HIGHER EDUCATION WITH A DIGITAL INSTRUMENT FOR 360° FEEDBACK <i>S. Chaoui, P. David, E. De Bruyne, S. Govaerts, A. Hoefkens, E. Van Den Broeck, G. Vanthournout</i>	9724
DEVELOPING GAMIFIED ACTIVITIES FOR IMPROVING ONLINE TEACHING-LEARNING PROCESSES OF THE SECURITY IN COMPUTER SYSTEMS AND RISK ANALYSIS AND MANAGEMENT SUBJECTS <i>J. Boubeta-Puig, K.J. Valle-Gómez, A. Estero-Botaro</i>	9733
COMPLEX ASSESSMENT OF SIMILAR OBJECTS IN THE EUROPEAN HIGHER EDUCATION AREA <i>H. Kostadinova, G. Totkov</i>	9742
INTENTIONAL ERRORS AND GAME-BASED PLATFORMS AS MECHANISMS TO IMPROVE LEARNING AMONG UNIVERSITY STUDENTS: A PILOT STUDY CARRIED OUT IN THE DEGREE IN NUTRITION <i>E. Molina-Montes, A. Macho-González, V. Verardo, C. Rodríguez-Pérez, A. Alcalá-Santiago, M.C. Razola-Díaz, M.D. Ruiz-López, R. Artacho, E.J. Guerra-Hernández, S. Bastida, F.J. Sánchez-Muniz</i>	9751
A MODEL FOR THE INTEGRATION OF PROJECT-BASED LEARNING AND TEAM-TEACHING IN AN ENGINEERING HIGHER EDUCATION CONTEXT <i>A. Barrera Puerto, R. Seiz Ortiz</i>	9756
LEARNING FROM MENTOR-TEACHERS' AND STUDENT-TEACHERS' EXPERIENCES IN PRACTICUM IN TEACHER EDUCATION IN PALESTINE <i>A. A Rezeqallah, A. Aljanazrah, M. Vivitsou, H. Janhonen-Aburuquah, A. Bsharat, R. Al-Ramahi, A. Fteiha</i>	9764
QUIZ MAKER TOOLS: ANALYSIS AND PEDAGOGICAL APPLICATIONS <i>L. Babo, I. Vieira, C. Torres, V. Oliveira, J. Azevedo, C. Lopes, J. Mendonça</i>	9765
ENTREPRENEURIAL EDUCATION IN A TECHNICAL UNIVERSITY POST THE COVID 19 PANDEMIC <i>V. Maier, A. Constantinescu-Dobra, M.A. Cotiu</i>	9775
WHY EVERY CHILD SHOULD LEARN TO CODE <i>O. Herden</i>	9782
MENTORING AND PRACTICUM AT BIRZEIT UNIVERSITY AS PERCEIVED BY MENTORS AND STUDENT TEACHERS <i>A. Bsharat, R. Al-Ramahi, A. Fteiha, A. A Rezeqallah, A. Aljanazrah, H. Janhonen-Aburuquah, M. Vivitsou</i>	9790
REALIZATION OF REMOTE EDUCATIONAL PRACTICAL ACTIVITIES OF DIGITAL ELECTRONICS FOR ENGINEERING STUDENTS <i>J. Ramirez Ortega</i>	9791
THE DESIGN AND EVALUATION OF A VIGNETTE-BASED COURSE FOR ENHANCING PRE-SERVICE TEACHERS' NOTICING OF STUDENTS' GEOMETRICAL THINKING <i>M. Bernabeu, C. Fernández, P. Ivars, S. Llinares, M. Friesen, J. Krummenauer, S. Kuntze, L. Healy, L. Samková, F. Schwaderer, K. Skilling</i>	9796
COLLABORATION AND PEER FEEDBACK IN PRONUNCIATION TRAINING <i>H. Vancova</i>	9803
THE DESIGN OF A TRAINING PROGRAM ON IMMERSIVE TECHNOLOGIES IN TRANSDISCIPLINARY STEAM EDUCATION <i>I. Vekiri, M. Meletiou-Mavrotheris, E. Mavrotheris, C. Rodosthenous</i>	9804
NEUROSCIENCE IN EDUCATION - NEUROMIL: FROM TRAINING TO COMBAT <i>C. Novikoff, C.A. Schettini, T. Pergentino de Sant'ana, M. Vieira Xavier, S. Pavanelli</i>	9810

APPLYING GAMIFICATION MECHANICS IN AN ENVIRONMENTAL EDUCATION SPOC <i>C. Rodosthenous, E. Mavrotheris</i>	9818
VIRTUAL AND HYBRID TEACHING DURING THE PANDEMIC: CONVERTING PANIC INTO DISCOVERY <i>M. Obadat, E. Alqusaireen</i>	9826
EMPLOYABILITY TRENDS OF HARAMAYA UNIVERSITY GRADUATES WITHIN ONE YEAR AFTER GRADUATION <i>E. Gebregiorgis</i>	9832
A SURVEY OF HUMAN RESOURCES COMPETENCIES IN DIGITAL SKILLS IN THE DIGITAL ECONOMY AND SOCIETY <i>K. Repkova Stofkova, M. Krejnus</i>	9833
STE(A)M APPROACH: DISTINGUISHING AND DISCUSSING MEANINGS <i>P.B. Teixeira, C. Martins, H. Rocha</i>	9842
THE CONTRIBUTION OF DIGITAL SYSTEMS TO DENTAL MEDICAL EDUCATION PERFORMANCE <i>M.E. Antohe, C.G. Dascalu, I. Gradinaru</i>	9848
PARTICULAR FEATURES OF DENTAL MEDICAL EDUCATION IN THE PERIOD OF THE SARS-COV-2 PANDEMIC <i>I. Gradinaru, C.G. Dascalu, M.E. Antohe</i>	9855
IMPROVEMENT OF TEACHERS REFLECTION SKILLS IN SUPERVISION <i>L. Rutka, L. Trupa</i>	9860
INTERACTIVE TUTORING AGENT GENERATION FOR STUDENT ASSISTANCE IN HIGHER EDUCATION <i>U.U. Shegupta, G.V.P. Gowthaman Malarvizhi, M. Jose, T.S. Kumar, W. Hardt</i>	9861
USERS' EXPERIENCES AND PERCEPTIONS ABOUT TELEPRESENCE ROBOTS IN EDUCATION <i>M. Perifanou, P. Häfner, A. Economides</i>	9870
CHALLENGE-PROJECT AS A SUPERVISED LEARNING ACTIVITY WITHIN A TRAINING UNIT <i>R.J. Díaz, R. Villalpando, E. Vázquez, J. Hernández, V.E. Durán, G. Castañeda, G. Domínguez, X. Alcalá, F.A. Pámanes, S. Hinojo, V.M. Macías, J.J. Atayde, A.P. Salas, M. Martínez, M. Cuevas, J.A. Rodríguez, H.A. Rodríguez, G.S. Avelar, A. Carrasco</i>	9880
THE IMPACT OF UNIVERSITY ONLINE TEACHING ON THE DIGITAL LITERACY OF DIGITAL NATIVES AND THEIR ATTITUDES TOWARDS IT <i>D. Suša Vugec</i>	9886
DESIGN EDUCATION IN BUSINESS INNOVATION <i>S. Palmieri, M. Bisson, R. Palomba, G. Rubino, A. Ianniello</i>	9894
REFLECTION OF DIVERSITY IN THE OBJECT OF SOCIAL WORK. STUDENT'S VIEWS AND PRACTICAL EXPERIENCES <i>E. Raya Diez, A.B. Cuesta Ruiz-Clavijo, C. Serrano Martínez</i>	9901
(H)OLD ON PROJECT – EDUCATION AND PARTICIPATION IN THE COMMUNITY FROM THE PERSPECTIVE OF LEADERS <i>S. Bergano, G. Santos, L. Cramês</i>	9908
OVERCOMING EARLY ABUSE AND NEGLECT AND BUILDING RESILIENCE AND HARDINESS IN INDIVIDUALS GROWING UP IN INSTITUTIONAL CARE <i>L. Mynařková, L. Dobrucká</i>	9913
COMPETENCE OF VOCATIONAL SCHOOL TEACHERS UNDER THE CONDITIONS OF COVID-19 RESTRICTIONS: THE CASE OF LATVIA <i>L. Rutka, M. Dubickis, A.M. Reidzane</i>	9914
EDUCATIONAL DESIGN APPROACHES AND THEIR CONTRIBUTION TO THE REFLECTION OF TEACHERS' PEDAGOGICAL PRACTICES <i>P. Carolei</i>	9921
MIGRATION PROJECTS FOR HIGHER EDUCATION: A PERSPECTIVE FROM WOMEN'S VOICES <i>S. Bergano, M.J. Rodrigues, B. Moreira, C. Martins</i>	9928
INNOVATIONS IN EDUCATION RELATED TO SUSTAINABLE DEVELOPMENT THROUGH EDUCATIONAL LABORATORY <i>Z. Konecna</i>	9935
A FOCUS GROUP STUDY ON TELEPRESENCE ROBOTS IN EDUCATION <i>M. Perifanou, M. Galea, A. Economides, T. Wernbacher, P. Häfner</i>	9936

APPLICATION OF A HYBRID FORMAT FOR LEARNING MICROCONTROLLERS	9945
<i>R.J. Díaz, S.A. De la Torre, J.J. Berumen, A.E. Batres</i>	
SUSTAINABLE RURAL DEVELOPMENT THROUGH VOCATIONAL EDUCATION: SOT RIVER LANDSCAPE RESTORATION WORKSHOP	9951
<i>V. López-Mateu, T.M. Pellicer, J. Blanch Vanacloig</i>	
IDENTIFYING INSTITUTIONAL FACTORS WHICH ENABLE TEACHER DIGITAL COMPETENCE DEVELOPMENT IN HIGHER EDUCATION: AN INSTITUTIONAL CULTURE ANALYSIS	9960
<i>M. Peters, A. Elasri-Ejjaberi, M.J. Martínez-Argüelles, S. Fàbregues</i>	
MEANINGFUL USE OF TECHNOLOGY THROUGH DIGITAL PEDAGOGY: TEACHERS' REFLECTIONS	9966
<i>M. Mäeots, L. Halpin, K. Kollom-Vahtra, P. Loss, H. Snorrason</i>	
PERCEPTIONS OF FUTURE ELEMENTARY SCHOOL TEACHERS ABOUT FORMATIVE ASSESSMENT	9971
<i>N. Cardoso, S. Reis, A. Oliveira</i>	
DIGITAL RHAPSODIES SUMMER CAMP: THE OSTIA ANTICA CULTURAL HERITAGE NARRATED BY CHILDREN	9979
<i>S. Bertelli, M. Guerra, D. Daffara, F. Montanino, F. Lange, F. Fabiano</i>	
FUTURE TEACHER'S PERCEPTIONS ABOUT NATURAL SCIENCES TEACHING AND LEARNING	9985
<i>S. Reis, A. Oliveira, H. Menino</i>	
NURSING STUDENTS' PERCEPTIONS ABOUT EFFECTS OF COVID-19 PANDEMIC IN CLINICAL PRACTICE	9992
<i>C. Sá, A. Nabais</i>	
TOWARDS INSTAGRAMABLE AND NARRATIVE HOTELS EXPERIMENTAL FORMATS FOR A SMART HOSPITALITY BETWEEN RESEARCH AND PROFESSION	9999
<i>B. Di Prete, D. Crippa</i>	
ENGAGING TEACHERS IN THE CO-DESIGN OF EDUCATIONAL SCENARIOS AIMING TO INTEGRATE CITIZEN OBSERVATORIES TECHNOLOGIES INTO SCHOOL-BASED ENVIRONMENTAL EDUCATION	10008
<i>M. Daskolia, J. Piera, K. Soacha</i>	
SUPPORTING GEOMETRY LEARNING DIGITALLY THROUGH ADAPTABLE ALGORITHMIC FEEDBACK – CHALLENGES AND SOLUTIONS	10017
<i>T. Huhmann, F. Winkelkemper</i>	
COVID-19: CLASSROOM ATTENDANCE AND ACADEMIC ACHIEVEMENT	10027
<i>L. Johnson</i>	
TEACHING ENGLISH PRONUNCIATION TO LOWER SECONDARY SCHOOL LEARNERS – A COURSEBOOK ANALYSIS	10032
<i>H. Vancova</i>	
THE TEACHING OF ETHICS IN OCCUPATIONAL RISKS PREVENTION THROUGH THE DEBATE ON ETHICAL DILEMMAS	10039
<i>T.M. Pellicer, V. López-Mateu, E. Giménez-Carbó</i>	
CLIMATE CHANGE LITERACY AND CONCERNS AMONG GREEK UNIVERSITY STUDENTS WITH A NON-SCIENCE BACKGROUND	10046
<i>M. Daskolia</i>	
IMPACT OF USE OF SCHOOL MANAGEMENT INFORMATION SYSTEM ON TEACHING AND LEARNING: A CASE OF A SCHOOL IN SOUTH AFRICA	10055
<i>M. Kimanzi</i>	
TEACHING NONLINEAR LEAST-SQUARES DATA FITTING IN AN UNDERGRADUATE MATLAB LABORATORY	10062
<i>M. Ben Ghalia</i>	
PATHS TO INTERDISCIPLINARITY IN HIGHER EDUCATION: COMPARATIVE ANALYSIS OF EXPERIENCES IN PORTUGAL	10069
<i>R. Mauritti, H. Belchior-Rocha, S.P. Saleiro, C. Granjo</i>	
SECURING THE LONG-TERM OF COVID TECHNOLOGY ADOPTIONS: PROMISE AND CHALLENGES OF UTILIZING WEB-BASED CONFERENCING FOR ASYNCHRONOUS STUDENT-FOCUSED FEEDBACK	10075
<i>J. Campbell</i>	
MY PRACTICUM STORY: USING REFLECTIVE WRITING FOR THE DEVELOPMENT OF A PROFESSIONAL IDENTITY WITH STUDENT TEACHERS OF ENGLISH AT THE MASTER'S LEVEL	10084
<i>A. Oliva-Girbau</i>	

STUDENT DRIVEN DESIGN AND TESTING OF A MOBILE EXPERIMENTAL DEVICE IN THERMAL SCIENCE <i>E. Glakpe, S. Franco, C. Badiane</i>	10085
ANIMATED PRESENTATIONS USING POWTOON AND ITS APPLICABILITY IN PEDAGOGICAL PRACTICE: PERSPECTIVES OF HIGHER EDUCATION PROFESSORS AND FUTURE BASIC EDUCATION TEACHERS <i>M. Castelhana, D. Pedrosa, T. Pessoa</i>	10086
TEACHING FOREIGNER LANGUAGES IN HIGHER EDUCATION: CHALLENGES IN TIMES OF THE PANDEMIC <i>D. Ramalho Alves, H. Belchior-Rocha, I. Casquilho-Martins</i>	10094
BE AWARE OF THE SPECIFICATIONS THAT CAN BE CHANGED IN AN APPRENTICESHIP MANAGEMENT SYSTEM: THE CASE STUDY OF MATHITEIA <i>S. Christodoulou, I. Christodouloupoulos, K. Toggias, M. Paraskevas, P. Ntentopoulos</i>	10103
CAN MICROSERVICES BE THE ANSWER TO EVER-CHANGING REQUIREMENTS OF A 10-YEARS OLD LEGACY TRAINING MANAGEMENT SYSTEM? <i>P. Ntentopoulos, K. Toggias, I. Christodouloupoulos, M. Paraskevas, S. Christodoulou</i>	10108
INTRODUCTION TO SUSTAINABILITY AS A TRANSVERSAL COMPETENCE IN HIGHER EDUCATION <i>H. Belchior-Rocha, V. Ramalho, C. Roseta-Palma</i>	10115
OVERCOMING THE HORSELESS CARRIAGE SYNDROME: METHODS TO ENCOURAGE PEDAGOGICAL RE-ENGINEERING <i>G. Salter</i>	10122
PROFILING PROGRAM DECOMPOSITION IN CS1 <i>C. Charitsis</i>	10128
FIRST: FINDING INTERESTING STORIES ABOUT STUDENTS - AN INTERACTIVE NARRATIVE APPROACH TO EXPLAINABLE LEARNING ANALYTICS <i>A. Al Doulat, M.L. Maher</i>	10136
THE IMPACT OF IMMERSIVE CONTENT VIEWING ON MOVEMENT LEARNING: FOCUSING ON EDUCATIONAL GYMNASTICS <i>N. Suzuki, T. Fujimoto, Y. Sawa</i>	10146
ON COMING TOGETHER AS KNOWLEDGE BUILDERS ONLINE: A COLLABORATIVE AUTOETHNOGRAPHY <i>L. Yearwood, P. Raman, A. Sevsek</i>	10151
THE ONLINE MATH INTERVIEW: BEGINNING ELEMENTARY TEACHERS ASSESSING MATHEMATICAL LEARNING IN THE VIRTUAL SPACE <i>H. Haydar</i>	10152
READING, WRITING AND RACISM: EXPLORING THE IMPACT OF RACIAL DISCRIMINATION ON THE COGNITIVE AND SOCIAL-EMOTIONAL GAINS OF DEVELOPING YOUTH <i>R. Johnson-McCurry</i>	10158
FACULTY/LIBRARIAN OER PARTNERSHIP <i>J. Meloun, B. Digiallonardo</i>	10159
TOWARDS CO-DESIGN AND USE OF LEARNING ANALYTICS IN HIGHER EDUCATION ONLINE COURSES <i>P. Raman</i>	10160
PREPARATORY DISCUSSION AND PROJECT AUGMENTED STUDENT LEARNING VIA STUDENT PRESENTATION BASED EFFECTIVE TEACHING (SPET) APPROACH <i>P. Tyagi</i>	10161
STUDENT PRESENTATION-BASED TEACHING TO PROVIDE TRANSACTIONAL ANALYSIS TRAINING TO PRODUCE EMOTIONALLY INTELLIGENT ENGINEERING GRADUATE STUDENTS <i>P. Tyagi, S. Addo</i>	10169
NONLINEAR EQUATION SYSTEM PROBLEM GENERATOR WITH GAMIFICATION <i>H.P. Leyva, R.B. Silva</i>	10176
FROM THE PHYSICAL CLASSROOM TO THE DIGITAL CLASSROOM IN TIMES OF CRISIS: COVID-19 <i>R.B. Silva, H.P. Leyva</i>	10185
STRATEGIES FOR EFFECTIVE COMPUTER SCIENCES TEACHING TO STUDENTS WITH DIFFERENT PRELIMINARY RESULTS <i>R. Kararusinov</i>	10190
CREATING A MULTI-ACCESS LEARNING COMMUNITY IN THE CIS SANDBOX <i>M. Frydenberg</i>	10195

THE EXPERIENTIAL LEARNING IN MICROBIOLOGY LABORATORY CLASS APPLIED IN SOCIAL ASSISTANCE FOUNDATIONS <i>J. Castillo Reyna, C.D. Gonzalez Barriga, G.A. Silveyra Sáenz</i>	10202
TRANSVERSAL APPROACH TO CURRICULUM DESIGN - HUMAN-CENTERED ARTIFICIAL INTELLIGENCE <i>E. Valoeny, R. Vilanova</i>	10209
EXPERIENCES WITH THE USE OF VIRTUAL REALITY ENVIRONMENTS IN EDUCATION – IDENTIFYING DIFFICULTIES AND POSSIBLE SOLUTIONS DURING THESIS WORK <i>G. Bujdosó, C.M. Novac, O.C. Novac, T. Roskó, K. Teperics</i>	10216
HOW TO GET REAL IN THE CLASSROOM: USING AUTHENTIC MATERIALS IN LANGUAGE TEACHING <i>AM. Toma</i>	10222
SELF-REGULATED LEARNER IN THE LIGHT OF DISTANCE LEARNING CAUSED BY PANDEMIC: ESTONIAN 12TH GRADE STUDENTS' VIEWS AS AN EXAMPLE <i>T. Kraav, K. Oras, K. Orav-Puurand, H. Jukk, S. Pihlap</i>	10229
SMALL-SCALE HORIZONTAL AXIS WIND TURBINE (HAWT) MODEL AS AN EDUCATIONAL TOOL <i>F. Zabihian, A. Ingrassia, E. Quintero, K. Lee, V. Quijas</i>	10235
FLIPPED LEARNING IN CORPORATE TRAINING TO SUPPORT INDUSTRY 4.0 <i>V. Rossano, P. Plantamura, E. Gentile, T. Roselli</i>	10244
CREATING EFFECTIVE LEARNING AND WORKING IN STUDENT TEAMS <i>K.Z. Tang</i>	10252
LEVERAGING GAMING TRENDS TO FOSTER ENGAGEMENT IN REMOTE DELIVERY OF GAME DEVELOPMENT / SOFTWARE ENGINEERING COURSES <i>B. Cassidy</i>	10253
DIGITASK: AN OPEN-ACCESS AND USER-FRIENDLY PLATFORM TO DESIGN DIGITAL PEDAGOGICAL TASKS FOR THE FOREIGN LANGUAGE CLASSROOM <i>D. Masats, C. Pratginestós</i>	10262
STUDENT LEARNING PERFORMANCE BEFORE AND DURING THE PANDEMIC <i>H. El-Sadi, S. Shady, G. Ma</i>	10263
IMPACT OF PRACTICAL SKILLS REQUIRED BY LECTURERS OF ECDE SUBJECTS AT TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING COLLEGES IN MPUMALANGA PROVINCE <i>S.T. Mashika, O. Moila, S. Maile</i>	10269
AUTOBIOGRAPHY AS A RE-CONSTRUCTION OF SELF-IDENTITY IN THE PERSPECTIVE OF LIFELONG LEARNING. AN EXPLORATORY RESEARCH ON EDUCATORS <i>G. Aleandri, A. Colantonio</i>	10274
SIMUDATA: NEW DIGITAL MODELS AS ACTIVE METHODOLOGIES FOR ACCOUNTING EDUCATION <i>J.L. Zafra-Gómez, N. Aguilar-Gómez, J. Andrades-Peña, L. Marquez-Arenas, P. Povedano-Fernández</i>	10281
FACE-TO-FACE TO MASK-TO-MASK AND BACK AGAIN: A LOOK AT TEACHING LARGE PHYSICS CLASSES PRE- AND POST- COVID19 <i>C. Rodriguez, A. Kolomenski, H. Schuessler</i>	10282
A SHORT-STORY APPROACH TO COMPLEX MICROLECTURES <i>M.C. Dal Pian, M. Dal Pian, L.F. Dal Pian</i>	10289
ASSESS-IMPROVE-ASSESS: CONTINUOUS IMPROVEMENT IN THE CLASSROOM <i>N. Rodriguez</i>	10299
EXPLAINABLE AI FOR DATA DRIVEN LEARNING ANALYTICS: A HOLISTIC APPROACH TO ENGAGE ADVISORS IN KNOWLEDGE DISCOVERY <i>N. Nur, A. Benedict, O. Eltayeb, W. Dou, M. Dorodchi, X. Niu, M.L. Maher, C.N. Chambers</i>	10300
PECULIARITIES OF ASSESSMENT OF PRE-SCHOOL AGE CHILDREN'S ACHIEVEMENTS: THE CONTEXT OF DISTANCE LEARNING <i>R. Bilbokaitė, I. Bilbokaitė-Skiauterienė</i>	10307
QUALITY ASPECTS OF STUDENTS' LEARNING THROUGH FILMS <i>R. Bilbokaitė, I. Bilbokaitė-Skiauterienė, M. Marmokaitė</i>	10315
EVALUATION OF PROFESSIONAL COMPETENCE DEVELOPMENT OF NOVICE TEACHERS DURING THE INDUCTION PERIOD AT SCHOOL <i>R. Bubnys, A. Meškauskienė, A. Žemguliė</i>	10321

FACT-CHECKING AS AN EMERGING PROPOSAL FOR MEDIA EDUCATION WITH ECUADORIAN TEACHERS	10331
<i>R. Elizalde-Robles, C. Rodríguez-Hidalgo, G. Coronel-Salas, C. Mier-Sanmartín</i>	
CLASSROOM MANAGEMENT: EVALUATION OF INSTRUCTIONAL MANAGEMENT FROM THE PERSPECTIVE OF UNIVERSITY STUDENTS	10338
<i>K. Němejc, K. Tomšíková</i>	
DASHBOARD FOR STATISTICAL ANALYSIS OF QUALIFICATIONS: A CASE STUDY IN A DISTANCE-LEARNING SECONDARY SCHOOL	10345
<i>J. Jiménez, C. Guerrero</i>	
HOW DOES A THIRD-PARTY PLATFORM AFFECT PROJECT-BASED LEARNING OBJECTIVES FOR FACULTY AND STUDENTS?	10354
<i>B. Bengler, L. Rowland</i>	
FROM CONCEPTS TO DETAILS: THE ROLE OF MOODBOARDS IN THE NEW PRODUCT DEVELOPMENT PROCESS	10355
<i>C.E. Standoli, G. Galán Jurado</i>	
SCHOOL SUCCESS: CONCEPT, FACTORS AND STRATEGIES	10356
<i>C. Martins, A. Sanches, I. Freire-Ribeiro</i>	
BELIEFS ABOUT SCHOOL: MULTIPLE PERSPECTIVES	10363
<i>C. Martins, C. Ribeiro, J. Carvalho Sousa, R. Novo</i>	
PSYCHOSOCIAL DEVELOPMENT OF DHH CHILDREN: OBSTACLES AND STRATEGIES FOR PROMOTING SELF-CONCEPT AND SOCIALIZATION	10369
<i>A. van Staden</i>	
ACHIEVEMENTS IN READING AND WRITING AMONG DEAF AND HARD-OF-HEARING CHILDREN: THE IMPACT OF LANGUAGE PROFICIENCY ON LITERACY ABILITIES	10377
<i>A. van Staden</i>	
TRANSFORMING THE PEDAGOGICAL LANDSCAPE IN EDUCATION: THE TEACHING OF CLIMATE CHANGE IN SECONDARY SCHOOLS	10387
<i>N.P. Caga, M. Steleki</i>	
EFFECTS OF COVID 19 PANDEMIC ON LEARNERS WITH DISABILITIES IN KENYA	10392
<i>M. Kavua</i>	
OPPORTUNITIES AND CHALLENGES OF METAVERSE FOR EDUCATION: A LITERATURE REVIEW	10401
<i>K. Stanoevska-Slabeva</i>	
THE EFFECT OF PEER FEEDBACK ORIENTATION ON HIGHER EDUCATION STUDENTS' PERCEPTION OF COMMUNITY OF INQUIRY AND POSITIVE EMOTIONS	10411
<i>M. Yang, M. Deng</i>	
LEADERS' VOICES ON CURRICULUM AND CURRICULAR FLEXIBILITY	10412
<i>C. Martins, C. Mesquita, G. Santos, M.R. Patrício</i>	
TELECOMMUTING BEFORE, DURING AND AFTER COVID-19: EFFECTS ON UAE HIGHER EDUCATION WORKFORCE	10422
<i>R. Zein, H. Abduljaber</i>	
IDENTIFYING THE DIGITAL ACADEMIC PROFILE OF UNIVERSITY DROPOUTS WITH INTELLIGENT PREDICTIVE MODELS	10434
<i>J.L. Peñaloza Figueroa, AD. Hernández Estrada, C.G. Vargas Pérez, M. Martin Santiago, M.S. Aparicio Sánchez</i>	
EFFECT OF UNIVERSITY ENVIRONMENT ON STUDENTS' PERCEPTION OF THE UTILITY OF ICT-ENABLED FEEDBACK	10444
<i>M. Yang, C.Y. Hou</i>	
GENDER MARKING AND THE PAREMIOLOGICAL REPRESENTATION OF WOMEN IN ENGLISH AND GREEK POLITICAL EDUCATION	10445
<i>M. Loikov, E. Theodoridou</i>	
NEW FORMS OF TRAINING IN THE FIELD OF SECURITY EQUIPMENT	10451
<i>M. Boroš, Z. Zvakova</i>	
ENHANCING AVIATION ENGLISH COURSE THROUGH SIMULATION-BASED INSTRUCTION	10456
<i>N. Dincer, R. Dinçer</i>	
PUTTING LEARNING INTO PRACTICE. CASE STUDY: PREVENTION AND COEXISTENCE WITH COVID-19	10457
<i>C. Ortiz, M. Gonzáles, C. Valdiviezo-Abad</i>	

CAREER DEVELOPMENT AND AGEING OF PERSONNEL IN THE PUBLIC ADMINISTRATION <i>S. Blumberga, I. Danovska</i>	10464
INVESTIGATING PRE-SERVICE SCIENCE TEACHERS ICT INTEGRATION COMPETENCIES IN GHANA <i>M.J. Ofori, N. Caga</i>	10472
VIDEO GAMING AND YOUTH THEMATIC ON CROATIAN NEWS PORTALS <i>M. Ražnjević Zdrilić, V. Kalajžić</i>	10480
MODERN MULTIMEDIA TECHNOLOGY AS A MEANS OF TEACHING FOREIGN LANGUAGES <i>E. Andreeva, I. Korneva</i>	10490
THE TRAINING OF EDUCATORS AND TEACHERS, BETWEEN PRESENCE AND DISTANCE <i>F. Zuccoli</i>	10495
COVID-19 AND THE APPLICATION OF THE BLENDED LEARNING MODEL IN HIGHER EDUCATION <i>D. López Jiménez, E.C. Dittmar</i>	10500
THE IMPORTANCE OF CSR INSIDE UNIVERSITIES <i>E.C. Dittmar, D. López Jiménez</i>	10501
PERGAMEX: PERVASIVE GAMING EXPERIENCES FOR @LL <i>S. Baldassarri, F.J. Perales, E. Cerezo, F. Gutiérrez, C. González</i>	10502
LACK OF INFORMATION ABOUT THE SELF IN CAREER DECISIONS OF UNIVERSITY STUDENTS <i>G. Sart, A.E. Aslan</i>	10503
EFFECTIVE ASSESSMENT OF 21ST CENTURY SKILLS IN A COMPUTING PROGRAM IN A FULLY ONLINE ENVIRONMENT <i>M. Danaher, A. Rhodes, A. Ater Kranov</i>	10513
A BIBLIOMETRIC REVIEW ON WORK GAMIFICATION <i>R. Encarnação, M. Ferreira Dias, J. Reuter, M. Amorim</i>	10514
MINI-VIDEOS FOR TEACHING PLANNING IN THE MASTER'S DEGREE IN INSURANCE LAW <i>M. Hernández Solís</i>	10523
EFFICACY OF PEER TUTORING ON TUTEES' ATTITUDE AND RETENTION IN FINANCIAL ACCOUNTING <i>T. Wale-Fadairo, O.A. Ige</i>	10528
INTEGRATING STUDENT-FOCUSED SUPPORT MODELS TO ENHANCE STUDENT ATHLETES' EXPERIENTIAL LEARNING AND ENGAGEMENT <i>E. O'Connor</i>	10542
REFLECTIONS ON RESPONDING TO THE INFLUX OF NEW STUDENTS DURING THE COVID-19 PANDEMIC AT AN E-LEARNING UNIVERSITY CAMPUS IN QUEBEC, CANADA <i>R. Tremblay</i>	10543
HEY, THIS IS WHAT A TEACHER NEEDS TO KEEP IN MIND TO RETAIN E-LEARNERS ENGAGED DURING VIDEO LECTURES! <i>A. Gorbunovs</i>	10544
LOOKING BACK TO MOVE FORWARD: EXPERIENTIAL LEARNING IN HIGHER EDUCATION DURING AND FOLLOWING THE COVID-19 PANDEMIC <i>E. Marcogliese, E. O'Connor</i>	10545
STUDY OF PERCEPTION OF THE USE OF HAPTIC 3D SIMULATORS FOR LEARNING IN THE DEGREE OF DENTISTRY, THEIR STRENGTHS AND WEAKNESSES <i>D. Gonzalez, P. Tomás, P. Riutort, F.J. Perales, F. Negre, P.A. Borrás</i>	10546
MOCK-EXAM IN HIGHER EDUCATION <i>M. Blanco Diaz, A.M. Rodriguez Rodriguez, I. Escobio Prieto, M. Albornoz Cabello, J. Casaña, E. Magni</i>	10547
LEARN STARTUP AND AGILE ENTREPENENURSHIP IN THE HEALTH FIELD <i>I. Escobio Prieto, E. Magni, A.M. Rodriguez Rodriguez, J. Casaña Granell, M. Albornoz Cabello, M. Blanco Diaz</i>	10548

DESIGN EDUCATION IN BUSINESS INNOVATION

S. Palmieri, M. Bisson, R. Palomba, G. Rubino, A. Ianniello

Politecnico di Milano (ITALY)

Abstract

Today's technological evolution, directly and indirectly determined by businesses, is progressively redefining social habits and interactions [1]. This change is generating new design opportunities, through increasingly intelligent and interconnected products and services. In order for technologies to be enjoyed in a simple and intuitive way by the public, it is necessary for companies to adopt an approach that synthesizes complexity, through products and systems that meet the needs of the users. A different approach towards the problem is what makes the use of design in business dynamics interesting.

Within the macro-scenario of technological and cultural transition that is outlining this historical period, the acquisition of design methodologies and strategies by companies without a design center could increase the value of the product and the brand. The branch of design that addresses the relationship between corporate culture and design culture is Design Management. There are identified three processes that build this discipline as a dynamic capability: design learning, which corresponds to the ability to acquire knowledge and practices and disseminate them in the company; design coordination, which represents the ability to coordinate the activities and practices required for good design processes; and design skills, which comprise a set of techniques and knowledge that generate synergy, creativity and innovation [2].

For this to happen, it is essential to establish clear and fluid communication between managers and designers, creating collaboration between different professionals [3].

From this perspective, and referring to a design-oriented problem-solving perspective, the formation of a design center, within the company, requires a preliminary phase of active learning to design practices. One approach capable of conveying the values and vision of the design team is co-design. This method refers to the creative process of designers and people not trained in the discipline collaborating on strategic and design development [4]. From this viewpoint, co-design represents an educational tool that guides the company towards design awareness by catalyzing technological complexity into affordable products and services. The learning of practices related to design by companies, thus triggers the generation of new vision inside and outside the company perimeter.

The research aims to investigate how preparatory practices of co-design can educate companies, without a design center, to an approach that enhances the know-how. The designer is configured as a guide/tutor to the active learning of strategic and design tools that expand the corporate vision.

Keywords: Research Methodologies, New projects and Innovations, Educational Design, Design Management, Co-design.

1 INTRODUCTION

Industrial progress has always been the engine of technological and social evolution. A process that alternates between evolution and refinement, materialising in the generation of multiple scenarios and project opportunities [5]. This entails a high level of adaptability on the part of the social actors that interact and participate in this change. In this context, the figure of the designer plays a fundamental role, due to the transversal and multidisciplinary skills that distinguish him/her, enabling the ability to manage the company's complexity.

The turning point is represented by the emerging willingness of companies to adopt new technologies, which act as drivers towards the fruition of new contents. However, in an extremely dynamic and changing market context, it is no longer enough to passively follow the new trends provided by technologies and it is necessary to adopt a broader perspective, defining a vision that allows one to create new meanings and influence changes in the frame of reference.

One of the goals of the designer is to reinvent the reasons why people use a certain category of products and services. With this in mind, internal design education strategies induce cross-disciplinary and multi-disciplinary thinking to solve the problem [6]. During the design process, such complexity is encountered

that the design of the object or service alone is insufficient to meet its perceived value in the market and by the public. For this reason, design guidelines and methodologies are applied to orient all the figures gravitating around the product towards a complete understanding of it. This approach involves the collaboration of various actors inside and outside the company, including the public.

The in-depth study of various factors such as the needs of the final user, the experiences and services offered during use, and the study of trends developing in the area of reference acquire great importance. Functionality and ergonomics are flanked by various factors that add value in order to create an empathetic and satisfying relationship that leads the user to choose that company's product [7]. To describe this broad process, we speak of a Service-Product System [8], which is made possible by departmental complementarity within the company, which has proven to be a significant addition to the efficiency of strategic innovation processes.

The role that design can and must fulfil within companies resides in catalysing internal and external resources towards a constructive and strategically future-oriented design. Design Education dynamics trigger, in the company, preparatory processes for the understanding of a different approach, and typical of design, towards a problem.

The paper proposes a reflection on the potential of design education for the corporate world. It defines how design and co-design practices, enhanced by the possibilities given by technologies, can represent a key to innovation capable of educating the company towards short- and long-term strategic approaches that further enhance its know-how. This study may be relevant for private and public institutions in order to better understand the opportunities that design can offer in terms of sustainability, design education and collaboration and to ensure that products and services generate social value "Fig. 1".

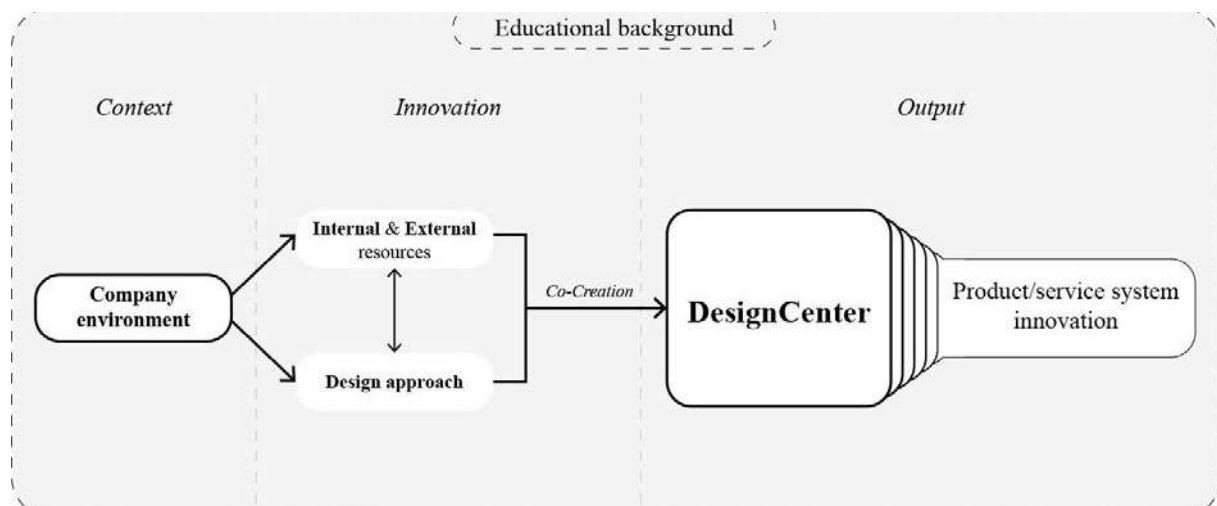


Figure 1. Educational background.

2 METHODOLOGY

As mentioned earlier, adopting one or more design methodologies is necessary for the design itself to be understood and shared by all parties involved during the design process. To educate the company in this discipline, it is essential to maintain an open and continuous dialogue that stimulates the active participation of different professional figures belonging to technical and managerial departments. This encourages co-design practices that can enable greater design awareness and make the process more fluid and continuous. Sanders and Stappers [4] define co-creation as an act of collective creativity, meaning forms of creativity shared by two or more people. The term co-design thus refers to the application of collective creativity throughout a design process, with reference to both that typical of designers and that belonging to people not trained in design, working together in the development of a product-service.

The methodology proposed by the authors includes four main steps, during which differentiated tools are employed based on the objectives of each step. At the end of each step, a workshop is conducted to verify that the project is proceeding with the consensus of the team or the client itself. This approach allows business realities to perceive the offer from a different point of view, depending on new project opportunities.

The first phase involves the analysis of the state of the art. This process is based on research and critical elaboration of various factors. As for the internal analysis, the corporate identity is investigated by defining the organizational chart, product portfolio and geographic dislocation; moving to an external analysis, the position held in the market of interest is identified, elaborating a comparison with the main competitors. The outputs from the various steps involved in the analysis result in the construction of a well-structured vision, capable of conveying its values through its products or services.

The second stage involves the research and mapping of current and futuristic trends through significant keywords on several levels, the hierarchy of which allows the scenario to be structured. Therefore, at this stage, we proceed with the analysis of social and technological trends related to opportunities of a multidisciplinary nature (humanities, science, engineering disciplines), triggering product system innovation processes. The identification of the target audience is fundamental: an in-depth user study is implemented aimed at understanding needs and opportunities to be met with new products or services. The research uses various tools and methodologies such as desk research, interviews, surveys and focus groups, participation in conferences, and analysis of market data.

The third phase involves the synthesis of the previous project steps. This process tends to highlight and explicate different design paths that converge in the creation of current and futuristic scenarios. The context scenario is characterized by the elements of research put into system in a focused way, from which the definition of a network between contexts, people and technologies for the design of new strategies and business assets emerges strongly.

The fourth and final phase is based on the new synthesis of the parameters that emerged. The modeling of the design concept is supported by the scientific literature and desk research, which will be followed by subsequent research to verify the resulting limitations and opportunities for subsequent applications. Multiple solutions arising from the same scenario are thought out in order to show the most convincing alternatives and choose the main guidelines for further development in agreement with the whole working team.

3 RESULTS

The methodology proposes the progressive acquisition of strategic and design knowledge that converge in the conscious use of tools related to the discipline of Design Management. These results are achieved through co-design activities such as workshops and focus groups that stimulate the corporate community towards new visions "Fig. 2".

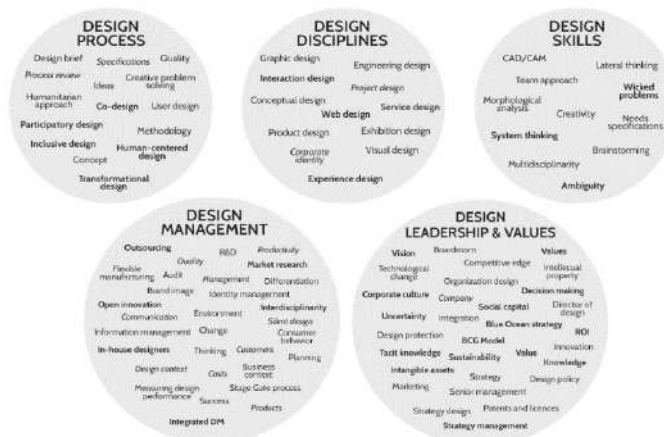


Figure 2. The Words of Design Management (Borja de Mozota and Wolff 2019).

According to Zurlo [9], Design Management addresses the relationship between design culture and corporate culture, seeking to build bridges between the two with the specific aim of mediating an effective and constructive relationship. The innovation proposed by the strategic design vision, through the dynamics that perceive marketing, increases the value in use of the product, including brand identity. The three processes mentioned above - design learning, design coordination and design skills - connote an innovative and dynamic value to the discipline. Starting from this dynamism [10], through extensive desk research encompassing some 40 years of literature on the subject of Design Management, he identifies five key themes:

- Design expresses an economic and managerial value that evolves through subjective, qualitative, humanistic, emotional, sensorial, intangible and strategic dimensions, using qualitative indicators.
- Design methods and skills are represented by creative and contextual visualisation skills and, subsequently, move towards co-design processes - with users, but also with other experts in the project team - and usability methods, where the designer's qualities of observation, dialogue and empathy are fundamental to improving both products and processes [11].
- Design provides tools for managing a design department within the company, which can be used in different ways: for example, Cautela et al. [12] apply some design management tools before and after the design process, depending on the importance given to design in the three decision-making levels: operational, tactical and strategic
- Integration into other functions denotes the transversal quality of the discipline and its relationship with the other functions of a company.
- The theme of 'better managers by design' leads to questions about the role of strategic design as a catalyst for corporate strategy, assuming that empathic design can help managers to be aware of the challenges of today's world and to imagine and solve the complex problems they face every day, as the specific qualities of designers align with the profiles of the new managers of the 21st century.

In this sense, project outcomes converge towards the creation. These factors are strongly influenced both by the social and economic context inside and outside the company perimeter, and by the type of offer the company proposes to the public.

By 'scenario building' we mean the development of a series of alternative fictional representations - stories - involving specific characters, events, products and environments that allow for the exploration of product-related ideas or issues in the context of a realistic future. The medium may vary: written stories, annotated sketches, comic strips, photographs, role-plays, videos or live dramatisations [13].

The macro scenario therefore represents a tool capable of synthesising trends, know-how, assets and corporate vision towards new market areas (blue ocean) or disruptive products/services that redefine the market area in which they are launched. Plausible scenarios are seen as a future-oriented epistemology that embraces uncertainty and seeks to interpret multiple futures, discontinuous changes and transformative views [14]. The use of scenarios in future studies seems to diverge in two directions: on the one hand, modifying current thinking, suggesting radical changes in the status quo to provoke a reaction; on the other hand, developing future-oriented thinking, creating plausible narrative scenarios of the future [15]. At this stage, it is crucial for the designer to make the company realise that the process does not lead to a single result, but - taking up the issue of the different approach to problems, characteristic of the design discipline - to a co-design of different strategies that can be in harmony with the company's values and objectives. Through the continuous sharing of the results obtained from the first two phases of analysis, the company arrives prepared for the scenario construction and the process acquires a shared consensus from the different figures involved.

Savolainen and Hyysalo [16] investigated in detail the use of human-centred design (HCD) methods in a company with a long and successful history of using design methodologies. An analysis of the company's method mix and its key profiles was used to clarify how information about past and present users oriented and influenced design and R&D activities. Their research shows that, at the corporate level, it is important to have a full range of methods with different levels of user involvement and intensity and their use across all projects. The designer in the company uses versatile methods for understanding the user: conducts tests and ethnographic research in the field; carries out internal discussions and tests; utilises knowledge derived from previous studies, and researches new ones; applies typical methodologies, trying to best understand the operational context. HCD methods are also fundamental to the development of the product/service, which undergoes a series of incremental innovations to bring it to the highest design quality "Fig. 3". Subsequently, to move to a phase with higher potential, radical innovation is required, which occurs through a change in technology or meaning [17].

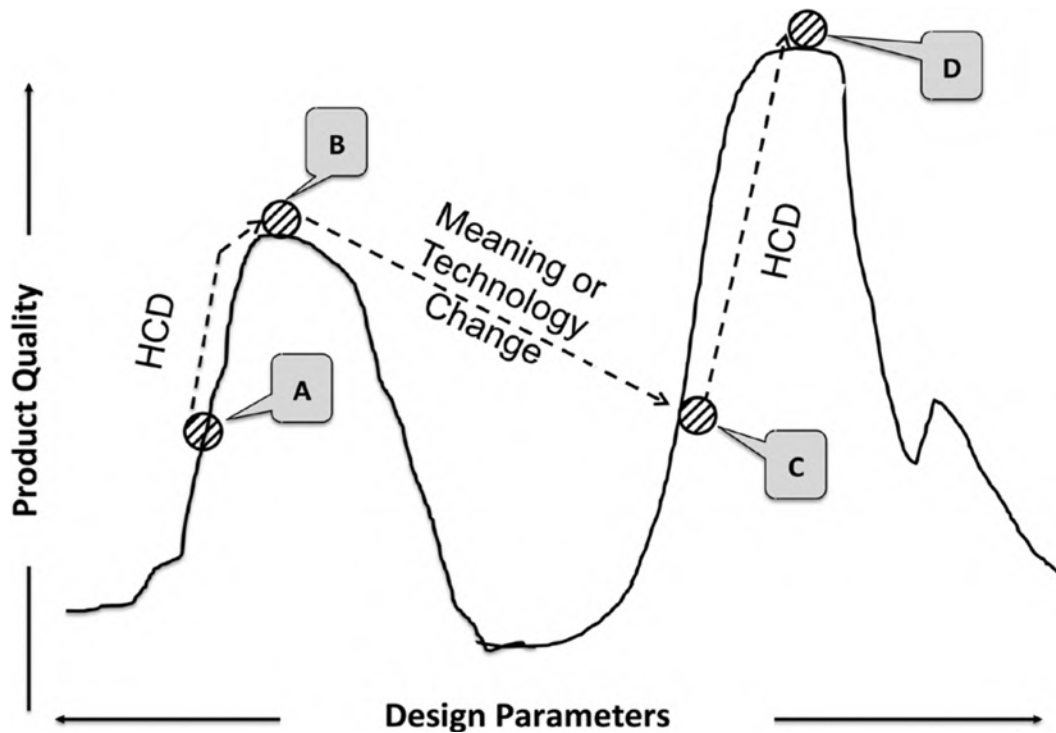


Figure 3. The hill-climbing paradigm applied to incremental and radical innovation. (Norman and R. Verganti, 2014).

In summary, it is relevant for companies to implement a propaedeutic co-design education, which enables the creation of an internal DesignCenter. The integration of this department within the corporate reality can determine a continuous flow of innovation, enhancing resources and catalysing external drives towards the generation of all-round strategies. The creation of a DesignCenter aims to generate modern and revolutionary experiences that incorporate culture and diversity. This inter-disciplinary department preserves and celebrates the most valuable aspects of design, while anticipating future needs to question norms and conventional thinking about the use of products [18].

4 CONCLUSIONS

Within this framework, it is evident how design processes and approaches can give rise to new design paradigms that emphasize the multidisciplinary nature of the professional figure, leading to added value, which can unearth new market opportunities and new user needs that are as yet unexplored or latent. The complex challenges facing society are often characterized by contrasts between the various factors at play (social, political, ecological and economic). Meeting these needs requires transcending disciplinary boundaries by co-creating knowledge. Design has proven capable of activating and facilitating these processes, informing and influencing change through complexity management [19].

This approach allows corporate entities to perceive offerings from a different point of view, renewing vision and internal assets according to new design opportunities. The presence of an in-house DesignCenter makes it possible to imagine new possible directions, paving the way for new business scenarios and new strategic opportunities within which the company's know-how obtains significant value.

Although there are many design possibilities, they require a proactive attitude on the part of both designer and company toward innovative co-design practices. The designer empowers corporate figures to be participants in change "Fig. 4".

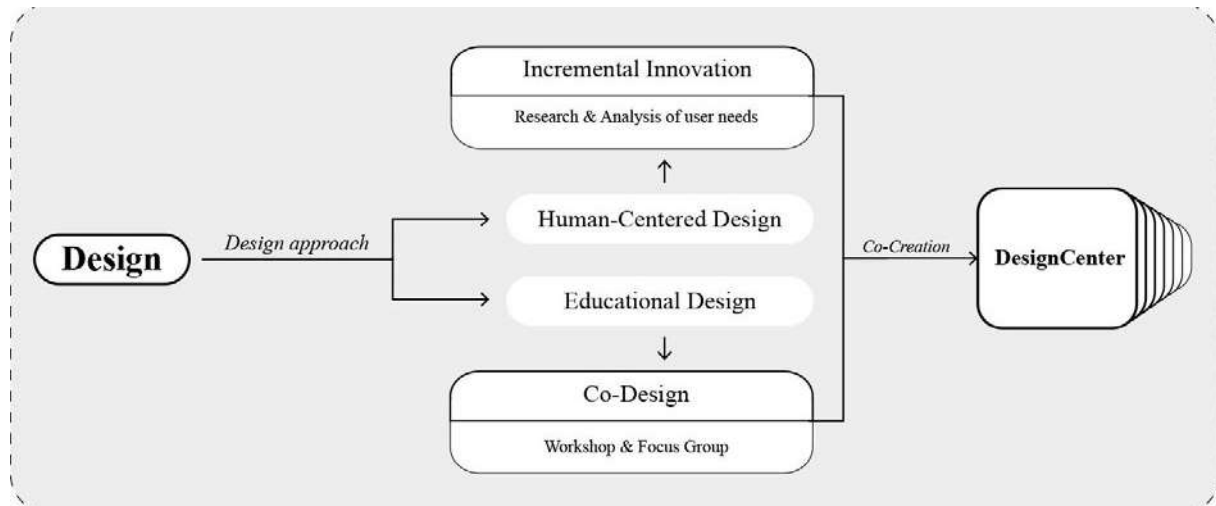


Figure 4. Design approach.

It is not only necessary to design content, but it becomes essential to design the entire training experience so that interactions and content can coexist, complementing each other. The lack of either of these would result in the generation of sterile solutions from a training perspective.

In conclusion, corporate education related to the opportunities generated by design, enables the activation of new paradigms, proposing training experiences characterized by co-design and propaedeutic experiences that train the corporate community towards strategic approaches capable of growing the enterprise both internally and externally.

Through this process, propaedeutic activity no longer occurs passively through manuals and books, but actively through targeted events and workshops that support the achievement of training objectives.

At present, the research carried out has generated a very broad and constantly evolving scenario where it stands out how the contamination between different application fields can generate new visions projected toward an increasingly smart future, allowing to reimagine the perception of the enterprise.

REFERENCES

- [1] C. Montag and S. Diefenbach, 'Towards Homo Digitalis: Important Research Issues for Psychology and the Neurosciences at the Dawn of the Internet of Things and the Digital Society', *Sustainability*, vol. 10, no. 2, p. 415, 2018.
- [2] R. dos Santos, E. V. Bueno, H. T. Kato, and R. O. Corrêa, 'Design management as dynamic capabilities: a historiographical analysis', *EBR*, vol. 30, no. 6, pp. 707–719, 2018.
- [3] C. C. Scaletsky, F. C. X. Da Costa, 'Design Management & Strategic Design: Cross Perspectives', *Strategic Design Research Journal*, vol. 12, no. 1, pp. 27–42, 2019.
- [4] E. B. N. Sanders and P. J. Stappers, 'Co-creation and the new landscapes of design', *CoDesign*, vol. 4, no. 1, pp. 5–18, 2008.
- [5] W. Jonas, 'A Scenario for Design', *Design Issues*, Vol. 17, No. 2, pp 64-80, 2001.
- [6] C. Dell'Era and R. Verganti, 'Collaborative Strategies in Design-intensive Industries: Knowledge Diversity and Innovation', *Long Range Planning*, vol. 43, no. 1, pp. 123–141, 2010.
- [7] K. Michlewski, *Design Attitude*, 0 ed. Routledge, 2016.
- [8] T. Sakao and M. Lindahl, *Introduction to product/service-system design*. London: Springer, 2009.
- [9] F. Zurlo, 'Il Design Del Sistema Prodotto', *Design Multiverso*. Milano, Edizioni Polidesign, pp. 141-150, 2006.
- [10] B. Borja de Mozota and F. Wolff, 'Forty Years of Research in Design Management: A Review of Literature and Directions for the Future', *Strategic Design Research Journal*, vol. 12, no. 1, pp. 4–26, 2019.

- [11] R. W. Veryzer and B. Borja de Mozota, 'The Impact of User-Oriented Design on New Product Development: An Examination of Fundamental Relationships*', *Journal of Product Innovation Management*, vol. 22, no. 2, pp. 128–143, 2005.
- [12] C. Cautela, F. Zurlo, K. Ben Youseff, S. Magne, *Design Et Marketing: Instruments De Design Management*, Paris, De Boeck, 2012.
- [13] J. Fulton Suri and M. Marsh, 'Scenario building as an ergonomics method in consumer product design', *Applied Ergonomics*, vol. 31, no. 2, pp. 151–157, 2000.
- [14] R. Ramírez and C. Selin, 'Plausibility and probability in scenario planning', *Foresight*, vol. 16, no. 1, pp. 54–74, 2014.
- [15] P. Durance and M. Godet, 'Scenario building: Uses and abuses', *Technological Forecasting and Social Change*, vol. 77, no. 9, pp. 1488–1492, 2010.
- [16] K. Savolainen and S. Hyysalo, "Cumulative and Combined: Analyzing Methods Use in a Human-Centered Design Mature Company", *Journal Of Usability Studies*, vol. 15, no. 2, pp. 103-123, 2020.
- [17] D. A. Norman and R. Verganti, 'Incremental and Radical Innovation: Design Research vs. Technology and Meaning Change', *Design Issues*, vol. 30, no. 1, pp. 78–96, 2014.
- [18] S. Magistretti, C. Dell'Era, R. Verganti, and M. Bianchi, 'The contribution of Design Thinking to the R of R&D in technological innovation', *R & D Management*, vol. 52, no. 1, pp. 108–125, 2022.
- [19] L.-A. Hepburn, 'Transdisciplinary learning in a design collaboration', *The Design Journal*, pp. 1–18, 2022.