ED2024

18th International Technology, Education and Development Conference

4-6 March 2024 Valencia (Spain)

CONFERENCE PROCEEDINGS



Sharing the Passion for Learning



CONFERENCE PROCEEDINGS

Sharing the Passion for Learning

Published by IATED Academy iated.org

INTED2024 Proceedings

18th International Technology, Education and Development Conference March 4th-6th, 2024 Valencia, Spain

Edited by

Luis Gómez Chova, *University of Valencia, Spain* Chelo González Martínez, *Polytechnic University of Valencia, Spain* Joanna Lees, *CEU Cardinal Herrera University, Spain*

DOI: 10.21125/inted.2024 ISBN: 978-84-09-59215-9

ISSN: 2340-1079

Book cover designed by J.L. Bernat

© Copyright 2024, 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 Book Series Editors

18th InternationalINTED ProceedingsLuis Gómez ChovaTechnology, Education andChelo González MartínezDevelopment ConferenceJoanna Lees

Publication YearPublisherPublisher Address2024IATED AcademyValencia, Spain

Book ISBN Series ISSN DOI

978-84-09-59215-9 2340-1079 10.21125/inted.2024

Conference NameDatesLocationINTED2024March 4th-6th, 2024Valencia, Spain

Copyright Information Topics
This work is subject to Education

Copyright All rights Educational Poor

copyright. All rights Educational Research reserved. 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 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

The INTED2024 Conference Proceedings contain the papers presented at the 18th International Conference of Technology, Education and Development, held in Valencia, Spain, from the 4th to the 6th of March 2024. INTED takes place annually and its aim is to bring together academics and researchers to continue the exchange of innovative ideas and research. Participants from over 78 countries joined INTED2024 to learn about the changing world of education and learning technologies.

INTED's focus is on Education and Educational research. Since many international education experts attended the conference, participants were able to network and collaborate with other delegates from around the world, participating in thematic sessions, networking activities, workshops and interactive sessions. The keynote speeches are available at IATED Talks: iated.org/talks.

The INTED2024 Proceedings, exclusively in English, are included in the IATED Digital Library: library.iated.org. The INTED2024 International Program Committee was composed of lecturers and researchers from multiple countries. A blind peer review process was followed to guarantee the quality of the final publication, in which the following points were evaluated: information content, relevance to the educational field, general structure, clarity of contents, originality, and relation to the conference topics and disciplines.

IATED endeavors to publish original and high-quality research papers. Following the expected ethical standards, all authors that published their papers in the INTED2024 Proceedings signed the IATED copyright transfer form. More information about the publication ethics of IATED is available at iated.org/publication_ethics.

We wish to extend our most sincere thanks to all who contributed to the INTED2024 Proceedings. Thanks for your dedication and for sharing your passion for learning.

Organizing and Program Committee

Organizing Committee

Program Chairs

Luis Gómez Chova, *University of Valencia, Spain* Chelo González Martínez, *Polytechnic University of Valencia, Spain* Joanna Lees, *CEU Cardinal Herrera University, Spain*

Local Arrangements Chairs

David Martí, Int. Academy of Technology, Education and Development, Spain Mª Jesu's Suesta, Int. Academy of Technology, Education and Development, Spain Meghan Stockwell, Int. Academy of Technology, Education and Development, Spain Javi Doménech, MSX International Techservices, Spain Miguel Peiró, Progresa Vocational Training Center, Spain

Publication Chairs

Agustín López Martínez, *University of Barcelona, Spain* Ignacio Candel Torres, *Capgemini, Spain*

Publicity Chairs

Eladio Duque, Int. Academy of Technology, Education and Development, Spain Juanan Herrero, Graphimage Graffor, Spain

Web Masters

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

Panel Chairs

Sarah Newman – *Harvard University, United States* Mike Sharples – *The Open University, United Kingdom*

Workshop Chairs

Julie Smith – Webster University in St Louis, United States
Mike Sharples – The Open University, United Kingdom
Richard Powers – Universität Stuttgart, Germany
Tony Eng – Massachusetts Institute of Technology, United States
Tracey Tokuhama-Espinosa – Harvard University Extension School, United States
Vivian van Laarhoven – UCLL University of Applied Sciences, Belgium

Session Chairs

Achim Dannecker – *University of Applied Sciences and Arts Northwestern Switzerland, Switzerland*

Adriana Wilde – *University of Southampton, United Kingdom* Alejandro Garza – *Tarrant County College, United States*

Allen Barclay - Flagler College, United States

Ana Paula Lopes - Polytechnic of Porto, Portugal

Anita Tarnai – Bard College, United States

Anne Davidson - University of Northern Colorado, United States

Antonio Fernandez – *Barry University, United States*

Aslaug Grov Almås - Western Norway University of Applied Sciences, Norway

Barb Hamilton-Hinch – Dalhousie University, Canada

Ben Zoghi – Texas A&M University, United States

Bjoern Kjellgren – KTH Royal Institute of Technology, Sweden

Bob Hannafin - Fairfield University, United States

Carl Blue - Clemson University, United States

Catherine Botting – *University of York, United Kingdom*

Ciarán Dawson - University College Cork, Ireland

Cristina Pardo-Ballester – Iowa State University, United States

Daewook Kim - University of Arizona, United States

Daniel Pearce - University of Hertfordshire, United Kingdom

David Dalton – KUSTAR, United Arab Emirates

David Erent - Aalto University, Finland

Debbie Bayntun-Lees - Hult International Business School, United Kingdom

Denise Prescott – University of Liverpool, United Kingdom

Diana Garcia – Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico

Eleni Georgakakou – Hellenic Open University, Greece

Ellen Rusman - Open University, Netherlands

Eveline Wuttke – *Goethe University Frankfurt, Germany*

Fabian Lukas – Friedrich Schiller University Jena, Germany

Faiza Al-Dhahli – University of Technology and Applied Sciences, Oman

Filomena Soares – Polytechnic of Porto, Portugal

Gil Gonçalves – Universidade do Porto, Portugal

Irina Silva – Queensland University of Technology, Australia

Jana Bérešová – Trnava University, Slovakia

Janette Hughes – Ontario Tech University, Canada

Jens Siemon – *University of Hamburg, Germany*

Johan Lundin - University of Gothenburg, Sweden

Ken Plummer - Brigham Young University, United States

Kristina Mullamaa – Tartu University, Estonia

Külli Kori – Tallinn University, Estonia

Lieven Nils Kennes – University of Applied Sciences Stralsund, Germany

Lilian Snellman – Metropolia University of Applied Sciences, Finland

Linn Hongell – Arcada UAS, Finland

Manuela Milani – Humanitas University, Italy

Margit Kastner - Vienna University of Economics and Business, Austria

Marion Brown – Dalhousie University, Canada

Matthias Baume - Technical University of Munich, Germany

Michael Phillips – Monash University, Australia

Nina Weimann-Sandig – *University of Applied Sciences for Social Work, Education and Nursing, Germany*

Panagiotis Kosmas – *University of Limassol, Cyprus*

Paul Hunter - IMD Business School for Management and Leadership Courses, Switzerland

Paul Lane - Grand Valley State University / UNAN Managua, United States

Paul Trowler - Lancaster University, United Kingdom

Peter Mazohl – European Initiative for Education, Austria

Petra Bauer – Johannes Gutenberg University, Germany

Pumela Msweli – University of South Africa, South Africa

Rainer Groß – Technische Hochschule Nürnberg Georg Simon Ohm, Germany

Ramon Lawrence - University of British Columbia, Canada

Ramon Lopez - The University of Texas at Arlington, United States

Randall Davies - Brigham Young University, United States

Rebecca Rylance Graham - University of Liverpool, United Kingdom

Refiloe Tsephe – University of South Africa, South Africa

Rick Tynan – Liverpool John Moores University, United Kingdom

Sabrina Zeaiter – Goethe-University Frankfurt, Germany

Sandra Rebeor - University of Arizona Global Campus, United States

Sarvin Hassani - Anglia Ruskin University, United Kingdom

Susan Canning - University of Liverpool, United Kingdom

Tadhg Ó Ceallaigh – University College Cork, Ireland

Thomas N. Jambor - Leibniz University Hannover, Germany

Tracey Hillier – University of Alberta, Canada

Ursula Lagger - FH Joanneum, Austria

Wendy Holley-Boen - Massey University, New Zealand

Yongmin Kim - University of Glasgow, Singapore

International Program Committee

Adam Smith – Future University Hakodate, Japan

Alan Carlson – University of Gothenburg, Sweden

Alessia Maria Aurora Bevilacqua – University of Verona, Italy

Allison Spring – Outside the Lens, Photography, Filmmaking and Digital Media Learning Lab, United States

Ana Dias Daniel - Universidade de Aveiro, Portugal

Ana Paula Lopes – Polytechnic of Porto (P.PORTO) - Porto Accounting and Business School (ISCAP) - CEOS.PP, Portugal

Anna Dillon – Zayed University, United Arab Emirates

António Coelho - FEUP / INESC TEC, Portugal

Asako Ohno – *Kobe University*, *Japan*

Denise Prescott - University of Liverpool, United Kingdom

Dina Nader - The American University in Dubai, United Arab Emirates

Elena Baguzina – Moscow State Institute of International Relations, Russian Federation

Elena Grunt – Ural Federal University, Russian Federation

Emanuel Tundrea - Emanuel University of Oradea, Romania

Farhad Eftekhari - TechClass Ltd., Finland

Filomena Soares – *Polytechnic of Porto (P.PORTO) - Porto Accounting and Business School (ISCAP) - CEOS.PP, Portugal*

Guilherme Temporão – PUC-Rio, Brazil

Ilias Batzogiannis – Platon School of Katerini, Greece

John Gordon - University of East Anglia, United Kingdom

Kadiri Abdul-Karim – MottMcDonald Limited, Ghana

Kalaimagal Ramakrishnan – University of Nottingham Malaysia, Malaysia

Karl Oeyvind Jordell – *University of Oslo, Norway*

Kimberly Hoggatt Krumwiede – *University of Texas, United States*

Külli Kori – Tallinn University, Estonia

Loreta Juškaite – Riga Technical University (RTU), Latvia

Luís Torres Moreira – Colégio Casa Mãe, Portugal

Łukasz Wiechetek – Maria Curie-Skłodowska University, Poland

Marcelo Gaspar – Instituto Politécnico de Leiria, Portugal

Maria Cutajar – *University of Malta, Malta*

Marian Zajko – Slovak University of Technology in Bratislava, Slovakia

Martina König - FH JOANNEUM GmbH - University of Applied Sciences, Austria

Mary Dempsey - National University of Ireland Galway, Ireland

Matteo Bozzi – Politecnico di Milano, Italy

Michael Collins - Technological University Dublin, Ireland

Michela Tramonti – European Training and Research Association for Cooperation Key to business, Italy

Mohd Hassan Abdullah – Universiti Pendidikan Sultan Idris, Malaysia

Monika Banas – Jagiellonian University in Krakow, Poland

Mária Bakó – University of Debrecen, Hungary

Peter Haber - Salzburg University of Applied Sciences, Austria

Petr Beremlijski – VŠB - Technical University of Ostrava, Czech Republic

Petra Vondráková – VŠB - Technical University of Ostrava, Czech Republic

Remigijus Bubnys – Šiauliai University, Lithuania

Rob Branch – *University of Georgia, United States*

Saime Matsu – Defense Language Institute, United States

Sarah Hord - Roanoke College, United States

Sarah Lukas – University of Education Weingarten, Germany

Stefania Cassar - Hult International Business School, United Kingdom

Susanna Bertelli – Istituto Nazionale di Fisica Nucleare, Italy

Tessai Hayama – Nagaoka University of Technology, Japan

Tracy Hoot - Thompson Rivers University, Canada

Tânia Carraquico – ISEC Lisboa - Instituto Superior de Educação e Ciências, Portugal

Ursula JAHN – Saskatchewan Polytechnic, Canada

Victor Fester - University of Waikato, New Zealand

Wan Sin Lim - University of Massachusetts Boston, United States

Wendy Gorton – Educational Consultant, United States

Yulia Piller - University of Texas Southwestern Medical Center, United States

INTED2024 Keynote Speakers

Mike Sharples - The Open University (UK)



Keynote speech: Social Generative AI: A Future for International Education

Development of Generative Artificial Intelligence is following the same path as the World Wide Web: research, breakthrough, integration into workplace tools, development of apps. For the Web, the next major development was social media and services. I suggest we will soon see the emergence of "Social Generative AI" – AI systems interacting with humans and with other AI tools in complex social networks. Social Generative AI will have

profound implications. In education it will offer new roles for AI as a conversational partner and collaborator; it will break down language barriers and connect people across cultures. However, Social Generative AI may also erode trust in information and create networks of interacting machines beyond human control. In my talk, I will propose we develop social AI for education that is not only effective and ethical but also caring and founded on good pedagogy. The result could be a future for international education that merges human empathy and experience with social artificial intelligence.

Biography:

Mike Sharples is Emeritus Professor of Educational Technology at The Open University, UK. He gained a PhD from the Department of Artificial Intelligence, University of Edinburgh on Cognition, Computers and Creative Writing. His expertise involves human-centred design and evaluation of new technologies and environments for learning. He provides consultancy for institutions worldwide including UNESCO, UNICEF, universities and companies. As Academic Lead for FutureLearn.com he led pedagogy-informed design of the open learning platform. He is an Associate Editor of the International Journal of Artificial Intelligence in Education. He is author of over 300 published papers in the areas of educational technology, learning sciences, science education, human-centred design of personal technologies, artificial intelligence and cognitive science. His recent books are Practical Pedagogy: 40 New Ways to Teach and Learn and Story Machines: How Computers Have Become Creative Writers, both published by Routledge, and An Introduction to Narrative Generators, published by Oxford University Press.

Sarah Newman – Harvard University (USA)



Keynote speech:
Facing this Moment Critically & Creatively: AI Pitfalls & Opportunities for Educators

Many educators are intimidated and overwhelmed by the rapid availability and uptake of AI tools like ChatGPT. How do these tools change the value of skills we've held dear to learning — and expression — such as writing? How do they exacerbate inequities between learners? What do they mean for the role of educators? And what can, and should, we do right now?

New technologies have always changed how we learn, and how we teach. As an educator and AI researcher who leads the AI Pedagogy Project, I will offer recommendations (and some warnings) about how to best face this moment. We need to be both critical and creative. We need to separate AI hype from reality. As overwhelming as it feels, the introduction of these AI technologies offers a chance to revisit and revise what hasn't been working in education, while protecting what is most important. Centered on the value of interdisciplinarity, informed by technology ethics, and leveraging the opportunity that this indeed is, this talk will offer pitfalls to avoid, and concrete recommendations that educators can apply immediately.

Biography:

Sarah Newman is Director of Art & Education at metaLAB at Harvard University, a project of the Berkman Klein Center for Internet & Society. Her work explores the social, ethical, and pedagogical dimensions of artificial intelligence and other emerging technologies through research, art, and teaching. Newman leads the AI Pedagogy Project, a resource to provide educators materials for responsible engagement with AI technologies. Newman's research focuses on data transparency. She co-founded and serves as Research Lead of the Data Nutrition Project, which aims to mitigate bias in data-driven systems through tools and educational practices. Newman holds a BA in Philosophy from Washington University in St. Louis and an MFA in Imaging Arts from the Rochester Institute of Technology. She is also an installation artist who has exhibited work in New York, Miami, Berlin, London, and Rome, and has attended artist residencies in Germany, Italy, and Sweden. Previous honors include: AI Grant, Harvard Assembly Fellow, Harvard Berkman Klein Fellow, a Rockefeller AI Resident, Artist-in-Residence at Northeastern School of Law, and a grantee of the Notre Dame Tech Ethics Lab, a grantee of the National Endowment of the Arts, and winner of the 2022 Ars Electronica Award for Digital Humanity.

Conference Tracks & Sessions

The INTED2024 conference program is available online at https://iated.org/inted2024

ORAL SESSIONS MONDAY

Fostering Critical Thinking

Virtual Reality

Learning Analytics & Data Science Experiences

Post-Pandemic Scenarios in Education

Exchange & Mobility Programmes

Barriers to Learning & Inclusive Practices

Science Popularization and STEM Education

English as a Medium of Instruction

Challenge and Problem-Based Learning

Augmented Reality

Digital Assessment

From COVID to Construction: Creating a Sense of Belonging

Intercultural and Multicultural Education

Inclusive Education Teacher Training

Learning Factories & Remote Laboratories

AI and Chatbots in Language Learning

Game-Based Learning

Extended Reality

Feedback and Assessment

Technology Enhanced Learning

Employability Trends and Challenges

Equality, Diversity and Inclusion

Teaching STEM

English for Special Purposes

Active Learning Experiences

e-Learning Experiences

Assessment in the Era of Generative AI

21st Century Skills

Tales from the trenches of Entrepreneurship Education and Innovation in HEIs

Special Education

Computer Science and Cybersecurity Education

Online and Technology-Enhanced Language Learning

POSTER SESSIONS MONDAY

Emerging Technologies in Education Pedagogical Innovations in Education

ORAL SESSIONS TUESDAY

Making Learning Accessible to Diverse Students Students' and Teachers' Perceptions of AI Virtual Learning Environments Digital and AI Skills for Educators Workplace & Lifelong Learning 1 Curriculum Design Experiences Mathematics in Higher Education English as a Foreign Language Service Learning & Community Engagement

Generative AI in Education

Mentoring & Tutoring

Pre-service Teachers' Experiences Workplace & Lifelong Learning 2 Quality in Education **Promoting STEM Careers** Student Wellbeing

Pedagogical Innovations

Generative AI Chatbots

MOOCs & Open Educational Resources

Professional Development of Teachers

Entrepreneurship Education

Educational Management and Digitization

Science Outreach and Communication

Student Safety and Protection

Collaborative & Team-Based Learning

Research on Generative AI in Education

Blended and Hybrid Learning

ICT Skills among Teachers

University-Industry Cooperation

Leadership in Education

STEM in Schools

Health Sciences Education

Student Engagement

Application of AI in Education

Mobile Learning

Unlocking the Potential: Quality and Growth in Initial Teacher Education

Education for Sustainability

Institutional Cooperation in Education

Architecture & Civil Engineering Education

Transnational Medical Education: AIWMU Joint Medical Education Program

POSTER SESSIONS TUESDAY

Educational Trends and Experiences Challenges in Education and Research

VIRTUAL SESSIONS

DIGITAL & DISTANCE LEARNING

MOOCs & Open Educational Resources Blended & Mobile Learning LMS & VLEs e-Learning Experiences Distance Education in COVID-19 Times

DIGITAL TRANSFORMATION OF EDUCATION

Data Science & AI in Education Learning Analytics & Educational Data Mining Digital Transformation 21st Century Skills

INNOVATIVE EDUCATIONAL TECHNOLOGIES

Virtual & Augmented Reality Social Media in Education Videos for Learning **Technology Enhanced Learning**

TEACHER TRAINING & ED. MANAGEMENT

ICT & Digital Skills Teacher Training and Support Professional Development of Teachers **Educational Management**

ACTIVE & STUDENT-CENTERED LEARNING

Gamification & Game-based Learning Flipped Learning Problem & Project-Based Learning Pedagogical Innovations Active & Experiential Learning Cooperative & Team-Based Learning

ASSESSMENT, MENTORING & STUDENT SUPPORT

Assessment & Evaluation Mentoring & Tutoring Student Support & Motivation Student Wellbeing Developing Soft and Transversal Skills

EDUCATIONAL STAGES & LIFE-LONG LEARNING

From Pre-school to Secondary Education Vocational Training Transition to the Job Market Developing Entrepreneurship in Education Life-Long & Workplace Learning

QUALITY & IMPACT OF EDUCATION

Quality in Education Learning Space Design Service Learning & Community Engagement Social Impact of Education

INCLUSION & MULTICULTURALITY

Inclusive Education Diversity Issues Special Educational Needs Multicultural Education

LANGUAGE LEARNING AND TEACHING

Foreign Languages New Technologies in Language Learning Intercultural & Sociocultural Competences

DISCIPLINE-ORIENTED SESSIONS

Architecture & Interior Design Health Sciences Education Sustainable Development Goals in Education Business & Tourism Education

STEM EDUCATION

Mathematics & Statistics Engineering Education Computer Science Education STEM Experiences

Table of Contents

FIELD ESCAPE GAMES WITH QR CODES TO LIVEN UP THE CLASSES IN SECONDARY SCHOOLS L. Benediktova, A. Hruby	1
EMPOWERING E-TUTORS: AN ITERATIVE DEVELOPMENT OF AN E-TUTOR SELF-EVALUATION TOOL L.M. Langesee, N. Hobe, S. Schmidt	7
PLURI-TEAL AS A HYBRID PEDAGOGICAL FRAMEWORK: REVISITING THE PEDAGOGICAL VALUES OF ZOOM AND MOODLE K. Haseyama	17
USING AN EARLY CHILDHOOD LEARNING COMMUNITY IN AN EFFORT TO RETAIN ONLINE STUDENTS M. Simecek, H. Lopez, S. Heald	21
TELAGOGY: NEW LEARNING IN SOCIETY 5.0 AND BEYOND T. Pitso	22
THE VIEWS OF EARLY CAREER PRIMARY TEACHERS ON THE IMPACT OF AN UNDERGRADUATE SPECIALISM IN SPECIAL EDUCATION ON THEIR WORK AS CLASS TEACHERS T. O Brien	31
VIRTUAL WORLD DESIGN FOR CAPACITY BUILDING L. Cassar, M. Montebello	32
LEARNING FOREIGN LANGUAGES FOR SPECIFIC PURPOSES IN THE DIGITAL AGE IN PORTUGAL, AND THE PROBLEMATICS OF SKILLS FOR SOCIAL AND ECONOMIC CHALLENGES V. Delplanca, A.M. Costa Lopes, S. Fidalgo	43
EDUCATION BASED ON THE CHANGING ROLES OF TEACHER AND STUDENT	51
R. Gámez Belmonte, M.J. Zarzuelo Romero, C. Zarzuelo Romero PROJECT-BASED LEARNING IN THE FIELD OF SCIENCE AND ENGINEERING R. Gámez Belmonte, C. Zarzuelo Romero, M.J. Zarzuelo Romero	55
GIFTEDNESS FOR BIOLOGY IN THE CROATIAN EDUCATIONAL SYSTEM D. Vrbanović Lisac, N. Marangunić	60
MOVING IN, MOVING THROUGH, MOVING BEYOND INITIAL TEACHER EDUCATION – REPORT ON THE TRANSITIONS OF STUDENT TEACHERS J. Rens	68
INTEGRATED THINKING AS A TEACHING STYLE OR PROCESS FOR TEACHING BUSINESS A. Barclay, C. White	69
TEACHING SYNERGY THROUGH DIGITAL RESOURCES AND PROFESSIONAL WORKSHOPS IN THE MASTER OF INDUSTRIAL ENGINEERING J. Ferreiro-Cabello, E. Fraile-Garcia, J. Los Santos-Ortega, F. Somovilla Gomez	70
THERE'S AN APP FOR THAT: DESIGN, DEVELOPMENT, AND EVALUATION OF EDUCATIONAL APPS J. Hughes, L. Morrison, D. Petrarca	76
PERCEPTIONS OF ORGANIZATIONAL READINESS FOR CHANGE IN THE CONTEXT OF LEARNING MANAGEMENT SYSTEM PROJECTS: INSIGHTS FROM HIGHER EDUCATION INSTITUTIONS IN KOSOVO A. Veseli, P. Hasanaj, A. Bajraktari	84
OPTIMIZING THE OPERATION OF EDUCATIONAL INSTITUTIONS: VARIABLES, CATEGORIES AND TOOLS TO MONITOR ITS PERFORMANCE J. Villagrasa, C. Donaldson, A. Soler, F. Sánchez	85
ENTREPRENEURIAL COMPETENCE OF HIGH SCHOOL STUDENTS N. Othman, L. Sapudin	94
ATMOSPHERIC RESEARCH METHODOLOGIES: A PROPOSAL IN METEOROLOGY LESSONS M. Vérguez Dominguez P. Coll Hidden I. Cimana Sotala P. Sarí Comaz P. Nieta I. Cimana	100
M. Vázquez Dominguez, P. Coll Hidalgo, L. Gimeno Sotelo, R. Sorí Gomez, R. Nieto, L. Gimeno THE PLAY PARADOX: AN IPA STUDY WHICH EXPLORED PLAYFUL PRACTICE AS A MEANS TO IMPROVING PSYCHOLOGICAL WELLBEING R. Rylance-Graham	101

WORK AND CLASSROOM C. Ormsbee	102
ORAL COMMUNICATION CLASSES DURING THE COVID-19 PANDEMIC: EXAMINING STUDENTS' EXPERIENCES, BENEFICIAL FOR SPEAKING CLASSES IN THE POST PANDEMIC ERA J. Aliponga, Y. Koshiyama	103
DIGITAL SOLUTIONS FOR GAMIFICATION AND GAME-BASED LEARNING FROM THE PERSPECTIVE OF EDUCATORS E. Sarva, E. Grāvelsiņa, L. Daniela	109
ONLINE MICROLEARNING EVENTS: FOSTERING EDUCATORS' PROFESSIONAL GROWTH THROUGH PEDAGOGICAL PRACTICE EXCHANGE E. Sarva, L. Daniela	119
THE ROLE OF AI CODING ASSISTANTS: REVISITING THE NEED FOR LITERATE PROGRAMMING IN COMPUTER AND DATA SCIENCE EDUCATION M. Birkenkrahe	127
SELF-REGULATION OF STUDENT LEARNING AND TEAMWORK: THE ROLE OF VIDEO FEEDBACK, SELF-REFLECTION AND LECTURER FEEDBACK A. Lavric	133
NO-COST TWO-YEAR ASSOCIATE DEGREE AT A PWI B. Hannafin	138
LEVERAGING INSTRUCTIONAL DESIGN FOR EQUITABLE OUTCOMES B. Hannafin	139
FIXCAMPUS: A WEB APPLICATION FOR EXPLOITING COLLECTIVE EFFORT TOWARDS A WELL-PRESERVED CAMPUS ENVIRONMENT M. Kordas, E. Papaioannou, C. Kaklamanis	140
AN ONLINE WEB APPLICATION FOR DATA ANALYSIS AND VISUALIZATION ON GENDER ASPECTS OF COMPUTER SCIENCE AND ENGINEERING ALUMNI D. Assimakopoulos, E. Papaioannou, C. Kaklamanis	151
INFLUENCE OF DIDACTIC, AUDIOVISUAL, AND JOURNALISTIC DESIGN ELEMENTS ON LEARNING SUCCESS AND LEARNING MOTIVATION IN VIDEOS MADE FOR TEACHING AND LEARNING R. Fleck	161
STRENGTHEN KNOWLEDGE IN TOXICOLOGY THROUGH A PRACTICAL EXPERIENCE E. Ramos, C. de los Ríos, J. Egea, A. Romero	162
UTILIZING DIGITAL SOLUTIONS IN THE IMPLEMENTATION OF UNIVERSAL DESIGN FOR LEARNING: EDUCATOR PERSPECTIVES E. Sarva, A. Rektina	163
DEVELOPMENT OF UNIVERSITY EDUCATION FIELD STUDENT DIGITAL COMPETENCES - OVERVIEW OF PRACTICE E. Sarva, A. Lastovska, A. Olesika, Z. Zalite-Supe, Z. Rubene, A. Abolina	173
USING WIKIPEDIA AS A KNOWLEDGE TRANSFER TOOL AND TO ENHANCE SPANISH SCIENCE DISSEMINATION E. Ramos, R.M. Garcia-Garcia, M. Arias-Alvarez	181
PARENTAL AND ACADEMIC SELF-EFFICACY AMONG STUDENT-MOTHERS AND THEIR ASSOCIATIONS WITH MOTHER-CHILD RELATIONS: THE MEDIATING ROLE OF PERCEIVED STRESS AND PARENTING STYLE G. Levi, Y. Yaffe	188
PREPARING TEACHERS TO EDUCATE DIVERSE LEARNERS M. Milian, A.O. Davidson	189
ARTIFICIAL INTELLIGENCE BASED DIAGNOSTIC SUPPORT SYSTEM FOR DENTAL RESIDENTS A Victor Montreal N. Voge C. Logh C. Clark	190
A. Vistoso Monreal, N. Veas, G. Loeb, G. Clark ANCESTRAL KNOWLEDGE IN THE PRODUCTION OF CRAFTS IN THE	198
MUNICIPALITY OF RÁQUIRA (COLOMBIA) J.A. Segura Osuna	190
EMPOWERING TOMORROW'S LEADERS: A FACILITATOR-LED EXPLORATION OF CURRICULUM DESIGN FOR DEVELOPING GENERIC SKILLS 1. Chohan	202

AN INNOVATIVE FRAMEWORK FOR DIGITALISATION IN PUBLIC ADMINISTRATION IN GERMANY R. Wang, C. Mertn	211
A NEW VUCA-APPROPRIATE FRAMEWORK FOR THE NEW WORK IN THE IT INDUSTRY AND EDUCATION R. Wang, G. Contino	217
DEVELOPMENT AND EVALUATION OF IMAGE PROCESSING-BASED KINESTHETIC LEARNING SYSTEM D. Yildiz, U. Fidan, M. Yildiz, B. Er, G. Ocak, F. Güngör, I. Ocak, Z. Akyıldız	232
EDUCATIONAL STOPLIGHT M. Burt	233
NON-TRAINED INDIGENOUS ORANG ASLI TEACHERS' ROLE IN THE DEVELOPMENT OF EMERGENT READING SKILLS M.K. Mehar Singh	240
ORGANIZATIONAL MODEL OF A LEARNING FACTORY FOR INTEGRATED ENGINEERING TECHNOLOGY AND BUSINESS EDUCATION M. Vaz, B. Baetz, T. Wanyama	248
REFINING THE STUDENT EXPERIENCE IN INDUSTRY-UNIVERSITY COLLABORATIONS: STRATEGIES FOR SATISFACTION, ENGAGEMENT, AND EFFECTIVE LEARNING X. Xu, S. Zhang	256
CONSIDERING GENERATIVE AI FOR ACCESSIBILITY IN INTELLIGENT EDUCATIONAL SYSTEMS T. Mehigan	260
PROTOTYPE OF A SELF-STUDY WEB APPLICATION SUITE FOR PARALLEL PROGRAMMING EDUCATION A. Wakatani, T. Maeda	261
SHORT VIDEO-DRIVEN LEARNING: ENHANCING PARTICIPATION AND MOTIVATION IN ELECTRICAL ENGINEERING DEGREES R. Boluda-Ruiz, I. Moreno-González, B. Castillo-Vázquez, A. García-Zambrana, P. Salcedo-Serrano	271
DESIGN AND IMPLEMENTATION OF A BOARD GAME FOR CHEMICAL ENGINEERING COURSES I. Diaz, M. González-Miquel, M. Rodríguez, E. González	279
VOCATIONAL TRAINING AND LANGUAGE LEARNING. A PERFECT MATCH FOR TODAY'S GLOBAL WORKFORCE M. Pace	280
THE STRENGTHENING OF SOCIOEMOTIONAL SKILLS IN SCHOOLS D. Otálora-Gallego	285
VIRTUAL TEACHING AND LEARNING IN VISUAL ARTS AND STEAM EDUCATION S.L. Wong	286
PROBLEM-ORIENTED LEARNING AS AN ALTERNATIVE TO REGULATORY CHANGES IN TECHNICAL STUDIES F. Magdalena-Layos, S. González-Rodrigo, N. López Sánchez, A. Bosqued Navarro, P. Bautiste-Villanueva, B. González-Rodrigo	287
REFLECTION ON ASSESSMENT PRACTICES WITHIN A COMPUTER SECURITY MODULE AT HONOURS LEVEL L. Drevin	291
ATTITUDES OF UNIVERSITY STUDENTS OF TOURISM TOWARD DISTANCE TEACHING OF LANGUAGE FOR SPECIFIC PURPOSES IN AN ONLINE ENVIRONMENT: THE CASE OF TWO SLOVENIAN FACULTIES DURING THE COVID-19 PANDEMIC T. Smajla	301
ARE OUTREACH ACTIONS EFFECTIVE IN INCREASING THE REPRESENTATION OF WOMEN IN STEM FIELDS? C. Clausell-Terol, J. Beltrán-Arandes, A. Gómez-Cadenas	313
HOW DO STUDENTS DEMONSTRATE ELEMENTARY ARITHMETIC PROPERTIES AT THE BEGINNING OF THEIR UNIVERSITY STUDIES? M. Burgos, B. Milanesio, N. Tizón-Escamilla	319
PROBLEM-POSING MEGA-PROCESS IN TEACHER EDUCATION. DEVELOPING ALGEBRAIC REASONING IN THE PROBABILISTIC CONTEXT M. Burgos, N. Tizón-Escamilla, J. Chaverri	329

HEARING THE STUDENT VOICE: UNIVERSAL DESIGN FOR LEARNING AS A FRAMEWORK FOR PEDAGOGICAL REFORM IN HIGHER EDUCATION A. Power, E. Whewell	338
THE PEDAGOGY OF AN INTRODUCTORY LEVEL DESIGN COURSE J. O'Brien	339
KAHOOT! IN HIGHER EDUCATION: A SMALL-SCALE STUDY WITH STUDENTS ATTENDING A SECOND LANGUAGE ACQUISITION COURSE M.T. Barberán-Recalde, M. Martínez-Adrián	348
ASSESSMENT OF UNIVERSITY STUDENTS' ATTITUDES IN THE CONTEXT OF SUSTAINABILITY AND ETHICAL PRINCIPLES OF PRODUCTION M. Navrátilová, M. Beranová	356
ROBOTICS AS A TOOL TO IMPROVE RECEPTIVE COMMUNICATION IN AUTISTIC STUDENTS G. Lorenzo, J.A. López-Nuñez, E. Andreu-Cabrera, J.M. Romero, J.A. Marín, S. Alonso, F.J. Hinojo	364
A PILOT STUDY OF TELEPRESENCE IN CLASS WITH MIXED REALITY F. Escalona, B. Dominguez-Dager, F. Gomez-Donoso, A. Belmonte-Baeza, E. Martinez-Martin, M. Cazorla	370
USING AI GENERATED TESTS FOR STUDYING AND EVALUATION F. Gomez-Donoso, M. Pina-Navarro, F. Morillas-Espejo, L. Marquez-Carpintero, F. Escalona, M. Cazorla	374
VIRTUAL EMERGENT TECHNOLOGIES FOR INCREASING RECEPTIVE COMMUNICATION IN AUTISTIC LEARNERS G. Lorenzo, J.A. López-Nuñez, E. Andreu-Cabrera, F. Dovigo, I. Gómez-Barreto, M.T. Bejarano-Franco, G. Herrera-Gutierrez	378
NAVIGATING THE NEW NORMAL: ENSURING SUCCESS FOR EDUCATIONAL TECHNOLOGY SUPPORT TEAMS IN THE POST-COVID ERA Y. Piller, R. Dorough	384
MATCHING PEDAGOGY TO PRACTICE: ADAPTING TO COVID 19 AND BEYOND; MOVING A PHYSIOLOGY MOOC TO ON DEMAND STATUS T. Gleave, S. Canning, D. Prescott	392
EDUCATIONAL INITIATIVE ON INSTAGRAM TO ENHANCE UNIVERSITY STUDENTS' SCIENTIFIC WRITING SKILLS AND SELF-EFFICACY S. Collado, R. Rodríguez-Rey, C. Fidalgo, M. Sorrel, M. Carballo	393
HOW THE USE OF AI IS CHANGING THE ROLE OF EDUCATORS AT UNIVERSITIES - AND WHY THIS IS BY NO MEANS A BAD THING N. Weimann-Sandig	394
DIGITALISATION OF PRACTICAL CONTENTS IN ELECTRONICS TO PROMOTE BLENDED LEARNING WITH AN INVERTED APPROACH D. Valiente, F. Rodríguez-Mas, A. Ruiz, A. Hortal, A. Peidró	401
EXPLORING SOCIAL CONNECTEDNESS AND EMPATHY WITH POSTGRADUATE PSYCHOLOGY STUDENTS AND THE IMPACT OF THE COVID-19 PANDEMIC: THE VALUE OF THE HIDDEN CURRICULUM A.J. Viljoen, T.A. Adonis	402
THE IMPACT OF ARTIFICIAL INTELLIGENCE (AI) CONTENT ON EDUCATION AND STUDENT LEARNING J. Dosky	408
A NEW UNIVERSITY LEARNING EXPERIENCE WITH IMAGINATIVE EDUCATION L. Vargas, V. Tena, F. Sandoval, R. Ruiz	422
REIMAGINING STUDENT CENTEREDNESS IN HIGHER EDUCATION: ENTERPRISE CAPABILITY THEORETICAL PERSPECTIVE P. Msweli	429
MULTIMODAL CONTEXTUALIZING AND TARGETING EXERCISES IN ICAPT SYSTEMS E. Pyshkin, J. Blake, V. Khaustova, V. Khaustov, I. Lezhenin, R. Svechnikov, D. Efimov, N. Bogach	438
EDUCATION OF MANAGERS IN THE AREA OF PROCESS RISK ASSESSMENT M. Hudakova, P. Kardoš, K. Buganová	449
HOW TO PROMOTE FEMALE ENTREPRENEURSHIP: A GENDER-SENSITIVE APPROACH TO HIGHER ENTREPRENEURIAL EDUCATION J. Villagrasa, S. Enrique, C. Donaldson	458
TECHNOLOGICAL RESOURCE FOR TEACHING AND LEARNING OF CONDUCTING FOR BLIND STUDENTS E. Lima	463

IS IT POSSIBLE TO TEACH CONDUCTING TO BLIND STUDENTS? E. Lima	464
USING SMARTPHONE-BASED MICROSCOPY FOR INNOVATIVE BIOLOGY TEACHING V. Lang, A. Šorgo	465
RESEARCH TRENDS WITH THE USE OF EDUCATIONAL TECHNOLOGY M.E. Cipagauta Moyano	469
LEADING THE RETURN TO THE HIGHER EDUCATION UNIVERSITY CLASSROOM AFTER THE COVID-19 PANDEMIC A. Fernandez, G. Shaw	470
SMARTPHONE SENSORS: A VALUABLE TOOL FOR SCIENTIFIC EXPERIMENTS V. Lang, A. Šorgo	471
EXPLORING FACTORS INFLUENCING ADULTS' ENGAGEMENT IN SECONDARY EDUCATION AND TRAINING PROGRAMMES IN PORTUGAL M.J. Antunes, A.R. Luz, O. Tavares, C. Sá	477
EXPLORING DROPOUT AND RETENTION TRENDS IN PORTUGUESE HEIS DURING TRANSFORMATIVE PERIODS A.R. Luz, M.J. Antunes, C. Sá, O. Tavares	484
EXPLORATION AND INTEGRATION OF METAVERSE OPPORTUNITIES AND THE CDIO METHODOLOGY IN BLENDED TEACHING OF TECHNICAL ENGINEERING SUBJECTS	492
J. Herrera Herbert, R. Arranz Revenga, J.A. Ramírez Masferrer	
ENHANCING SCIENCE EDUCATION THROUGH ROBOTIC INSTRUMENT EXPERIMENTATION IN JUNIOR HIGH SCHOOL N. Papadimitropoulos	500
THE INFLUENCE ON CONCEPTUAL DEVELOPMENT WITHIN ARITHMETIC AND MATHEMATICS VIA APPLICATION OF VIRTUAL REALITY N. Fanchamps	506
EVOLUTION OF TEACHING IN THE METAVERSE FROM 2011 TO 2024 J.A. Ramírez Masferrer, J. Herrera Herbert, R. Arranz Revenga	516
INTERNATIONAL STUDENT VIEW ON INTEGRATION TO WORKING LIFE IN THE HOST COUNTRY L. Hongell, S. Fabricius, M. Halmén	526
UNLOCKING TEACHERS' DIGITAL COMPETENCE: THE CONTRIBUTION OF A MOOC DESIGNED FOR ENHANCING DIGITAL ASSESSMENT M. Lucas, S. Senos	532
BUILDING FUTURE ENGINEERS THROUGH TEAMWORK: WHAT WE NEED TO IMPROVE IN HIGHER EDUCATION I. Ortiz-Marcos, R. Garcia-Galan, A. Zarzo Altarejos, E. Caro Huertas	534
TEACHER'S PERSPECTIVE ON COMMUNICATION BETWEEN PARENTS OF SPECIAL NEEDS CHILDREN AND THEIR TEACHERS IN THE TECHNOLOGICAL AGE E. Wasserman, H. Berkowitz	542
THE TRANSFORMATIVE POTENTIAL OF GENERATIVE AI IN EDUCATION M. Muhic	543
INTERNATIONAL COOPERATION AS A DRIVER FOR STUDENT DEVELOPMENT – A CASE STUDY BASED IN GEOSPATIAL INFORMATION TECHNOLOGY APPLICATION F. Sanchez Iglesias, M.A. Grande Ortiz, A. Serrano Iglesias, M.J. Garcia Garcia, L.C. Echavarria Caballero	548
THE AGONY OF WORKPLACE DISCRIMINATION ON WOMEN IN EDUCATION LEADERSHIP: A CASE OF WATERBERG DISTRICT IN LIMPOPO PROVINCE S.J. Madela, E. Ngobeni, P. Sepeng	555
USE OF PYTHON PROGRAMMING LANGUAGE FOR SOLVING PRACTICAL PROBLEMS RELATED TO ELECTRICAL ENGINEERING J. Jimenez-Ruiz, A. Honrubia-Escribano, E. Gómez Lázaro	562
ABSTRACT THINKING OF ENGINEERING STUDENTS IN HIGH-SCHOOL AND HIGHER EDUCATION A. Gero	570
PEER LEARNING: NURSING STUDENTS' EXPERIENCE C. Pinto, A. Pinto, A. Veríssimo, I. Ribeiro, F. Segadães, R. Pires, P. Oliveira, S. Costa	575
USE OF MOBILE DEVICES IN UNDERGRADUATE NURSING STUDENTS C. Pinto, A. Pinto, A. Varíssimo, I. Ribeiro, E. Sagadãos, R. Pires, S. Costa, P. Oliveira	583

PARENTING EDUCATION IN SLOVAKIA: A CONTENT ANALYSIS OF PARENTING EDUCATION COURSES S. Dončevová, Z. Hrćan	588
MANAGERIAL ETHICS FOR SUSTAINABLE BUSINESS – A CASE OF IMPLEMENTATION OF ACTIVE LEARNING STRATEGIES E. Švejdarová	597
IDENTIFYING THRESHOLD CONCEPTS TO IMPROVE THE LEARNING AND TEACHING PROCESS: APPLICATION IN THE SUBJECT OF PROJECT ENGINEERING D. Uribe Rodríguez, S. Lopez Garcia-Vaquero, B. Quilez Fernandez	606
AI-DRIVEN STUDENT ASSISTANCE: CHATBOTS REDEFINING UNIVERSITY SUPPORT S. Martinez-Requejo, E. Jimenez García, S. Redondo Duarte, J. Ruiz Lázaro, E. Puertas Sanz, G.	617
Mariscal Vivas	
IMPROVING COMPETITION PERFORMANCE TO MIDDLE SCHOOL ROBOTIC TEAMS BY TEACHING PRODUCT DEVELOPMENT SKILLS E. Sudano, G. Avvento	626
TURBOCHARGING DOCTORAL RESEARCHERS' TRAINING: BLENDING TEXT, XERTE LEARNING OBJECTS AND AI INDIVIDUALISATION P. Trowler	637
DOES TRAUMA EFFECT IDENTIFICATION IN SPECIAL EDUCATION? WORDS FROM THE FIELD J. Finn	638
TECHNICAL CHANGE IN HIGHER EDUCATION SYSTEM V. Giménez, G. Pérez-López, D. Prior, J. Zafra-Gómez	639
EMPOWERING PRE-SERVICE TEACHERS: LEVERAGING QUANTITATIVE ETHNOGRAPHY TO ENHANCE ONLINE EDUCATION M. Phillips, T. McDougall	640
BIASED EDUCATION - TEACHING DIGITAL DESIGN THROUGH FEMALE PROTAGONISTS: A CASE STUDY L. Bollini	648
INTERDISCIPLINARY, AI-BASED CYBERSECURITY AWARENESS TRAINING IN SMES I. Hamburg	657
PRIVATE AVATAR GOES HOME, TEACHER OBSERVATIONS M. Beňo, D. Cagáňová, N. Horňáková	662
A TEACHING EXPERIENCE ON THE USE OF CHATGPT FOR LEARNING AND CRITICAL REASONING J.A. Aledo, P. Bermejo	670
ACTIVE LEARNING METHODOLOGIES IN HIGHER EDUCATION: REFLECTIONS ON THE PERCEPTIONS OF PORTUGUESE TEACHERS AND TRAINING OPPORTUNITIES G. Reses, V. Carlos, S. Soares	675
MEASURING THE IMPACT OF 21ST CENTURY SKILLS EXPERIENTIAL LEARNING ON INTERNATIONALLY TRAINED PROFESSIONALS' (ITPS) WORKPLACE READINESS IN CANADA G. Grant, J. Staples	676
ASSESSVR: ENHANCING RISK ASSESSMENT SKILLS THROUGH SERIOUS GAMES WITH EMBEDDED PRIMING FOR OCCUPATIONAL HAZARDS N. Keren, J. Wright	686
TRAINING TEACHERS AND TRAINERS TO DESIGN TECHNOLOGY-BASED AND PROBEM-ORIENTED EXAMINATION TASKS S. Seeber, E. Wuttke	687
CHILDREN'S WELLBEING: CONCEPTUALIZATION OF CHILDHOOD AMONG ANGLOPHONES AND FRANCOPHONES IN CAMEROON A. Rita Veghessi	694
ONE EFFECT ON PRE-SERVICE TEACHERS' SELF-EFFICACY SCORES LINKED TO CHANGES IN ANTI-COVID-19 MEASURES AS THE PANDEMIC PROGRESSED IN SCHOOLS IN THE NORTHWEST OF ENGLAND R. Tynan, A. Mallaburn	695
USING THE SCHOOL PLAYING FIELD TO MEET THE PRACTICAL REQUIREMENTS ASSOCIATED WITH ECOLOGY SUBSTANTIVE KNOWLEDGE IN CURRENT BIOLOGY EXAMINATION SPECIFICATIONS IN ENGLAND R. Tunan	705

TECNO-CONCIENCIA: ECO-FRIENDLY STRATEGY TO ENCOURAGE STEAM LEARNING M. Martinez	715
LET'S RESIST A RETURN TO PRE-PANDEMIC HIGHER EDUCATION A. Fernandez, G. Shaw	716
LEARNING, UNDERSTANDING AND RECOGNIZING THE IMPORTANCE OF FORMAL AND SEMANTIC CONGRUENCE BETWEEN MUSIC AND SPORTS ROUTINES F.C. Loo, F.Y. Loo	717
TEACHING NATIONAL MUSIC IDENTITY IN A MULTIRACIAL MALAYSIA: DIVERSITY, COMPLEXITY, AND CONTINGENCY F.Y. Loo, F.C. Loo	722
THE POTENTIAL CONTRIBUTION OF LI JINHUI'S COMPOSITIONS AND PRESCHOOL MUSIC TEXTBOOKS TO PRESCHOOL MUSIC EDUCATION IN CONTEMPORARY CHINA Y. Huang, F.C. Loo	723
A DECADE OF EXPERIENCE: ADVANCES AND REFLECTIONS IN THE MANAGEMENT OF INTERNATIONAL GROUPS AT THE FACULTY OF VETERINARY MEDICINE OF THE UNIVERSITY CEU CARDENAL HERRERA C. de Brito, I. Tadeo, E. Bataller	727
EXPLORING TEACHERS' REQUIREMENTS FOR EDUCATIONAL RESOURCES: DIVERSE USER TYPES AND COMMON NEEDS M. Kastner, B. Simon	732
ENGAGING MEDIA APPROACH IN THE INSTITUTIONALIZATION OF PUZHOU OPERA L.L. Pang, F.C. Loo	742
A PRELIMINARY STUDY OF SPOC FOR MEDICAL IMAGING TECHNOLOGIST EDUCATION IN RURAL CHINA UNDER THE COVID-19 PANDEMIC S. Chow, D. Zhong	746
REPURPOSING THE FUTURE SCHOOL TEACHER THROUGH A FOUCAULDIAN LENS M. Harpham, J. Patterson	755
EVEN BETTER THAN THE REAL THING? HOW NEW FORMS OF POLICE TRAINING PROGRAMS CHALLENGE ESTABLISHED EDUCATIONAL STRUCTURES D. Skog	763
DIGITAL EDUCATIONAL RESOURCES IN TRAINING OF OIL AND GAS SPECIALISTS K. Makayev, G. Makayeva, L. Ibatulina, E. Bilguzovna, I. Kuznetsova	764
CONSIDERATION OF DIFFERENCES OF RUSSIAN AND ENGLISH TERMS BY THEIR USE AND TRANSLATION K. Makayev, G. Makayeva, L. Ibatulina, E. Bilguzovna, I. Kuznetsova	769
ONE-TO-ONE CONVERSATIONAL STUDY PARTNERS FOR CHILDREN USING AI: A USER EXPERIENCE ANALYSIS OF TEDDYAI P. Otermans, A. Sharma, M. Singh, D. Aditya	777
A STUDY EXPLORING THE EFFECTIVENESS OF A VIRTUAL COACH TO UPSKILL UNDERSERVED WOMEN P. Otermans, D. Aditya	784
INFLUENCE OF EDUCATION LEVEL, GENDER, AGE AND SENIORITY OF TEAM MEMBERS ON THEIR JOB SATISFACTION AND ORGANISATIONAL BEHAVIOUR S. Silberg, L. Stehlík, M. Silberg	796
USING DOCUMENTARIES IN THE ONLINE CLASSROOM TO TEACH MEDIA LITERACY AND BUSINESS ETHICS D. Pearce	807
GASTRONOMIC EVENT AS A DRIVER FOR DEVELOPING LANGUAGE SKILLS - ADVANTAGES AND LIMITATIONS OF PROJECT-BASED LEARNING M.N. Perez Santos, B. Costa	817
THE USE OF PROMOTIONAL TOURISM VIDEOS TO DEVELOP FOREIGN LANGUAGE SPEAKING SKILLS M.N. Perez Santos	822
OBSERVING FROM A DISTANCE: DIGITAL ETHNOGRAPHY TO INVESTIGATE AUTISTIC CHILDREN'S DIGITAL INTERACTION IN THE HOME I. Silva	828

THE USAGE OF DEPTH AND COMPLEXITY ICONS WHEN WORKING WITH INTELLECTUALLY GIFTED STUDENTS G. Eremeeva, N. Sigacheva, R. Bikbulatov	829
DIGITAL RECORD OF STUDENT ATTENDANCE IN UNIVERSITY CLASSES C. Lerma, J. Vercher, J.G. Borràs, Á. Mas, E. Gil	837
ELABORATION OF TRAINING COMPLEMENTS BY RECORDING VIDEOS WITH CHROMA KEY C. Lerma, J. Vercher, J.G. Borràs, Á. Mas, E. Gil	844
DECODING LEARNER RESPONSES: AN ANALYSIS OF COMMENTS ON TIKTOK VIDEOS Y. Zhang, M. Lucas, L. Pedro	853
RETHINKING EDUCATION: UNLEASHING THE POWER OF DIGITAL INNOVATION - PARADIGM SHIFT IN EXAMINATION CULTURE - DIGITAL MEDIA AND INNOVATIVE FORMS OF EXAMINATION E. Benedik, A. Gruber	854
READING NON-LINEAR DIGITAL NARRATIVES: A SYSTEMATIC REVIEW C. Vanhees, M. Sinnons, V. Joosen	861
EMPOWERING YOUNG MINDS: A JOURNEY INTO MAKING IN PRIMARY SCHOOLS - THE MAKERSPACE OF THE UNIVERSITY COLLEGE OF TEACHER EDUCATION UPPER AUSTRIA E. Benedik, A. Gruber	871
VALUE ORIENTATION AND ATTITUDES OF POLICE OFFICERS IN PREVENTION OF DISCRIMINATORY ETHNIC PROFILING AND FURTHER POLICE EDUCATION Š. Strnad, Z. Freitinger-Skalická, L. Michalcová, Š. Kavan	875
INNOVATION, PRODUCTION, QUALITY AND INTERNAL COMMUNICATION FACTORS THAT CONTRIBUTE TO AN ORGANISATION'S SUCCESS R. Caldeira, A. Infante Moro	879
PAPER VOLCANOES LAB: ENGAGING YOUNG CHILDREN WITH EARTH SCIENCE IN KENYA. WHAT WE HAVE ACCOMPLISHED SO FAR S. Amici, A. Bertoli, J.T. Ng'asike, M. Tesar, R. Sulpizio, S. Eleman, P. Emase	886
DESIGN AND IMPLEMENTATION OF LEARNING ANALYTICS IN HIGHER EDUCATION. A PILOT CASE STUDY F. Pelizzari, C. Sala, E. Tassalini	896
TRANSPAVET: INNOVATING IN VETERINARY LEARNING USING AUGMENTED AND VIRTUAL REALITY M. García-Roselló, E. García-Roselló, J.A. Solves, B. Ballester, J. López, A. Navarro, M. Muñoz, C. de Brito	905
AN EXPLORATION OF FOREIGN LANGUAGE CLASSROOM ANXIETY IN YOUNG ADOLESCENTS IN FRENCH-SPEAKING SWITZERLAND D. Bosmans	912
BRIDGING THEORY AND PRACTICE: EMPOWERING COMMUNITIES THROUGH RECIPROCAL LEARNING M. Castrillon Toro	921
DIGITAL TWIN AS A TOOL FOR SOCIAL PARTICIPATION IN ENVIRONMENTAL IMPACT ASSESSMENT L.I. Hojas Hojas, E.M. García-Del-Toro, I. Más López	928
TACTICAL ENVIRONMENT IN CIVIL ENGINEERING: ENVIRONMENTAL SPECIALIZATION IN CIVIL ENGINEERING WITH A HIGH SOCIAL PARTICIPATION L.I. Hojas Hojas, E.M. García-Del-Toro, I. Más López	934
EMBRACING THE TRANSFORMATIVE SHIFT OF 3D TECHNOLOGY: COLLABORATIVE PATHWAYS BETWEEN SUSTAINABLE DIGITAL INNOVATION AND FASHION DESIGN EDUCATION X. Lin, M.O. Ingaramo	943
INFORMATION AND COMMUNICATION TECHNOLOGIES AS FACILITATORS IN THE TEACHING AND LEARNING PROCESS: AN ANALYSIS OF MUNICIPALITIES IN THE SEMIARID REGION OF RIO GRANDE DO NORTE, BRAZIL E. Sant'anna, R. Silva, J. Mendes de Araujo, M. Aguirre, B. Lima, A.A.S. Fontoura, J. Ribeiro de	951
Oliveira, P. Medeiros	

GENERATING KNOWLEDGE CONTENT AND KNOWING IN THE AGE OF ARTIFICIAL INTELLIGENCE	957
S. Dugal, S. Singh, M. Troiano, R. Singh, E. Sillat, M. Hanna, M. Vancouyghen, N. Gamache, G. Daddio, C. Calise, M. Goeller, M. Sundwall, J. Castro, L. Joseph, A. Ryder, J. Morley, S. Boyer, J. Keeler, E. Papa, A. Merlo, J. Campbell, S. Schindlar, H. Brown, A. Bacik, N. Januario, B. Swajger, O. Surette, P. Gudas, T. Tobin, A. Doran, J. Romero, T. Renzi, M. Lessard, A. Gomez, E. Piel, S. Cardoso, N. Carlino, M. Harmon, G. Isaacson, V. Jones, M. Torres, M. Lasky, N. Debarros, S. Rodriguez, P. Smith	
L2 VIRTUAL EXCHANGES AND LABORATORY EXPERIMENTS IN ENGINEERING EDUCATION: NEW HORIZONS FOR SUSTAINABLE, TRANSVERSAL AND LINGUISTIC DEVELOPMENT O. Polyakova, E. Klyatskina	959
CONNECTIONS BETWEEN READING COMPREHENSION AND SCIENCE FAMILIARITY FOR SCIENCE TEACHERS IN TRAINING E. Ortega Torres, E. Gamero Sandemetrio	965
DESIGNING A CHATBOT TO SUPPORT PROBLEM-SOLVING IN A PROGRAMMING COURSE C. Martinez-Araneda, M. Gutiérrez, D. Maldonado, P. Gómez, A. Segura, C. Vidal-Castro	966
PROJECT-BASED LEARNING FOR THE ANALYSIS AND MANAGEMENT OF RURAL SPACES: PROPOSAL FOR ADAPTATION MEASURES AGAINST CLIMATE CHANGE N. Dávila Cabanillas, I. Aguado Moralejo, J. Aranbarri Erkiaga	976
INNOVATIVE TEACHING FOR CLIMATE CHANGE AND SOCIAL VULNERABILITY: RESTRUCTURING LEARNING IN GEOGRAPHY N. Dávila Cabanillas, I. Aguado Moralejo, J. Aranbarri Erkiaga	983
UNLOCKING SCIENCE FOR ALL: FOSTERING COMMUNITY EMPOWERMENT THROUGH EUROPEAN RESEARCHERS' NIGHT IN RURAL TERRITORIES OF PORTUGAL	991
R. Branquinho, I. Duarte, C. Sarabando, S. Ambrósio, P. Cruz, C. Damião, J. Duarte, X. Sá Pinto YOU'VE GOT MAIL! EMPOWERING STUDENTS TOWARD SUCCESS THROUGH THE USE OF UPLIFTING MESSAGES AND LIVE, VIRTUAL CONNECTIONS - THE MISSING LINK TO STUDENT RETENTION AND SUCCESS? S. Rebeor, C. McMahon, S. Stubbs, M. Rosser-Majors	1001
LEARNING BY DOING AND EXPERIENCING THE WORLD THROUGH OUTDOOR EDUCATION K. Kasowska, M. Kowalski	1002
ACTION RESEARCH: OPTIMIZING IDEATION AND DIGITAL PREPRESS WORKFLOWS WITH AI INTEGRATION A. Bridges, C. Blue	1006
CAPTURING THE PERSONAL AND PEDAGOGICAL EXPERIENCES OF FACULTY DURING EMERGENCY RESPONSE TEACHING (COVID 19) AT A RESEARCH UNIVERSITY IN ABU DHABI D. Dalton	1013
PROMOTING ATTITUDINAL CHANGE AND IMPROVING KNOWLEDGE OF INSECTS THROUGH COOPERATIVE LEARNING AMONG SECONDARY SCHOOL STUDENTS	1014
M. Ferrer Suay, J.J. Asensi, J. Selfa, J. Pérez-Rodríguez, T. Pina INTERCONNECTION BETWEEN THEORY AND PRACTICE FOR PROBLEM SOLVING: ANALYSING THE POINT OF VIEW OF THE STUDENTS E. Segredo-Morales, O. Díaz, E. González	1023
THE PROBLEM-BASED TEACHING METHODOLOGY APPLIED TO THE REFORMULATION OF LABORATORY PRACTICES E. Segredo-Morales, O. Díaz, E. González	1027
ELEARNING MOTIVATION ACROSS UNIVERSITY AND RURAL YOUNG ADULTS IN WINNOVATOR SPACE M. Zapušek, K. Pata, K. Jüristo, V. Devedzić, S. Radenkovic, M. Devedzić, D. Miloševic, M. Blagojevic, S. Popovic-Pantic	1031
THE EFFECTIVENESS OF CRITIQUES AS WRITING TOOLS IN A GRAPHIC COMMUNICATIONS CLASSROOM A. Bridges	1038
DIGITAL TRANSITION AND HOME EDUCATION: CHALLENGES AND OPPORTUNITIES FOR PSYCHOLOGICAL INTERVENTION F. Olineira, G. Castanheira, R. Fidaloo de Olineira, I. Cunha, C. Costa, John	1044

EXPLORING THE ELECTRONIC INTERACTIONAL COMPETENCE THROUGH CONVERSATION ANALYSIS: A CASE STUDY OF TWO PHILIPPINE K-12 SYNCHRONOUS ONLINE CLASSES N. Lyu	1053
EDUCATION FOR SUSTAINABILITY: NURTURING GLOBAL COMPETENCY AND CHANGEMAKERS THROUGH INTERDISCIPLINARY LEARNING P. Holanchock, S. Davis	1060
RIC: A CHATGPT-BASED MODEL TO DEVELOP STUDENTS' CRITICAL THINKING SKILLS N. Rizk	1065
DEVELOPING AN INNOVATIVE FRAMEWORK TO EXPLORE THE RELATIONSHIP BETWEEN IN-TEXT CITATIONS AND ACADEMIC WRITING SKILLS AMONG OMANI UNIVERSITY UNDERGRADUATES J. Issa, F. Al-Dhahli	1071
ENHANCING STUDENT ENGAGEMENT AND LEARNING OUTCOMES THROUGH RESEARCH-BASED LEARNING STRATEGIES IN BIOCHEMISTRY AND MOLECULAR BIOLOGY C. Martín, R. Montes, K.B. Uribe	1079
CONTINUOUS VERSUS DISCONTINUOUS TEXTS: PROCESSING DIFFERENCES IN UNIVERSITY STUDENTS A. Rubio-Peñarrubia, A.C. Llorens-Tatay	1085
A GAME BASED PHYSICAL EXERCISE LEARNING SUPPORT SYSTEM FOR HEALTHCARE OF THE ELDERLY N. Uchiyama, Y. Yamahira, N. Iwane, S. Kitano, M. Yamaguchi	1086
BURNOUT AND WELL-BEING OF PARENTS OF CHILDREN WITH AND WITHOUT NEURODEVELOPMENTAL DISABILITIES E. Hassanein	1092
FOSTERING CRITICAL THINKING IN VOCATIONAL EDUCATION AND TRAINING B. Vignjević Korotaj, I. Buchberger	1093
PLURICENTRIC APPROACH IN LEARNING GERMAN IN A SCHOOL ENVIRONMENT IN SLOVAKIA E. Stranovská, I. Haringa	1094
ADVANCING THE DISCOURSE ON SERVANT LEADERSHIP IN SCHOOLS: AN EXPLORATION OF INTERPRETATIONS C.B. Swart	1102
THE IMPACT OF GAMIFICATION AND ONLINE QUIZZES ON PRE-CLASS PREPARATION FOR AN ENGINEERING DESIGN COURSE. AN ACTIVE LEARNING APPROACH A.Z. Salem	1112
A RIGOROUS ASSESSMENT OF A PROPOSED CONCEPTUAL FRAMEWORK FOR FACILITATING SCHOOL LEADERSHIP IN ESTABLISHING A POSITIVE TEACHING AND LEARNING ENVIRONMENT IN SOUTH AFRICAN SCHOOLS C.B. Swart	1117
SERVICE LEARNING AND INTERDISCIPLINARY TEAMWORK FOR MEDICAL STUDENTS M. Alonso-Chamorro, M.P. Rodríguez Gabriel	1127
BIM EDUCATION FOR QATAR'S CONSTRUCTION INDUSTRY: A LIFECYCLE VISION A. Hammi, D. Ouahrani, A. Bouras, K. Naji	1135
STUDY OF THE HABITS OF EQUALITY, INCLUSION AND SUSTAINABILITY IN THE UNIVERSITY COMMUNITY M.J. Alférez, A. Molinero García, B. Clares Naveros, A. Conejo García, O. Cruz López, E. García Fernández, R.J. Giménez Martínez, M.C. González García, J.A. González Vera, A.I. Del Moral García, C. Monteagudo Sánchez, R. Navarrete Casas, F. Ocaña Peinado, J.M. Paredes Martínez, M. Romero Pérez, B. Rubio Ruiz, M.J. Ruedas Rama, M. Sánchez Polo, E.M. Talavera Rodríguez, J. Valverde Pozo, R. Castilla Ríos, C.F. García Jiménez, A. Lozano Ortega, A. Martínez Avilés, A. González Muñoz, L. González Robles, J. Sepúlveda Villodres, F. González Muñoz.	1144

INNOVATIVE STRATEGIES: A CASE STUDY ON EMPLOYMENT TRAINING AT THE UNIVERSITY OF GRANADA	1149
M.J. Alférez, A. Lozano Ortega, B. Clares Naveros, A. Conejo García, O. Cruz López, E. García Fernández, R.J. Giménez Martínez, M.C. González García, J.A. González Vera, A. Molinero García, A.I. Del Moral García, C. Monteagudo Sánchez, R. Navarrete Casas, F. Ocaña Peinado, J.M. Paredes Martínez, M. Romero Pérez, B. Rubio Ruiz, M.J. Ruedas Rama, M. Sánchez Polo, E.M. Talavera Rodríguez, J. Valverde Pozo, R. Castilla Ríos, C.F. García Jiménez, A. Martínez Avilés, A. González Muñoz, L. González Robles, J. Sepúlveda Villodres, E. González Muñoz	
COMPUTATIONAL TOOLS FOR DEALING WITH ENERGY SYSTEMS. A NECESSARY DIDACTIC APPROACH L. García-Pérez, M. Santos	1157
DIVERSE PERSPECTIVES IN STEM EDUCATION M. Day	1162
BUILDING SCHEDULES TO SUPPORT COMPLETION: ENGAGING STUDENTS IN GUIDED PATHWAYS M. Perry	1163
EDUCATOR PERSPECTIVES OF PROFESSIONAL COMMUNICATION IN PRIMARY SCHOOL ENVIRONMENTS N. Maras, B. Nemet, D. Tot	1164
ENHANCING DIGITAL DESIGN: INVESTIGATING PROMISING PEDAGOGICAL PRACTICES FOR ONLINE LEARNING IN HIGHER EDUCATION L. Morrison, R. Kay	1174
EMPOWERING NONTRADITIONAL STUDENTS IN TARRANT COUNTY COLLEGE: STUDENT ENGAGEMENT STRATEGIES TO FACILITATE STUDENT COMPLETION AND TRANSFERRING A. Garza	1175
MATHEMATICS COMPETITION BY TEAMS (COMATEQ): AN OPPORTUNITY TO COMPETE INTERNATIONALLY L. Cáceres, O. Colón	1176
GRAPHIC DESIGN STUDENTS DESIGN, DEVELOP AND DELIVER FOR CLIENTS L. Frear, C. Fillip, K. Dirisio	1177
THE CONCEPT OF MULTICULTURALISM - THE ROLE OF LIBRARIES AND THE IMPORTANCE OF FOREIGN LANGUAGE LEARNING D. Pavlovic, Z. Stanisavljevic Petrovic	1178
RESEARCH SKILLS DEVELOPMENT OF POSTGRADUATE PSYCHOLOGY STUDENTS: THE INTEGRATION OF LEARNING, TEACHING, RESEARCH, AND COMMUNITY ENGAGEMENT T.A. Adonis, M. Florence, S. Isaacs, K. Jackson	1186
EMERGING TRENDS IN HIGHER EDUCATION IN PORTUGAL M. Varela, A. Infante Moro	1193
SPIRAL TEACHING METHODOLOGY IN MATHEMATICS COMPETITIONS L. Cáceres, V. Reyes	1201
EDUCATIONAL TRANSFORMATION THROUGH AI: PREPARING FOR A NEW ERA OF LEARNING G. Zootzky, A. Pfeiffer	1202
LEVERAGING ARTIFICIAL INTELLIGENCE FOR ENHANCING READING SPEED, VOCABULARY, AND COMPREHENSION: AN INTEGRATED APPROACH I. Kondrateva, A. Makhmutova, A. Zinnatullina	1208
GATHER 'ROUND FOR I HAVE A STORY: ENGAGING STUDENTS IN A COMMON READER PROGRAM C. Savant	1218
VIRTUAL CLASSROOMS: THE CHANGE OF ONLINE EDUCATION D. Garcia	1219
DICTATION PRACTICE ENHANCED BY ARTIFICIAL INTELLIGENCE: A MODERN APPROACH TO LANGUAGE LEARNING A. Makhmutova, I. Kondrateva, A. Zinnatullina	1225
A HYBRID APPROACH TO ENGINEERING EDUCATION: INTEGRATING ONLINE AND IN-PERSON LEARNING M. Tomoviic, C. Tomoviic, S. Bazuah	1233

VET TEACHERS: FACING THE CHANGES IMPLEMENTED IN VET EDUCATION IN SPAIN	1240
L. Gómez Estrada, L. Gómez Estrada, C. Zoli, S. Randaccio, L. Pietra, R. Sixto Iglesias, R. Navarro Cerveró, J.S. Nunes, P. Karampelas, J.B. Tormos Capilla, L. Miltiadis, J.L. Gómez Ribelles	
GRADUATE TRACE STUDIES (GTS) IN ARCHITECTURAL AND PLANNING FACULTY, KAU: INVESTIGATING THE EXTENT OF SKILLS MATCHING BETWEEN THE PROGRAM OF URP AND NEEDED SKILLS FOR THE LABOR MARKET W. Salem	1248
LEARNING BY INNOVATING AND PLAYING IN DIFFERENT AREAS M.I. Rodríguez, M.J. Álvarez, M. Cuadros, S. García-Rodríguez, V. Ayllon, V. Sánchez, L.J. Martínez, P. Sánchez, C. Torres	1258
RURAL STUDENTS' EMPOWERMENT: FOSTERING SCIENTIFIC CURIOSITY THROUGH MICROBIOLOGY R. Branquinho, C. Sarabando, L. Queijo, C. Damião, J. Duarte	1262
A MOTIVATIONAL LEARNING BY DOING ERASMUS+ INTERNSHIP: BUILDING A WIND TURBINE S. Esteban San Román, M. Santos Peñas	1275
AN EXPLORATORY ASSESSMENT OF THE USABILITY AND POTENTIAL OF GENERATIVE PRETRAINED TRANSFORMERS (GPTS) AS FEEDBACK ASSISTANTS FOR LONG-FORMAT ACADEMIC WRITING TASKS J. Lievens	1280
IMPLEMENTATION OF APPLIED RESEARCH PROJECTS IN STUDENTS OF THE BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT AS INNOVATIVE METHODOLOGIES WITHIN PROJECT-BASED LEARNING J. Ivorra-Martínez, D. García-Sanoguera, O. Fenollar, N. Montanes, R. Balart, L. Quiles-Carrillo	1287
USE OF FORMAL COOPERATIVE LEARNING IN THE SUBJECT OF POLYMERIC MATERIALS ENGINEERING V. Moreno-Garcia, J. Gomez-Caturla, T. Boronat, L. Quiles-Carrillo, L. Sanchez-Nacher, D. Garcia-Garcia	1293
RESILIENCE AND EMOTIONAL INTELLIGENCE IN UNIVERSITY EDUCATION STUDENTS A. Izquierdo, N. Perez-Soto, T. Pozo-Rico, R. Gilar-Corbi	1298
FINOPTIMISE: A COMPREHENSIVE USER EXPERIENCE METHODOLOGY FOR ASSESSING A STOCK TRADING SIMULATION C. Power, D. Kneeshaw, R. Kelly, W. Kavanagh, J. Corcoran, B. Byrne, A. Curley, D. Gordon, P. Kelly	1304
USE OF NEW TECHNOLOGIES IN THE CLASSROOM TO REFLECT ON SUSTAINABILITY IN PERSONAL MOBILITY I. Villalba Sanchis, M.R. Arroyo López, V.G. Lo Iacono Ferreira	1312
THE BL-5D MODEL: THE DEVELOPMENT OF A MODEL OF INSTRUCTIONAL DESIGN FOR BLENDED LEARNING ACTIVITIES D. Gordon, P. Doyle, A. Becevel, J. Vilafranca Molero, C. Gascon, A. Vitiello, T. Baloh	1318
ADVANCING E-TUTOR TANDEMS: QUALITATIVE INSIGHTS AND A MATRIX FOR COLLABORATIVE PRACTICE L.M. Langesee, N. Ukhova, M. Altmann	1327
JOURNALISM AS AN ARTICULATOR OF KNOWLEDGE. A PROPOSAL OF CURRICULAR DESIGN IN THE PROFESSIONAL TRAINING OF COMMUNICATORS C. García-Hernández	1338
POETRY AND LITERATURE AS TEACHING STRATEGIES IN SCHOOL BULLYING PREVENTION T.G. Fernández Guayana	1346
USE OF THE IMPLICIT ASSOCIATION TEST IN QUALITATIVE RESEARCH FOCUSED ON INVESTIGATING UNCONSCIOUS CONTENT IN MOTIVATION TO LEARN ENGLISH AS A FOREIGN LANGUAGE W. de Lima, M.R. Bambirra	1355
FOSTERING RESILIENCE AND UNITY: NURTURING A SENSE OF BELONGING IN THE FACE OF UNCERTAINTY L. Benedetti	1364
THE POTENTIAL OF BLENDED ESP ASSIGNMENTS IN THE AGE OF AI-GENERATED STUDENTS' LANGUAGE PRODUCTION P. Brebera, Z. Bezdickova	1365
STEM TRAINING FOR PRIMARY SCHOOL TEACHERS WITH REMOTE LABS M. Haack, D.M. Jozefiak	1371

REAL OR VIRTUAL? ENSURING AUTONOMOUS LEARNING IN BLENDED HIGHER EDUCATION CLASSROOMS L. Zizka, G. Probst, N. Sarrasin	1379
USE OF PROTONATION CONSTANTS TO FACILITATE MATHEMATICAL TREATMENT IN ACID-BASE EQUILIBRIUM M.J. Ruiz-Ángel, S. Carda-Broch, J. Peris-Vicente	1386
STRATEGIES FOR THE ACADEMIC PERFORMANCE IMPROVEMENT OF THE STUDENTS IN THE ADVANCED CHEMISTRY SUBJECT (CHEMICAL ENGINEERING DEGREE)	1391
S. Carda-Broch, J. Peris-Vicente, M.J. Ruiz-Ángel, R. Castillo-Solsona USABILITY OF A SIMULATION-BASED TEACHING TASK: EVALUATION THROUGH EYE TRACKING P. Tekeli, Ş. Çağlar Özhan, A. Altun	1396
TRANSFORMATIVE APPROACH FOR ENHANCING EXPERIMENTAL LEARNING IN THE DESIGN OF IRRIGATION SYSTEMS A. Román, F. Sanfelix, P. Martí	1405
REIMAGINING SCIENCE EDUCATION: STUDENT PERCEPTIONS AND THE POTENTIAL OF THE GAMIFIED DIGITAL BOOK F. Sanfelix, A. Román, P. Martí	1411
SELF-ANALYSIS WORKSHOPS IN MANTEIGAS (PORTUGAL) USING THE RECIPROCAL MAIEUTIC APPROACH UNDER THE PROJECT OUR DIGITAL VILLAGE: CO-DESIGNED DIGITAL EDUCATION IN RURAL AREAS A. Ribeiro	1420
DUCK GRIPPER: A MODULAR PARALLEL JAW GRIPPER FOR EDUCATION AND RESEARCH G. Espinoza, N. Fernandez, R. Barber	1430
REDEFINING GAMIFICATION IN EDUCATIONAL CONTEXTS: INTEGRATING DATA ASSESSMENT AND EVALUATION INTO PLAYFUL LEARNING ENVIRONMENTS A. Pfeiffer, T. Wernbacher, S. Bezzina, A. Dingli	1438
DEVELOPING A CURRICULUM FOR TEACHING ARTIFICIAL INTELLIGENCE LITERACY TO EDUCATORS S. Schallert-Vallaster, K. Papageorgiou, J. Buchner	1444
LEAF: RESULTS AND IMPACT ASSESSMENT OF THE THREE-YEAR EUROPEAN RESEARCHERS NIGHT PROJECT FOCUSED ON GREEN DEAL TOPICS E. Diociaiuti, G. Burzachechi, D. Chiti, A. Della Ceca, G. Ciocca, R. Donghia, V. Guglielmotti, M. Martini, S. Pierangeli	1449
UNVEILING THE IMPACT OF AI CHATBOTS ON HIGHER EDUCATION: INSIGHTS FROM STUDENTS C. Bjelland, K. Ludvigsen, A. Møgelvang	1458
CROATIAN-ITALIAN LANGUAGE CONTACTS AND INTERCULTURAL EDUCATION OF CHILDREN IN CROATIA D. Drandić, L. Lazarić, E. Šegon	1466
TRANSFORMING POSTGRADUATE CYBERSECURITY EDUCATION: A CYBERSECURITY BODY OF KNOWLEDGE CASE STUDY A. Wilde, B. Sanders	1474
STUDENTS' PERCEPTION OF AI GENERATED EXAM QUESTIONS V. Juričić, M. Obrvan	1480
DOES ONLINE TEACHING/LEARNING PROMOTE INCLUSIVITY? U. Jahn	1488
ENHANCING ENGLISH LANGUAGE SKILLS THROUGH MOTIVATION: A CASE STUDY USING THE WANDER APP FOR VIRTUAL DIRECTION-GIVING TASKS Y. Satake	1493
BENEFITS OF USING THE LBD MODEL IN MASTER'S LEVEL DIGITAL ACCESSIBILITY COURSES J. Lahti, R. Beenen	1503
CYBERSECURITY AWARENESS AMONG YOUNG LEARNERS – A CASE STUDY G. Kozieł, M. Dziuba-Kozieł, E. Łukasik	1508
THE IMPACT OF USER EDUCATION AND EXPERIENCE ON ACCESS PROTECTION WHEN USING NETWORK SERVICES M. Dziuba-Kozieł, G. Kozieł, M. Pańczyk	1514

FROM IVORY TOWERS TO RURAL POWERS: HIGHER EDUCATION INSTITUTIONS AS KNOWLEDGE PARTNERS IN DIGITAL TRANSFORMATION P. Weber, A. Wyczisk, M. Patalon, I. Borowicz	1521
WORK BASED LEARNING: THE ROLE OF NOVEL ASSESSMENT IN PERSONALISED STUDENT LEARNING EXPERIENCES FROM A HIGHER EDUCATION PERSPECTIVE J. Gilchrist	1531
DEFYING ZOOM FATIGUE – HOW TO BOOST THE EFFECTIVENESS AND SUSTAINABILITY OF ONLINE COMMUNICATION F. Kempf, M. Krauss, M. Aßfalg	1538
TRANSFORMING LEARNING: HOW EMOTIONS AND TECHNOLOGY COULD ENHANCE STUDENT SUCCESS M.L. Mocé, M.D. Soler Sanchís, C. Garcés Narro, E. García-Roselló	1546
A CONCISE VIEW OF CURRICULUM DESIGN AND LEARNING OUTCOMES: VIRTUAL REALITY TECHNIQUE IN SAUDI ARABIA A. Alraddadi, S. Alghamdi	1551
DIGITAL EDUCATIONAL CONTENT - THE CONCEPT OF HISTORY INTERACTIVE VIDEO LESSONS M. Glučina, T. Pleić	1556
EDUCATIONAL REVOLUTION IN THE METAVERSE: TEC VIRTUAL CAMPUS'S FIRST FULL-CLASS IMPLEMENTATION A. Juárez	1562
OPTIMIZING LEARNING ENVIRONMENTS: A MICROCLIMATE STUDY OF A SCHOOL CAMPUS IN SINGAPORE USING AN INTEGRATED ENVIRONMENT MODELLER SIMULATION TOOL (IEMSIM) I.J.E. Lim, A.L.Y. Low, K.Y.T. Lim	1569
FROM A PICTUREBOOK TO A READING CULTURE OF EARLY-AGED CHILDREN M. Verdonik, V. Katić	1578
STUDENT READINESS FOR CO-CREATION: ENHANCING ACTIVE LEARNING FOR STUDENT-STAFF PARTNERSHIP IN HIGHER EDUCATION A. Ko, S. Sabapathy, W.W.L. Chiu	1587
STUDENT SATISFACTION DURING TEMPORARY COLLEGE RELOCATION – THE CASE OF THE FACULTY OF MECHANICAL ENGINEERING AND NAVAL ARCHITECTURE IN ZAGREB I. Čavar, N. Dubreta, F. Miškić	1592
THE PROMOTION OF DIGITAL HEALTH LITERACY IN GERMANY: CENTRAL LINES OF DEVELOPMENT AND KEY SUCCESS FACTORS AS A RESULT OF A DELPHI PRESTUDY J. Ullbrich	1602
INTEGRATING CHATGPT IN FOREIGN LANGUAGE EDUCATION Z. Vasiljevic	1607
INTERNATIONAL INTERNSHIPS FOR NON-MEDICAL STUDENTS AS A TOOL TO ENHANCE CULTURALLY SENSITIVE PATIENT CARE A. Lochmannová	1612
FACE-TO-FACE VS REMOTE LEARNING S. Alles, P. Ranasinghe Mudiyanselage	1613
VIRTUAL SICKNESS AS A LIMITATION OF EDUCATION AND TRAINING IN VIRTUAL REALITY: USERS' PERCEPTIONS A. Lochmannová, M. Dvořák, M. Bakeš, B. Kopová, J. Jeníkovský	1621
AI EDUCAMP: A CREATIVE APPROACH TO ENVISIONING THE FUTURE OF AI-BASED HIGHER EDUCATION D. Casiraghi, S. Sancassani	1629
NATIONAL SCIENCE FOUNDATION – EXPERIENTIAL LEARNING FOR EMERGING AND NOVEL TECHNOLOGIES (EXLENT): A RESPONSE TO EMTECH WORKFORCE SHORTAGES C. Tomovic, M. Tomovic, M. Yang, S. Bawab	1639
GENDER AND AGE AS FACTORS AFFECTING THE DIGITAL SKILLS OF PRIMARY SCHOOL PRINCIPALS G. Kalogeratos, K. Lourida, E. Anastasopoulou, D. Tsogka, C. Pierrakeas	1643
INFORMATION SYSTEMS USAGE IN THE GREEK PRIMARY SCHOOL. THE CASE OF THE PREFECTURE OF ACHAIA G. Kaloveratos, K. Lourida, E. Anastasopoulou, D. Tsooka, C. Pierrakeas	1652

THE IMPACT OF COIL COLLABORATIONS WITHIN THE CONSTRUCTION OF INVESTMENT PORTFOLIOS A. Uribe Rocha	1658
RETOOLING DIALOGIC PEDAGOGY AS A UNIVERSAL LANGUAGE FOR EQUITABLE AND INCLUSIVE TRANSFORMATIVE TEACHING AND LEARNING C. Fort	1663
ADAPTING WRITING PROMPTS AND CORRECTING RUBRICS: AVOIDING AI GENERATED STUDENT WRITING ASSIGNMENTS H. McCune Bruhn	1664
EXPLORING AI'S ROLE IN BILINGUAL BIBLE EDUCATION: OVERCOMING LANGUAGE BARRIERS – A CASE STUDY OF SIXTH GRADE BIBLE STORY READING AT SANKUANG ELEMENTARY SCHOOL IN NEW TAIPEI CITY P.J. Wang	1671
IMPLEMENTING READING STRATEGY INSTRUCTION IN TEACHING UNIVERSITY STUDENTS A FOREIGN LANGUAGE E. Shmidt, M. Bolina, K. Bolshakova, E. Chelpanova, L. Naumenko	1681
PROGRAMMING TEACHING IN A VIRTUAL ENVIRONMENT USING THE ROS INTERFACE C. Lecon, S. Soeser, A. Stegmaier	1686
PROBLEMATIZATION IN TEACHING FOREIGN LANGUAGE SPEAKING E. Chelpanova, M. Bolina, K. Bolshakova, L. Naumenko, E. Shmidt	1695
EXPLORING PERCEPTIONS IN THE MATH TEACHER-STUDENT RELATIONSHIP THROUGH GAMIFICATION S. Rizzo, A. Cavallaro	1702
EXPLORING THE POTENTIAL AFFORDANCES OF AUGMENTED REALITY (AR) GAME-BASED LEARNING IN CAMPUS HERITAGE PRESERVATION Q. Ying, P.B.A. Vu, K.Y.T. Lim	1707
FACING CONTEMPORARY CHALLENGES: ABOUT THE UNCONSCIOUS RESOURCE THAT CAN BE USED IN EDUCATION - TACIT KNOWLEDGE M. Bielecki	1715
PERSPECTIVES ON THE PROGRESS OF NURSING EDUCATION: INSIGHTS FROM ESTONIAN NURSES U. Körgemaa, J. Sepp, K. Puusepp	1716
HOW IS AI BEING APPLIED IN HIGHER EDUCATION? EXAMINING THE STATE-OF- THE-ART J.M. Aguado-García, S. Alonso-Muñoz, R. González-Sánchez, C. De-Pablos-Heredero	1721
THE ROLE OF THE UNIVERSITY IN SUSTAINABLE DEVELOPMENT GOALS (SDGS) ACHIEVEMENT. J.M. Aguado-García, R. González-Sánchez, S. Alonso-Muñoz	1729
EDUCATIONAL EMPOWERMENT FOR SUSTAINABLE PRACTICES: ENHANCING FOOD SECTOR PERSONNEL THROUGH ADVANCED WASTE MANAGEMENT PROFICIENCY G. Grinberga-Zalite, A. Zvirbule	1730
DEVELOPING A COURSE IN ACADEMIC COMMUNICATION FOR MASTER'S STUDENTS: CASE STUDY A. Astanina, V. Kareva, N. Sazonova, S. Ivanova	1736
THE POTENTIAL OF DIGITAL LEARNING PLATFORMS IN TRAINING FUTURE TEACHERS TO IMPLEMENT ADAPTIVE TEACHING N. Valiakhmetova, R. Akhmadullina, I. Yarmakeev, E. Gimadieva, Y. Hismatullina	1744
DESIGN AND INFORMATION COMPETENCE FORMATION OF FUTURE TEACHERS BASED ON DIGITAL STORYTELLING R. Akhmadullina, N. Valiakhmetova, I. Yarmakeev, E. Gimadieva, Y. Hismatullina	1752
A COMPARATIVE STUDY OF FUNCTIONALITY OF AVAILABLE VIDEO- CONFERENCING PLATFORMS FOR TEACHING ENGLISH N. Sazonova, S. Ivanova, V. Kareva, A. Astanina	1759
PRESCHOOL TEACHERS' EXPERIENCES IN TEACHING/LEARNING IN THE WORKPLACE (THE CONTEXT OF LITHUANIA) J. Smilgienė, E. Masiliauskienė	1764
SUMMER SCHOOL: USING MATHEMATICS FOR SUSTAINABLE DEVELOPMENT E. Safiulina, O. Panova, A. Vintere	1772

IDENTIFICATION OF MOTIVATING AND DEMOTIVATING FACTORS IN TEACHERS' WORK AS A GUARANTEE OF THE SUCCESS OF THE LEADERSHIP ACTIVITIES OF THE HEAD OF THE EDUCATIONAL INSTITUTION J. Smilgienė, E. Masiliauskienė	1781
EDUCATIONAL INNOVATIONS: A CASE STUDY ON THE PRACTICAL IMPLEMENTATION OF STEAM IN FORMAL EDUCATION AT PRIMARY AND PRESCHOOL LEVELS M. Abramishvili, M. Apakidze	1788
TOWARDS THE DESIGN AND EVALUATION OF CLICKBAIT EDUCATION CONTENT: LEVERAGING USER MENTAL MODELS AND LEARNING SCIENCE PRINCIPLES A. Shrestha, A. Flood, B. Hackler, A. Behfar, M.N. Al-Ameen	1794
TEACHING PRACTICES WITH DIGITAL AFTER TRAINING WORKSHOPS: THE IMPACT ON SCHOOLS IN THE SAME GEOGRAPHICAL AREA M.L. Neves, J. Silveira, A. Amaro	1805
THE CONTRIBUTION OF THE ORCHESTRA IN THE CONSTRUCTION OF AN AUTHENTIC SCHOOL M.L. Neves, M. Ângelo Gomes Fialho, A. Amaro	1814
THE RELATIONSHIP BETWEEN THE PERSONAL EXPERIENCES OF FUTURE CHILDHOOD PEDAGOGUES AND THEIR PREPARATION FOR CHILDREN'S CITIZENSHIP EDUCATION AT SCHOOL S. Kovienė, N. Bražienė	1827
CONTEMPORARY PARENTS' CULTURAL TRANSFORMATION IN TERMS OF CHILDREN'S EDUCATION S. Kovienė, N. Bražienė	1834
PERCEPTION AND USAGE OF CHAT GPT IN THE EDUCATION SYSTEM K. Aleksić-Maslać, F. Borović, Z. Biočina	1842
INCORPORATING POST-QUANTUM CRYPTOGRAPHY (PQC) INTO COMPUTER SCIENCE AND INFORMATION SYSTEMS EDUCATION T.A. Yang, A. Yang	1849
INNOVATING MIDDLE EAR ANATOMY LEARNING: THE IMPACT OF A NEW VIRTUAL REALITY SCENARIO – A PILOT STUDY J. Plane, N. Sepúlveda, M. Acosta, V. Rayo, D. Morales, C. Meza, M. Rojas	1854
INTRODUCTION OF A REAL-TIME COMMUNICATION TOOL FOR ONLINE ENGINEERING EXPERIMENTS K. Sugimoto, Y. Teshima, A. Sakaguchi	1862
STUDENT PREFERENCES IN LABORATORY LEARNING MODALITIES: FACE-TO-FACE VS. REMOTE INSTRUCTION IN PHYSIOLOGY AND PHYSIOPATHOLOGY EDUCATION J. Olloquequi, R. Martin-Venegas, T. Cambras, M.C. Moran, M.P. Vinardell, R. Ferrer, J. Del Valle, M.E. Juan, M.J. Rodríguez-Lagunas, M. Riba, C. Casanova, A. García-Vara, C. Pelegrí, A.S. Maddaleno, M.L. Miro, A. Pérez-Bosque, M. Mitjans	1871
INTERMEDIATE PHASE TEACHERS' MOTIVATION AND JOB SATISFACTION AMID THE COVID-19 PANDEMIC S. Sibanda, A. Rambuda	1873
OPPORTUNITIES FOR PUBLIC RELATIONS SPECIALISTS TO ENHANCE THEIR KNOWLEDGE IN MANAGING NEGATIVE UGC T. Limba, E. Juozėnaitė	1874
STRATEGIES FOR ADDRESSING CHALLENGES FOUNDATION PHASE TEACHERS EXPERIENCE WHEN IMPLEMENTING INCLUSIVE EDUCATION IN SOUTH AFRICA Y. Qhala, A. Rambuda, P. Serero	1884
STUDENTS DEVELOPING RESEARCH: LIFE-CYCLE ASSESSMENT IN THE PIG SECTOR F. Sánchez, G. Cervantes	1885
REFRAMING MYOPIA IN TEACHING REFUGEE AND IMMIGRANT STUDENTS L. Kajee	1891
RESILIENCE IN TROUBLING TIMES: REFUGEE YOUTH VULNERABILITIES L. Kajee	1892
UNDERSTANDING ENTREPRENEURIAL BEHAVIOUR AMONG INDUSTRIAL TECHNOLOGY ENGINEERING STUDENTS IN BILBAO I Ridaguren D. Boullosa-Falces I. Albaina II Izquierdo G. A. Esteban A. Sarrionandia-Ibarra	1893

THE USE OF FLIPPED CLASSROOMS METHODOLOGY IN DEGREE OF MARINE ENGINEERING TO INCREASE STUDENT MOTIVATION D. Boullosa-Falces, I. Bidaguren, E. Urtaran-Lavin, A. Peña, E. Madrazo, J.M. Blanco, A. Gamarra	1901
PEER-COACHING WITH GENERATIVE AI: AN EXPERIMENT M. Leiss	1909
THE EVOLUTION OF AN INDIGENOUS LANGUAGE LEARNING SPACE IN THE IRISH GAELTACHT C. Dawson	1915
EMPOWERING PROFESSIONAL SKILLS: A MOBILE LEARNING CONCEPT IN SOFTWARE ENGINEERING EDUCATION S. Schefer-Wenzl, I. Miladinovic	1916
UNIVERSITY-INDUSTRY COLLABORATIONS IN DOCTORAL EDUCATION PROGRAMMES: A GLIMPSE OF THE PORTUGUESE CONTEXT S. Santos, S. Diogo, M.J. Rosa	1917
ADJUSTMENTS FOR STUDENTS WITH DISABILITIES IN TERTIARY EDUCATION V. Vidaček-Hainš, K. Kokot, M. Klačmer Čalopa	1927
HEI STAKEHOLDER ENGAGEMENT: WHAT IS THE IMPACT OF PROXIMITY? R. Vancelee, R. Kelly	1934
ELIMINATING THE BARRIERS TO CREATING AND SHARING 3D INTERACTIVE MEDIA FOR ENHANCED LEARNING MATERIALS M. Hennelly, A. Kelly, V. Hargaden, K. Nolan	1935
ECOSYSTEM LEARNING: AN INTEGRATED LEARNING THEORY? H.K. Simonsen	1946
DESIGN MEETS IMPLEMENTATION: A CHATBOT PROJECT FOR FIRST-YEAR STUDENTS IN STEM PROGRAMS G. Socher, T. Weisser	1954
A DECADE OF SUCCESSFUL UNIVERSITY-INDUSTRY COOPERATION: A TRIPLE WIN SITUATION R. Groß, C. Cartwright, K. Freudenthaler, T. Ulrich	1960
TEACHING ENTREPRENEURSHIP AND INNOVATION THROUGH A UNIVERSITY INCUBATOR A. Zvirbule, A. Auzina, G. Grinberga-Zalite	1970
THEORETICAL-METHODOLOGICAL PRECONDITIONS AT THE BASE OF MIXED MODE LABORATORY TEACHING R. Vegliante, A. Marzano, S. Miranda	1976
AN EVALUATION OF A COMMUNITY OF PRACTICE AND ITS EFFECTIVENESS IN BUILDING LECTURER CONFIDENCE IN AN ONLINE TEACHING ENVIRONMENT D. Doran	1982
CHATGPT AS A TOOL TO FOSTER CRITICAL THINKING IN A HUMAN PHYSIOLOGY COURSE FOR STUDENTS OF THE DEGREE OF HUMAN NUTRITION AND DIETETICS M.E. Juan, M.P. Vinardell	1991
FROM NEEDS ANALYSIS TO FORMATIVE DESIGN FOR PRIMARY SCHOOL TEACHERS R. Vegliante, S. Miranda, A. Marzano	1999
LEARNING AND QUALITY ASSURANCE IN THE SAME PACKAGE L. Aggestam, I. Elison	2006
CHATGPT IN EDUCATION – AN EDUCATOR-DRIVEN UNDERSTANDING OF PROMISE AND THE PATH FORWARD D. Amiel, C. Blitz	2012
UNDERSTANDING THE INFLUENCE OF INTERCULTURAL COMMUNICATION IN CONSTRUCTION MANAGEMENT CURRICULUM AND PRACTICE A. Bhattacharya, V. Kretzschmar	2013
EDUCATIONAL RESOURCES FOR PHYSICS 101 INSTRUCTION WITHIN HEALTH SCIENCES DEGREES	2021
V. Gonzalez-Fernandez, A. Gonzalez-Cano, J. Alda Serrano, M.E. Piedrahita Alonso, S. Fernández Núñez, N. Díaz Herrera, M.C. Navarrete Fernández, L. Ares Santos, A. Orenes Plankova	
PLANET EARTH, SUSTAINABILITY AND CLIMATE CHANGE FROM ITALIAN ELEMENTARY SCHOOL DRAWINGS G. D'Addezio, N. Besker	2029

EXPLORING DIGITAL EPISTEMOLOGY WITHIN CONSTRUCTIONIST LEARNING IN THE AGE OF ARTIFICIAL INTELLIGENCE M. Marom, I. Levin	2037
DEVELOPING DIGITAL TEACHING MATERIALS SUITABLE FOR BOTH FACE-TO- FACE AND DISTANCE TEACHING IN THE PANDEMIC ERA C.C. Yang	2041
ON THE USE OF EDUCATIONAL SIMULATORS FOR ROCKET PROPULSION IN AEROSPACE ENGINEERING UNDERGRADUATE COURSES J. Gomez-Soriano, M. Carreres, J. García-Tíscar, P.M. Quintero-Igeño	2048
SECOND LANGUAGE ACQUISITION THROUGH INTERPERSONAL COMMUNICATION WITH ARTIFICIAL INTELLIGENCE A. Nessel, G. Kamilar, K. Gaugler, C. Matheus	2054
DIGITAL READING AS THE RESULT OF CHANGING READING PRACTICES: POSSIBLE DIFFICULTIES AND IMPLICATIONS A. Gilmanova, L. Yuzmukhametova, T. Marsheva, I. Gimaeva, G. Zakirova	2062
ENHANCING STAFF WEEK ORGANISATION THROUGH SERVICE ACTION RESEARCH O. Polyakova	2067
NAVIGATING THE ARTIFICIAL INTELLIGENCE FRONTIER IN HEALTHCARE ENTREPRENEURSHIP EDUCATION: INTEGRATION, IMPACTS, AND CONSIDERATIONS J. Sepp, U. Körgemaa, K. Puusepp	2072
COMPUTER GAMES AS MOTIVATION FOR LEARNING ENGLISH T. Marsheva, A. Gilmanova, G. Zakirova, L. Yuzmukhametova, I. Gimaeva	2080
FOSTERING STRATEGIC INNOVATION AND COLLABORATION THROUGH GAMIFICATION: A CASE STUDY BASED ON LEGO SERIOUS PLAY IN AN MBA MASTER'S PROGRAM J.V. Tomás-Miquel, J. Capó-Vicedo, J. Capó-I-Vicedo	2085
USE OF AN INDIVIDUAL CONTRIBUTIONS DESIGN AS AN INNOVATIVE PEDAGOGICAL METHOD FOR MEASURING COLLABORATIVE LEARNING UPON COMPLETION OF A GROUP PROJECT R. Branch, H. Lee	2094
SOFT SKILLS DEVELOPED IN BUSINESS SIMULATION MODELS FOR ACCOUNTING - STUDENTS' PERCEPTION S. Bastos, H. Costa Oliveira, T. Barros, M. de Sá	2095
PROMOTING ENVIRONMENTAL AWARENESS: A STUDY ON THE IMPACT OF ADOPTING DESIGN THINKING APPROACHES THROUGH THE DEVELOPMENT OF MULTIMEDIA PRODUCTS J. Cartaxo da Silva, M. Aresta, P. Beça	2106
A SYSTEMATIC REVIEW: FREE ALTERNATIVES FOR VIDEO CREATION AND PROCESSING IN ACADEMIC ENVIRONMENTS O. Labanova, N. Maksimova, E. Safiulina	2116
COMPARATIVE ANALYSIS OF CHATGPT-4 AND CO-PILOT IN CLINICAL EDUCATION: INSIGHTS FOR MEDICAL TEACHING AND LEARNING V. Rajaratnam, S. Tan, F. Omar	2123
THE PROBLEM OF VIOLENCE IN GEORGIAN PUBLIC EDUCATION: IMPLEMENTING STRATEGIES FOR A SAFE SCHOOL POLICY L. Tavdgiridze, N. Sherozia, I. Khasaia	2124
ENHANCING THE PEDAGOGICAL CLIMATE IN SCHOOLS: A CRUCIAL FACTOR IN MITIGATING TEACHER BURNOUT (ILLUSTRATED BY GEORGIAN SCHOOLS) L. Tavdgiridze, N. Sherozia, K. Beridze, S. Meskhidze, I. Khasaia	2132
ENROLLMENT AND SCHOOL DROPOUT DUE TO THE PANDEMIC IN MEXICO: A CASE STUDY OF THE STATE OF JALISCO M. Morfín Otero, C.A. González Quintanilla, H.M. Rodríguez Gómez, V. Peña Guzmán	2138
THE EFFECTIVENESS OF USING "GO TALK NOW" APP THROUGH GROUP PLAY STRATEGY IN ENHANCING INTERACTIVE INITIATIVE SKILL AMONG STUDENTS WITH INTELLECTUAL DISABILITY W. Alzahrani	2143
APPLICATION OF COMPUTATIONAL FLUID DYNAMICS (CFD) SIMULATIONS FOR LEARNING THERMAL ENGINEERING IN HEAT EXCHANGERS PROBLEMS F.D. Molina-Aiz, M.N. Honoré, A. López-Martinez, A.J. Alvarez-Martínez, R.M. Oliva-Molina, M.A. Moreno-Teruel	2144

PROMOTING WATER EFFICIENCY IN A STUDENT RESIDENCE AS A CONTRIBUTION TO SUSTAINABILITY: HYDROSAAP INNOVATION PROJECT F. Silva, J. Barros, M.J. Afonso, G. Oliveira, I. Fachada, A.M. Antão-Geraldes	2153
EXPLORING HISTOLOK AS A GAMIFIED LEARNING TOOL IN MEDICAL HISTOLOGY	2163
J. Vázquez-Flores, R. Pantoja-Vázquez, V. Menéndez-Domínguez, H. Rubio-Zapata ENHANCING ENGLISH LEARNING EXPERIENCE WITH AN INNOVATIVE INTERPRETATION TRAINING MOBILE APP: A SELF-DETERMINATION THEORY PERSPECTIVE ON AUTONOMOUS MOTIVATION Y.L. Chen, C.C. Hsu	2170
EXPANDING THE HYFLEX APPROACH IN INTERPROFESSIONAL EDUCATION (IPE) <i>K. Hoggatt Krumwiede</i>	2175
NAVIGATING THE NEXUS OF AI LITERACIES: A STUDY ON GENERATIVE AI PRACTICES AMONG NTU STUDENTS S.H.S. Ng, H.Y. Chan	2176
KNOWLEDGE MANAGEMENT APPLIED TO ENTERPRISE AND SUPPLY CHAIN RESILIENCE. A TEACHING CASE M. Arias-Vargas, R. Sanchis, R. Poler	2186
THE ROLE OF TUTOR IN MASSIVE SOCIAL LANGUAGE LEARNING: A CASE STUDY OF AN ACADEMIC ITALIAN MOOC A. Pakula	2195
CRITICAL SUCCESS FACTORS (CSFS) – AN IMPORTANT ANALYTICAL TOOL L. Aggestam, A. Svensson, A.K. Holmqvist	2204
EDUCATIONAL LEADERSHIP FOR ACADEMIC DEVELOPMENT: PRACTICES AND REFLECTIONS AT UNIVERSITY OF TRENTO A. Serbati, D. Agostini, S. Maniero, F. Picasso, P. Venuti, E. Felisatti	2212
EMPLOYING SOCIAL MEDIA PLATFORMS DURING CRISIS IN PRIVATE SCHOOLS A. Alanezi	2218
FROM LABS TO LECTURE HALLS: UNDERSTANDING THE CROSSROADS OF EU R&D PROJECTS AND MARKETING EDUCATION AT UNIVERSITIES J.C. Serrano-Ruiz, J. Mula, R. Poler	2223
LOOKING TO THE FUTURE: DEVELOPING A DIGITAL EDUCATION AND INNOVATION STRATEGY WHICH PREPARES AND EQUIPS THE NEXT GENERATION OF HEALTHCARE PRACTITIONERS D. Prescott, S. McKinnell, S. Canning	2232
SUPPORT FOR INNOVATIVE METHODOLOGY, APPROACHES AND TOOLS FOR TEACHING THROUGH THE MEDIUM OF ENGLISH IN ORDER TO IMPROVE EDUCATIONAL YIELD, SUSTAINABILITY, AND INTERNATIONALIZATION - THE SMARTI PROJECT L. Oliveira, E.L. Cardoso	2237
BLENDED LEARNING AND STUDENT TEACHERS' EXPERIENCES OF PRESENCES IN A MULTI-CAMPUS UNIVERSITY A.G. Nilsen, J.E. Ølmheim, A.G. Almås	2238
PRACTICAL EXAMPLES OF IMPLEMENTING CHALLENGE-BASED LEARNING IN ENGINEERING EDUCATION FOR STUDENTS, LIFE-LONG LEARNERS AND EDUCATORS – EXPERIENCE AT THE UNIVERSITY OF STAVANGER, NORWAY M. Shahverdi, Y. Xing, C. Ren	2239
BOOSTING THE UTILIZATION OF RESEARCH AND DEVELOPMENT OUTCOMES IN LIFELONG LEARNING IN HIGHER EDUCATION L. Kuismala, R. Hämäläinen	2247
ON THE ROLE OF EDUCATION IN SOCIETY J. Loeckx	2252
USE OF VIDEOS FOR THE INTERCONNECTION OF BIOCHEMISTRY WITH PHYSIOTHERAPEUTIC THERAPIES P. Sánchez, M.I. Rodríguez, C. Torres, V. Sánchez, S. García-Rodríguez, L.J. Martínez, M.J. Álvarez, R.M. Tapia-Haro, A. Casas-Barrragán, E. Aguilar-Ferrándiz, L. Chica-Redecillas, C.M. Morales-Álvarez, M. Cuadros	2257
ENTREPRENEURSHIP HUB- A WAY TO SUPPORT ENTREPRENEURIAL DREAMS L. Hongell, S. Fabricius, M. Hernberg, C.J. Rosenbröijer, F. Sirén	2261
WHAT TEACHERS THINK: WHAT KIND OF COMPETENCE AND SUPPORT DO TEACHERS NEED IN DESIGN OF LEARNING? L.E. Olmheim, E. Roone	2267

GENDER AND TEAMWORK: CASE STUDY IN A SUBJECT IN AN ENGINEERING DEGREE	2268
R. Martín Cabezuelo, J.M. Meseguer Dueñas, J. Molina Mateo, A. Vidaurre Garayo, N. Navajas Pertegás, J.A. Gómez Tejedor, S. Quiles Casado, J. Riera, M.A. Serrano Jareño, I. Tort Ausina	
EVALUATING A REMOTE ROBOTIC LABORATORY ACROSS DIFFERENT UNIVERSITY SYSTEMS S. Prohaska, L.N. Kennes	2274
EXPLORING STEM EDUCATION IN GEORGIA: UNDERSTANDING THE DYNAMICS OF IMPLEMENTATION M. Abramishvili, M. Tabidze, L. Tavdgiridze	2281
SUPPORTING FACULTY DEVELOPMENT IN ENGLISH AS A MEDIUM OF INSTRUCTION (EMI): INSIGHTS FROM A FACULTY CERTIFICATE PROGRAM IN TAIWAN M. Doran, J. Rieker	2289
VESTLAND-CLASS IN FOOD AND HEALTH: AN EXAMPLE ON HOW TO IMPLEMENT A PRACTICAL SUBJECT AS A PARTIALLY WEB-BASED SUBJECT J. Meinseth Vatne, I. Veka	2297
TEACHING FUNDAMENTALS OF BUSINESS PROCESS MANAGEMENT IN THE CONTEXT OF GENERATIVE ARTIFICIAL INTELLIGENCE E. Ponick	2298
SIMULATION OF CAM MECHANISMS: UNVEILING MATHEMATICAL METHODS THROUGH THE MODELING OF ARBITRARILY SHAPED CAM DISKS U. Zwiers	2305
ACTIVE LEARNING OF PROGRAMMING BY COLOUR CODING K. Czakóová	2310
QUALITY INDICATORS OF ELEMENTARY EDUCATION FOR THE DEVELOPMENT OF SYNTROPIC ENVIRONMENTAL EDUCATION: A STUDY IN PUBLIC SCHOOLS IN THE INLAND OF THE STATE OF SÃO PAULO M.L. Spazziani, N.N. Rumenos, P.N. Pereira, C. Gheler-Costa, G.C. Stipkovic, F. Toqueti	2315
THE ROLE OF THE ENGLISH LANGUAGE IN THE PROCESS OF MASTERING ENGINEERING SPECIALTIES BY UNIVERSITY STUDENTS N. Plotnikova, T. Usmanov, L. Gizyatova, F. Sitdikova	2323
UNDERSTANDING ASYNCHRONOUS LEARNING: A CASE STUDY AT AARHUS UNIVERSITY HERNING J.H. Hire, H. Slavensky	2327
"PROVOTYPES" EXPLORING HOW TEACHERS VALUE AI IN EDUCATION J. Lundin, T. Leino Lindell, M. Utterberg Modén, M. Tallvid	2333
TEACHERS' PERSPECTIVES OF ASSESSMENT PRACTICES IN THE AGE OF LARGE LANGUAGE MODELS E. Winerö, J. Lundin	2334
STUDENT EXPERIENCES WITH USING CHATGPT IN HISTORY CLASSES A. Lazareva, S. Vindbo, A. Spanos	2335
ARTIFICIAL INTELLIGENCE FOR STUDENT LEARNING: PERCEPTIONS AND REVIEW J.J. Suñol	2343
TEAMWORK IN PHYSICS SUBJECTS: PERCEPTION OF THE STUDENTS J.J. Suñol	2348
FROM CONCEPT TO SOLUTION: A PROJECT-BASED LEARNING CASE STUDY IN ENGINEERING R. Sanchis, M. Díaz-Madroñero, J. Mula, R. Poler	2354
FACE MASK DETECTION AS A LABORATORY EXERCISE IN A COMPUTER VISION COURSE K. Hendija, M. Mikac, R. Logožar, E. Dumić	2361
EXPLORING PRIMARY SCHOOL PUPILS' NAÏVE CONCEPTIONS ABOUT SCIENCE B. Borovicza, K. Szarka, K. Paulíková, R. Madarász	2367
INNOVATIVE APPROACHES TO PEDAGOGICAL DESIGN: A TRANS-EDUCATIONAL FRAMEWORK FOR STUDY PLAN DEVELOPMENT AND EVALUATION J. Aguirre, P. Casado	2373
FORMATIVE EVOLUTION IN ENGINEERING: KEY EXPERIENCES IN CURRICULAR RENEWAL BY COMPETENCES C. Bañados, K. García	2374
C. Emmiros, 10 Onion	

GENDER AND SES DIFFERENCES IN THE AGE OF ENTERING STEM-RELATED ACADEMIC EDUCATION S. Lissitsa, S. Chachashvili-Bolotin	2381
TEACHERS' AND STUDENTS' MOTIVATION TO ENGAGE IN ROBOTICS ACTIVITIES IN STEM EDUCATION D. Saad, I. Verner, B. Rosenberg-Kima	2382
TEACHING DESIGN AND ACTIVELY APPLYING IT THROUGH PROJECT-BASED LEARNING FORMAT: A PRACTICAL CASE STUDY OF A COLLABORATION BETWEEN A UNIVERSITY COURSE AND A COMPANY G. Carella, F. Colombo	2391
PRIOR LEARNING ASSESSMENT FOR COLLEGE LEVEL CREDIT M. Walker	2399
TRANSLATION AND VALIDATION INTO PORTUGUESE OF THE TEAM MEETING EFFECTIVENESS QUESTIONNAIRE M. Varela, L. Neves	2403
STUDY-BUDDY FOR IMPROVING INTERNATIONAL COOPERATION D. Stepanova, V. Grytsai	2408
PRESCHOOL EDUCATION AND THE ACADEMIC PERFORMANCE OF FIRST-GRADERS N. Mamuladze, L. Turmanidze, I. Khasaia, K. Shotadze	2412
EXPERIENCES INTEGRATING TELEWORKING TOOLS IN FACE-TO-FACE TEACHING: SATISFACTION OF STUDENTS C. Vereda-Alonso, M.M. Cerrillo-Gonzalez, C. Gomez-Lahoz, R.A. Garcia-Delgado, J.M. Rodriguez-	2419
Maroto, C. Vereda-Alonso FOOTT PRINTTS - AN INTERNATIONAL RESEARCH PROJECT WITH THE AIM OF DEVELOPING PRACTICAL GUIDELINES FOR IN-SERVICE TEACHER TRAINERS C. Rudloff, A. Efstathiades	2426
CHALLENGES IN COLLABORATIVE PARTNERSHIP BETWEEN PRESCHOOL EDUCATIONAL INSTITUTIONS AND CHILDREN'S FAMILIES N. Makaradze, M. Gurgenidze, N. Makaradze, A. Diasamidze, I. Khasaia	2432
EXPERIENCES INTEGRATING TELEWORKING TOOLS IN FACE-TO-FACE TEACHING: ACADEMIC RESULTS C. Vereda-Alonso, M.M. Cerrillo-Gonzalez, C. Gomez-Lahoz, M. Villen-Guzman, J.M. Paz-Garcia, C. Vereda-Alonso	2441
DIGITAL COMPETENCE ENHANCEMENT THROUGH DISTANCE MOODLE-BASED BUSINESS ENGLISH COURSE Z. Vincela, J. Selivanova	2447
VALUES, NARRATIVES AND CONSERVATION DILEMMAS: AN EIGHT-YEAR SURVEY ON UNDERGRADUATE BIOLOGY STUDENTS AT THE UNIVERSITY OF VALENCIA, SPAIN F.J. Aznar, I. Álvarez-Rodríguez, M. Barreda-Llorens, R. Beltrí, M. Bernal-Ripollés, D. Buendía-Martín, L. Carretero-Arias, B.G. Chianese-Blanco, E. Espín-Ferrando, M. Castelló-Martínez, M. Díaz-Escudero, M. Estornell-Boscá, I. Fernández-Cabello, N. Fraija-Fernández, O. García-Casado, A. García-Gallego, M.L. Gaude, L. López-Gil, M. Martínez-Carrancho, A.B. Martínez-Santaella, M.X. Medrano-Montoya, J. Mendívil-Odériz, I. Moreno-Valle, F. Mortarini, C. Navarro-Pérez, I. Ortolá-Medina, A. Perales-Guzmán, C. Peralta-Aranda, M. Pérez-Pascual, C. Pons-Bordas, R. Pool, M. Puchades-Bartú, J.P. Torres-Da Silva, S. Tórtola-Utiel, A. Trigo-Viéitez, P. Ubiedo Evangelio, A. Van Calster Rolin, S. Ten, R. Ortells	2455
POWERING UP POWERPOINT WITH GPT-4 FOR ENGAGING LANGUAGE INSTRUCTION J.E. Suazo Zepeda	2463
DETERMINATION OF ANTHROPIC POLLUTANTS IN RABBITS' FAECES AS A PROPOSAL FOR A FINAL MASTER OF SCIENCE'S DEGREE PROJECT V. León-Pérez, S.J. Álvarez-Méndez, F.J. Díaz-Peña, S. Gómez-Escabia, J. González-Sálamo, J. Hernández-Borges	2470
BRANDY, A GAME DEVELOPED BY 10 EUROPEAN UNIVERSITIES TO TEACH BRANDING: MEASURING MARKETING AND INTERCULTURAL LEARNING, ENGAGEMENT AND LEARNING STYLES WITH STUDENTS FROM 4 EUROPEAN COUNTRIES S. Emad, F. Suay Perez	2479
ACTIVE AND EXPERIENTIAL LEARNING – ENVIRONMENT TRANSFORMATION INITIATIVE D. Garcia	2480

INTERDISCIPLINARY SCIENTIFIC DISSEMINATION IN EDUCATIONAL TALKS AND EVENTS: AN ENRICHING THREE-YEARS EXPERIENCE C. Villanova-Solano, C. Domínguez-Hernández, C. Hernández-Sánchez, C. Ortega-Zamora, G. Jiménez-Skrzypek, C. Socas-Hernández, A.M. Afonso-Álvarez, S.J. Álvarez-Méndez, J. González-Sálamo, J. Hernández-Borges	2485
EMPOWERING OF INFORMAL CAREGIVERS THROUGH IMPROVED KNOWLEDGE AND SKILLS OF PROVIDING CARE AT HOME M. Varik, E.M. Sooväli, J. Pael	2493
TEACHER TRAINING IN SYNTROPIC ENVIRONMENTAL EDUCATION AT A BASIC EDUCATION SCHOOL IN THE INTERIOR OF THE STATE OF SÃO PAULO, BRAZIL F. Toqueti, M.L. Spazziani, N. Novello Rumenos, F. Freitas dos Santos, E.A. Toledo Pinto, C. Gheler-Costa	2497
THE DESIGN PROCESS OF A MATHEMATICS TEACHER EDUCATION TASK FOR INTER-INSTITUTIONAL USE R. Tomás Ferreira, M.H. Martinho, F. Delgado	2504
HIGHER EDUCATION DIDACTICS FACING NEW CHALLENGES M. Ivanuš Grmek, M. Mithans, S. Ograjšek	2514
BUILDING GLOBAL CITIZENS: UNVEILING THE POWER OF EXCHANGE PROGRAMS IN EDUCATION M. Alvarez Barba	2520
IMPLEMENTING PROBLEM-BASED LEARNING AND CASE STUDIES IN HIGHER EDUCATION USING ARTIFICIAL INTELLIGENCE A. Lavric	2527
WHY DID NEW DISTANCE LEARNING STUDENTS DROP OUT? PRELIMINARY FINDINGS FROM INDONESIA R. Budiman, A. Afriani, W. Widyasari, Y. Efendi	2533
TEACHING A FOREIGN LANGUAGE IN THE INCLUSIVE EDUCATIONAL ENVIRONMENT OF A DIGITAL SCHOOL N. Sigal, A. Zabolotskaya, E. Gutman	2540
FLIPPED LEARNING MODEL IMPLEMENTATION IN A LEXICOLOGY COURSE N. Sigal, A. Zabolotskaya, E. Gutman	2547
COMPELLING EDUCATIONAL OFFERINGS: A STUDY ON THE EFFICACY OF SKILLS IDENTIFICATION PLATFORMS WITH COURSE DESCRIPTIONS J.W. Lai, L. Zhang, Y.S. Chan, C.C. Sze, F.S. Lim	2553
EXAMINING FACTORS AFFECTING STUDENTS' PREPAREDNESS FOR AI TECHNOLOGY Y.Y. Wang, Y.W. Chuang	2562
EMPOWERING EDUCATORS: FOSTERING DIALOGIC TEACHING K. Ludvigsen	2563
EXPLORING PERCEPTIONS AND USAGE OF LARGE LANGUAGE MODELS AMONG UNIVERSITY OF ANDORRA STUDENTS M. Bleda Bejar, A. Dorca Josa, B. Oliveras Prat	2564
AUTOMATED ANALYSIS AND GRADING OF PRIVACY POLICIES: AI-DRIVEN APPROACH FOR USER-CENTRIC DASHBOARD A. Ahmad, P. Raman	2573
ARTIFICIAL INTELLIGENCE AND THE DEVELOPMENT OF METACOGNITIVE STRUCTURES INVOLVED IN PROBLEM SOLVING M. Maier, Z. Triff	2574
CHATGPT AS A TOOL TO ANALYZE CHEMISTRY TEXTBOOKS R. Maršálek, K. Trčková, R. Opěla	2583
PROMPT ENGINEERING IN IT MANAGEMENT EDUCATION O. Resch	2590
ARE YOU MORE INTELLIGENT THAN ARTIFICIAL INTELLIGENCE? THE CRITICAL APPRAISAL OF CHATGPT AS AN EFFECTIVE LEARNING MEDIUM N. Tran, A. Kan, S. Spencer, M. Lin, H. Zhang, B. Shulruf, A. Agar	2598
A MOOC ON DATA JOURNALISM: THE BEGINNING OF A JOURNEY INTO DATA C. Silvestre, F. Bonacho, S. Araújo, H.F. Pina	2599
TRANSFORMING HIGHER EDUCATION TEACHING THROUGH THE INTEGRATION OF VIRTUAL AND AUGMENTED REALITY P. Kosmas, F. Nisiforou, C. Vrasidas	2604

COMPETENCES AND SKILLS: TEACHING AND LEARNING AT SCHOOL P. Paolini, N. Diblas	2613
ASSESSING DIGITAL LITERACIES: AN ETHNOGRAPHIC STUDY OF TEACHERS' ASSESSMENT LITERACIES IN THE DIGITAL AGE H.Y. Chan	2620
IMPACT OF GENERATIVE ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: STUDENT PERCEPTIONS V. Roger-Monzó	2631
INTEGRATING SDGS INTO THE OPERATIONS MANAGEMENT COURSE M.J. Oltra-Mestre, C. García Palao	2636
EXPLORING NEW REALITIES: UNIVERSITY STUDENTS' VIEWS ON IMMERSIVE TECHNOLOGY IN EDUCATION K. Varadharajulu, M. Lara	2637
A CASE STUDY OF PROMOTING K12 STEM EDUCATION THROUGH HACKATHONS E. Lazarou, R. Brezoaie, T.M. Ursachi, M.I. Dascalu, I.C. Stanica	2645
A FRAMEWORK TO DESIGN AND ANALYZE GAMES FOR CULTIVATING CREATIVE LITERACY J. Raimundo	2654
CREATING A COMPUTER ADAPTIVE ASSESSMENT FOR USE IN SCHOOLS C. Jellis	2662
TEACHER EDUCATOR IN A MULTI-CAMPUS UNIVERSITY A.G. Almås	2670
ASSESSMENT OF THRESHOLD MATH CONCEPTS FOR SECOND YEAR STUDENTS WITHIN A MATERIALS SCIENCE COURSE A.I. Pruna, F. Salas, A. Vicente-Escuder, E.M. Sánchez-Orgaz, S. Martínez Sanchis	2671
TEACHING REDUNDANCY RESOLUTION IN REDUNDANT PARALLEL MANIPULATORS WITH AN INTERACTIVE AND GRAPHICAL SIMULATION A. Peidró, M. Fabregat-Jaén, A. Gil, D. Valiente, O. Reinoso	2677
FROM THEORY TO PRACTICE: IMPROVING LEARNING THROUGH ACTION ORIENTATION IN ACADEMIC EDUCATION T.N. Jambor	2687
IDEATION, BUSINESS MODELLING AND LEADERSHIP BY GAMIFICATION – USING DIGITAL PLAYFUL LEARNING IN NEXT GENERATION ENTREPRENEURSHIP H. Fischer, M. Pippig, M. Arnold, Y. Farrand, S. Leducq, T. Köhler, M. Letonja, L. Mertens, J. Müller, R. Slingerland, P. Urgacz, R. Verhagen	2697
SMART TOOLS, SMARTER STUDENTS: A STUDY ON CHATGPT'S EFFECTS ON LEARNING OUTCOMES AND EXERCISE QUALITY IN BUSINESS EDUCATION L. Meyer, A. Dannecker	2704
LEARNING NEURAL NETWORKS BY PLAYING WITH WIND TURBINE SIGNALS: A GREEN CHALLENGE-DRIVEN DIDACTIC PROPOSAL J.E. Sierra-Garcia, M. Santos	2714
UNCONVENTIONAL EXECUTION OF CHEMICAL EXPERIMENTS IN CONTAINERS PRODUCED BY 3D PRINTING K. Trčková, R. Maršálek	2722
BARRIERS TO SOCIAL ENTREPRENEURSHIP AMONG BUSINESS MANAGEMENT UNIVERSITY STUDENTS IN SPAIN: A FUZZY DEMATEL APPROACH O. Barbulescu, J. Capó-I-Vicedo, G. Maldonado-Gómez, J.V. Tomás-Miquel	2728
A CONCEPTUAL FRAMEWORK FOR ANALYSING THE EFFECTS OF QUALITY MANAGEMENT SYSTEM ON STUDENT PERFORMANCE IN ADULT EDUCATION M. Vučić, I. Dužević, T. Baković	2737
"LET'S SAVE OUR BEACHES": SDG-DRIVEN ROBOTIC CHALLENGE FOR SECONDARY EDUCATION	2746
M. Sastre-Domenech, J.E. Sierra-Garcia, M. Santos	075 1
PARTICIPATORY ACTIVITIES AND INDIVIDUAL STUDENT INTEREST IN THE MODULE OF EXPRESSION AND COMMUNICATION Y. Martínez-Hierrezuelo, V. García-Aparicio, L. Lucio-González	2754
TEACHING EXPERIENCES SHARING AMONGST ACADEMICS IN SAUDI UNIVERSITIES: COMPUTER SCIENCE ACADEMICS' PERSPECTIVES M. Alharbi, M. Devlin, J. Warrender	2759

FOSTERING WHOLE INSTITUTION APPROACH TO SUSTAINABILITY IN HIGHER EDUCATION INSTITUTIONS THROUGH SYSTEMS THINKING S. Armenia, E. Franco, O. Christou, J. Papathanasiou	2769
INTEGRATING UNIVERSAL LEARNING DESIGN AND INNOVATIVE TECHNOLOGIES FOR THE EFFECTIVE INCLUSION OF STUDENTS WITH HEARING LOSS IN COMPULSORY SECONDARY EDUCATION V. García-Aparicio, Y. Martínez-Hierrezuelo, D. Gil-Pareja	2778
FLIPPED CLASSES BASED ON FREE ACCESS TO INDUSTRIAL DOCUMENTS TO KEEP THE STUDENTS ENGAGED J. Lario Femenia, M.J. Verdecho, M.P. Conesa	2786
RESPONSIBLE BUSINESS MANAGEMENT EDUCATION: INTEGRATION OF SUSTAINABLE DEVELOPMENT GOALS INTO A BUSINESS PLAN J. Lario Femenia, M.J. Verdecho, M.P. Conesa	2793
LONGITUDINAL LINKS BETWEEN HOME NUMERACY ENVIRONMENT AND CHILDREN'S MATH ADJUSTMENT IN LITHUANIAN ELEMENTARY SCHOOL G. Silinskas, S. Raiziene	2799
PREDICTORS OF ADOLESCENTS' FINANCIAL LITERACY: EVIDENCE FROM PISA 2018 G. Silinskas, K. Laine, A. Ahonen	2800
DEPLOYMENT OF ARTIFICIAL INTELLIGENCE IN EDUCATION: RESULTS OF EMPIRICAL RESEARCH Z. Konecna, J. Budik	2801
EDTECH AND GAMIFICATION: EFFECTIVE TOOLS IN EDUCATIONAL PROCESS AT HEIS. A CASE OF RE-DESIGNING OF A COURSE FOCUSED ON THE DEVELOPMENT OF MANAGERIAL SKILLS Z. Konecna, J. Budik	2806
CURRENT SITUATION AND CHARACTERISTICS OF THE USE OF VISUAL TEACHING MATERIALS IN DEAF SCHOOLS IN JAPAN I. Chung, A. Yamamoto, S. Ganmaru, Y. Ishida, H. Aoyama	2811
ANALYSIS OF TEACHERS' DIDACTIC PRACTICES IN RELATION TO STUDENTS' LEARNING M. Vaclavik, I. Cervenkova, T. Barot	2817
BUILDING A SENSE OF LEARNING COMMUNITY ONLINE: STRATEGIES TO FOSTER INTERACTION WITH AND AMONG STUDENTS IN DISTANCE ARTS EDUCATION A. Aurelio Castro-Varela, V. Pavlou	2821
ANALYSIS OF THE PROCESS AND SUCCESS RATE IN THE DEVELOPMENT OF MASTER DISSERTATIONS IN DISTANCE LEARNING DEGREES. COMPARISON WITH OFFICIAL FACE-TO-FACE DEGREES IN THE SAME SUBJECT AREA R. Del Teso, E. Gómez, E. Estruch-Juan, J. Soriano	2822
ACCESS TO BASIC EDUCATION FOR PERSONS WITH DISABILITIES - AN ANALYSIS OF THE MUNICIPALITIES OF RIO GRANDE DO NORTE (BRAZIL) USING EDUCATIONAL CENSUS DATA FROM THE YEAR 2022 B. Lima, J. Oliveira, P. Medeiros, M. Aguirre, A.A.S. Fontoura, E. Sant'anna, J. Silva, J. Araújo	2828
ENGAGEMENT PRACTICES IN CROSS-UNIVERSITY OPEN KNOWLEDGE-BUILDING ACTIVITIES K. Kori, K. Pata	2834
SERVICE-LEARNING AS A TEACHING METHODOLOGY FOR BRAND DESIGN IN HIGHER EDUCATION O. Ampuero-Canellas, J. González Del Río, N. Tarazona-Belenguer	2842
THE MEANING OF THE GAME IN EARLY CHILDHOOD EDUCATION V. Padgurskytė	2850
INFOGRAPHICS AND ICTS: UPDATING CONTENT IN A SUBJECT OF THE DEGREE IN AUDIOVISUAL COMMUNICATION N. Tarazona-Belenguer, M. Rodrigo-Sánchez, B. Jordá-Albiñana	2856
THE ROLE OF THE FAMILY IN THE EARLY EDUCATION OF A CHILD V. Padgurskytė	2865
PYTHIA - AI SUGGESTED INDIVIDUAL LEARNING PATHS FOR EVERY STUDENT S. Röhrl, S. Staufer, V.K. Nadimpalli, F. Bugert, F. Hauser, L. Grabinger, D. Bittner, T. Ezer, J. Mottok	2871
INVESTIGATING THE EFFECTS OF THE DISTRIBUTION OF CLASSROOM POWER ON THE QUALITY OF CLASSROOM INTERACTION S. Bouchene	2881

WHAT DO UNIVERSITY STUDENTS EXPECT FROM AN EDUCATIONAL APPLICATION DESIGNED TO DEVELOP SKILLS? M. Lara, T. Lutzenkirchen	2889
NATURBUILD PROJECT. NATURE-BASED SOLUTIONS: GREEN ROOFS TRAINING FOR URBAN AND BUILDING SUSTAINABILITY B. Oliete Galiano, E. Rodríguez Arévalo, M. Pérez Ríos	2897
SUSTAINABLE EDUCATIONAL LEADERS: FACING CHALLENGES OR CREATING OPPORTUNITIES? L. Snellman	2906
POLITECNICO CALZATURIERO SCARL AND THE TRAINING OF THE FUTURE: AN IMMERSIVE EXPERIENCE IN A FOOTWEAR FACTORY C. Biancotto	2914
TEACHER EMPOWERMENT TO OPTIMIZE STUDENT MONITORING AND ASSESSMENT: A HOLISTIC APPROACH TO LEARNING ANALYTICS IN DIGITAL ENVIRONMENTS M. Guitert Catasús, T. Romeu Fontanillas, J.P. Cerro Martínez	2920
DEVELOPING GRADUATE STUDENTS' CRITICAL THINKING ABILITIES THROUGH EAP COURSES: AN SEEI APPROACH Y. Dong	2927
TRAINING DOCTORAL SUPERVISORS TO TRAIN RESEARCHERS OF TOMORROW – A SWEDISH EXAMPLE L. Reneland-Forsman, A. Forsman	2928
INTERPROFESSIONAL AND INTERDISCIPLINARY COLLABORATION IN THE NURSING AND CARE WORKER CURRICULUM K. Puusepp, U. Kõrgemaa, J. Sepp	2933
THE INFLUENCE OF CURRICULUM CHANGES ON TEACHERS' EXPERIENCES OF TEACHING ACCOUNTING: A CASE STUDY OF SOUTH AFRICAN SECONDARY SCHOOLS N. Sithole	2934
EXPLORING SUSTAINABLE PRACTICES IN DIGITAL SCREEN USE BY CHILDREN AND ADOLESCENTS T. Romeu Fontanillas, M. Guitert Catasús, D. Español Fernández	2935
NAVIGATING NEW FRONTIERS IN EDUCATION: THE ROLE OF CHATGPT IN ALGORITHMIC LEARNING AND ITS CHALLENGES D. Palla, A. Slaby	2943
PHYSICS TEACHERS' CONCEPTIONS OF GAMIFICATION AND THE USE OF GAMIFICATION IN PHYSICS LESSONS M. Gaurina, J. Pavlin	2949
EYE TRACKING AS TECHNOLOGY IN EDUCATION: FURTHER INVESTIGATION OF DATA QUALITY AND IMPROVEMENTS T. Ezer, L. Grabinger, F. Hauser, S. Staufer, J. Mottok	2955
OVER-RELIANCE ON TECHNOLOGY IN FOREIGN LANGUAGE LEARNING: CASE STUDY OF LLB UNDERGRADUATES P. Novikov, A. Kiseleva	2962
USING COLOUR IN THE CLASSROOM TO LEARN DIFFERENT CALIBRATIONS IN ANALYTICAL CHEMISTRY R. Sáez-Hernández, I. Adam-Cervera, K.U. Antela, M.L. Cervera, Á. Morales-Rubio	2967
USE OF A MARINE AQUARIUM AS A CORE MULTIDISCIPLINARY PLATFORM TO DEVELOP LINKED ACTIVE AND COOPERATIVE LEARNING STRATEGIES IN CHEMICAL ENGINEERING COURSES C. Quijada, S.C. Cardona Navarrete, M.F. López-Pérez, V.G. Lo Iacono Ferreira, R. Sanchis	2973
INSTRUMENTAL LABORATORY PRACTICES IN A VIRTUAL ENVIRONMENT: AN APPLICATION IN ANALYTICAL CHEMISTRY R. Sáez-Hernández, K.U. Antela, I. Adam-Cervera, M.J. Luque, M.L. Cervera, Á. Morales-Rubio	2983
AI-POWERED TOOLS FOR ENHANCING ENGAGEMENT AND ACADEMIC PERFORMANCE OF ENGINEERING STUDENTS R. Yakhina, K. Grigorieva, N. Batrova, M. Lukoyanova	2990
PEDAGOGICAL PREDICTION OF LEARNING OUTCOMES BASED ON AUTOREGRESSIVE INTEGRATED MOVING AVERAGE MODEL M. Lukoyanova, N. Batrova, K. Grigorieva, R. Yakhina	2997

EYE TRACKING METRICS FOR DISTINGUISHING GLOBAL AND FOCAL GAZE PATTERNS: A SYSTEMATIC LITERATURE REVIEW T. Ezer, L. Grabinger, F. Hauser, S. Staufer, J. Mottok	3005
PLAYING FOR THE FUTURE. ENRICHING DESIGN STUDENTS' USER RESEARCH SKILLS FOR SUSTAINABLE TOY DESIGN L. Sossini, M. Italia, F. Costa, B. Del Curto, S. Banfi, E. Sadolfo	3015
DESIGN THINKING AS AN ENABLER OF CHANGE IN THE TECHNOLOGICAL MARKET: A PRACTICAL CASE STUDY OF COMPANY'S INNOVATION AND DIFFERENTIATION G. Carella, F. Colombo, S. Migliozzi, V. Arquilla	3025
UNIVERSITY STUDENTS WITH SPECIAL EDUCATIONAL NEEDS - AN EXAMPLE FROM SLOVAKIA V. Michvocíková, M. Sirotová	3034
INTERACTIVITY AND SCAFFOLDING IN PRACTICE BASED LEARNING WITH DISRUPTIVE TECHNOLOGIES T. Väljataga, K. Pata	3039
PERCEPTION OF INCLUSION OF SPECIAL NEEDS CHILDREN AMONG PUPILS, PARENTS, EDUCATORS AND STAFF IN INCLUSIVE AND NON-INCLUSIVE PRIVATE AND PUBLIC SCHOOLS IN LEBANON S. Emad, M. Kosremelli Asmar, M. Dubosson	3048
CHALLENGES OF DIVERSITY-SENSITIVE RESEARCH WITH YOUNG CHILDREN – A CASE STUDY OF MEDIA USE AND POLITICAL EDUCATION J. Lategahn, R. Tkotzyk, G. Marci-Boehncke	3054
STUDENTS' ATTITUDES, PERCEPTIONS AND INTENTIONS TO LEARN WITH DIFFERENT TYPES OF SERIOUS GAMES AND SERIOUS GAMES FOR OPIOID EDUCATION C. Anyinam, S. Coffey	3061
DEVELOPMENT OF A CHATGPT WEB-BASED EDUCATIONAL CHATBOT FOR CIRCUIT THEORY TEACHING J. Parra, P. Sanchis	3062
HEI SOCIAL MEDIA ANALYSIS - A CASE STUDY OF FIVE PRIVATE UNIVERSITIES IN CROATIA L. Opačić, P. Vranešić, K. Aleksić-Maslać	3063
STUDENTS' PERCEPTIONS OF GENERATIVE AI USAGE AND RISKS IN A FINNISH HIGHER EDUCATION INSTITUTION M. Suonpää, J. Heikkilä, A. Dimkar	3071
INTEGRATED EVALUATION OF MOTIVATION AND LEARNING IN CIRCUIT THEORY LABORATORY: A QUALITATIVE AND QUANTITATIVE STUDY J. Parra, P. Sanchis	3078
DEVELOPING DIDACTIC PROPOSALS FOR SCIENCE EDUCATION WITH STS ORIENTATION, PROMOTING CRITICAL THINKING: A SYSTEMATIC LITERATURE REVIEW L.F. Torres Moreira	3079
CAN SMARTWATCHES WITH STRESS DETECTION LOWER STUDENTS' ANXIETY? AN EXPLORATORY PILOT STUDY USING WEARABLES I. Nicolaidou	3080
INTRODUCTION OF BIOLUMINESCENCE IN SCIENCE FOR FIFTH GRADE PRIMARY SCHOOL STUDENTS L. Fortuna, M. Slapničar, J. Pavlin	3084
LINKING GREAT PARTNERS FOR ENTREPRENEURSHIP EDUCATION G. Gonçalves	3090
ENGLISH FOR THE EDI GENERATION: PREDICTING AND TRACKING THE ROLE OF ENGLISH AND DIGITAL/MOBILE TECHNOLOGIES IN HIGHER EDUCATION ACROSS EAST AND SOUTH ASIA S. Dawadi, A. Kukulska-Hulme, S. Seargeant	3091
HOW DEEP TECH CAN PROMOTE INNOVATION AND ENTREPRENEURSHIP IN HIGHER EDUCATION INSTITUTIONS G. Gonçalves, J. Miranda	3092
A PROCESS FOR INFORMAL EVALUATION OF AFTER SCHOOL STEM (SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS) PROGRAMS FOR GIRLS M. Larson	3101

THE LAW PROJECT: THE IMPORTANCE OF LEGAL LITERACY IN THE EVERYDAY LIFE OF KIDS AND YOUNG PEOPLE A. Ribeiro, M. Rodrigues	3102
MAKING GENDER EQUALITY VISIBLE IN HIGHER EDUCATION. AN APPROACH FROM CUBA AND ROMANIA C. Correa García, B. Tescasiu	3111
ADDRESSING CHALLENGES AND ENHANCING PROSPERITY: THE OREN PROJECT'S INNOVATIVE APPROACH TO RURAL ENTREPRENEURIAL EDUCATION G. Tsaples, S. Armenia, T. De Angelis	3119
UNLOCKING INSIGHTS: NATURAL LANGUAGE PROCESSING ANALYSIS OF CASE STUDIES IN THE OREN PROJECT G. Tsaples	3125
MIND THE (TECHNOLOGY) GAP: USING ARTICULATE STORYLINE TO BUILD A SERIOUS GAME FOR OPIOID EDUCATION C. Anyinam, S. Coffey, L. Graham, C. Da Silva, P. Munro-Gilbert, A. De La Rocha, D. Chorney	3126
THE SUCCESSFUL IMPLEMENTATION OF A CREDIT BEARING READINESS ACTIVITY USED TO ENHANCE PERSONAL LEARNING ENVIRONMENTS R. Branch, H. Lee, A. Morris, C. De Beer	3131
CONCEPTUAL KNOWLEDGE IN FINANCIAL LITERACY J. Helus	3132
ARTIFICIAL INTELLIGENCE IN THE TEACHING-LEARNING PROCESS IN PHARMACOLOGY M. Arribas Blazquez, M.V. Barahona Gomariz, A. Rodríguez Artalejo, M.I. San Andrés Larrea, J.J. de Lucas Burneo, J.A. Gilabert Santos, M.R. Gómez Villafuertes, F. Ortega de la O, E. García Delicado, R. Pérez Sen, S. Sánchez Fortún, A. D'Ors de Blas, E. De Lago Fernia, I. Lastres-Becker, S. Santander Ballestín, M.J. Luesma Bartolomé, A. García Barrios, B. López Bouzo, P. Morón Elorza, C. Llorente Sáez, J. Serrano López, A. Sánchez Fortún, A. Quintero Pérez, M. Arias Mosquera, I. Belloso Melcon, O. Liceras de Bernardo, M.J. Muelas González, L.A. Olivos-Oré	3139
MOBILE AUGMENTED REALITY GAMES FOR AUTHENTIC SCIENCE LEARNING: PERSPECTIVES OF STUDENTS (FUTURE TEACHERS) ON THE EDUCITY ACTIVITY L. Pombo, R. Rodrigues	3145
DIGITAL HUMANITIES: NEW RESEARCH TRAJECTORIES, NEW CHALLENGES, NEW INTERPRETATION M. Novikova, P. Novikov	3155
DIFFERENT ROLES OF ARTIFICIAL INTELLIGENCE IN THE TEACHING-LEARNING PROCESS IN PHARMACOLOGY L.A. Olivos-Oré, M.V. Barahona Gomariz, A. Rodríguez Artalejo, M.I. San Andrés Larrea, J.J. de Lucas Burneo, J.A. Gilabert Santos, M.R. Gómez Villafuertes, F. Ortega de la O, E. García Delicado, R. Pérez Sen, S. Sánchez Fortún, A. D'Ors de Blas, E. De Lago Fernia, I. Lastres-Becker, S. Santander Ballestín, M.J. Luesma Bartolomé, A. García Barrios, B. López Bouzo, P. Morón Elorza, C. Llorente Sáez, J. Serrano López, A. Sánchez Fortún, A. Quintero Pérez, M. Arias Mosquera, I. Belloso Melcon, O. Liceras de Bernardo, M.J. Muelas González, M. Arribas Blazquez	3160
CAN THE SDGS INSPIRE TOMORROW'S BUSINESS LEADERS? L. Guitart Tarrés, A. Núñez-Carballosa, N. Jaría Chacón, F. Achcaoucaou, P. Miravitlles, C. Cruz-Cázares	3166
CHATGPT IN EDUCATION - USE CASES IN AN INTRODUCTORY WEB PROGRAMMING COURSE M. Mikac, M. Horvatić, R. Logožar, E. Dumić	3173
SERVICE-LEARNING AND SDGS: EDUCATIONAL APPLICATION IN THE FIELD OF INFORMATION AND COMMUNICATION IN THE CONTEXT OF ISCHOOLS S. Martínez-Cardama, F. García-López, M. Caridad-Sebastián, A.R. Pacios-Lozano	3183
ATTITUDES OF HUNGARIAN STUDENTS IN SLOVAKIA IN VOCATIONAL SECONDARY SCHOOLS AND GRAMMAR SCHOOLS TOWARDS THE USE OF REGIONAL LANGUAGE VARIETIES D. Illés, I. Vančo	3192
THE APPROACH OF FIRE RESCUE OFFICERS TO ETHICAL ASPECTS OF FIREFIGHTING L. Michalcová, Z. Freitinger-Skalická, Š. Strnad	3198
ATTITUDES TOWARDS THE USE OF STANDARD LANGUAGE AMONG HUNGARIAN SECONDARY SCHOOL STUDENTS IN SLOVAKIA D. Illés, I. Vančo	3204

MANIFESTO OUTFITS: CREATIVE AND COMMUNICATIVE TOOLS, GREEN TECHNOLOGIES AND MATERIALS A. Violano, S. Ottieri, R. Liberti, M. Cannaviello, G. Savarese	3210
INTEGRATING VIDEO GAMES IN BUSINESS EDUCATION: A BARRIER-FREE APPROACH H. Pérez Moure, J. Lampón, P. Cabanelas	3220
TEACHER TRAINING AND EDUCATIONAL MANAGEMENT FOR THE DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS AT THE UNIVERSIDAD DEL QUINDÍO A.M. Ramírez Agudelo, L.M. Castro Benavides	3221
SIMULATION-BASED LEARNING FACILITATION USING THE HELPERS MODEL S. Coffey, L. Graham, A. de la Rocha, D. Chorney, A. Cope, P. Munro-Gilbert, C. Anyinam, C. Da Silva	3227
STUDENT PERCEPTION OF THE ACADEMIC TRANSITION FROM TECHNICAL CAREERS TO ENGINEERING AT UCSC K. Roberts, M. Basso, H. Abarca	3235
A UNIFIED AESTHETIC APPROACH TO ACADEMIC AND EDUCATIONAL WEB DESIGN	3240
A. Giannakoulopoulos, A. Lamprogeorgos, M. Pergantis	
USER EXPERIENCE DESIGN FOR ACADEMIC CONTENT EDITORS IN A MULTISITE ENVIRONMENT A. Giannakoulopoulos, M. Pergantis, A. Lamprogeorgos	3247
EMPOWERING EDUCATION: THE STEAME PROJECT'S VISION FOR TEACHER COMPETENCE AND INNOVATION IN STEM LEARNING ENVIRONMENTS P. Escudeiro, N. Escudeiro, M. Campos	3256
INTEGRATING LARGE LANGUAGE MODELS FOR REAL-WORLD PROBLEM MODELLING: A COMPARATIVE STUDY C.M. Lorenzo	3262
MOTIVATION OF EDUCATIONAL INSTITUTION EMPLOYEES IN THE GENERATIONAL CONTEXT A. Auzina, A. Zvirbule, G. Grinberga-Zalite	3273
UNIVERSITY STUDENTS' PERCEPTION OF TEACHING AS A GUIDE IN THEIR LEARNING PROCESS AND ITS IMPACT ON THE QUALIFICATIONS A.M. Martínez-Martínez, R.I. Herrada-Valverde, M.C. López-Berlanga	3274
THE DIDACTIC GAME AND ITS SIGNIFICANCE IN TEACHING CHEMISTRY AT PRIMARY SCHOOLS Z. Jenisová, L. Simon, K. Hotová, K. Szarka	3280
EXPLORING THE ROLE OF SOCIAL ROBOTS IN ELDERLY CARE: A CASE STUDY C. Tigerstedt, K. Kuvaja-Adolfsson, D. Biström	3288
PROMOTING THE ENTREPRENEURIAL MINDSET IN ENGINEERING COURSES AT THE UNIVERSITY OF AVEIRO, PORTUGAL B. Gabriel, R. Valente	3296
REFLEXIVE MONITORING FOR HIGHER EDUCATION IN TRANSITION E. Devries	3297
UNIVERSITY STUDENTS' PERCEPTION OF THE PRACTICAL-COLLABORATIVE EXPERIENCE IN THE CLASSROOM M.C. López-Berlanga, R.I. Herrada-Valverde, A.M. Martínez-Martínez	3298
CONTEXT-ADAPTIVE E-LEARNING CONCEPT IN A SMART HOME SCENARIO F. Fischer, M. Fischer	3305
HIGHER EDUCATION PROFESSORS' AND STUDENTS' PERSPECTIVES AND EXPERIENCES CONCERNING THE USE OF UNIVERSAL DESIGN FOR LEARNING: A SCOPING REVIEW M.A. Santos, R. Teles	3315
TEACHING CONDITIONS FOR THE INTEGRATION OF ICT MEDIATED GAMIFICATION M. Perdomo Vargas, Z. Chinchilla Ruedas	3324
PERSONALIZED GAMIFICATION TO PROMOTE USER ENGAGEMENT: A CASE STUDY F. Fischer, M. Fischer	3330

MOTIVATIONS BEHIND BULLYING FROM THE PERSPECTIVE OF TEACHERS: VALIDATION OF A NEW QUESTIONNAIRE AND FIRST RESULTS ON THE ASSOCIATION WITH MORAL DISENGAGEMENT S. Siddiqui, A. Schutlze-Krumbholz	3341
A ROPE OF MANY STRANDS; BUILDING EFFECTIVE TEACHING TEAMS TO SUPPORT WORK-INTEGRATED DELIVERY OF VOCATIONAL EDUCATION S. Hexamer, H. Cadzow	3342
WHICH MEASURES OF EMOTIONAL INTELLIGENCE HAVE BEEN ADOPTED IN EMPIRICAL RESEARCH THAT EXPLORES ITS VALUE FOR HIGHER EDUCATION EDUCATORS? A. Youde, W. Bailey, A. Armitage	3343
RESULTS OF AWARENESS WORKSHOP ON SAVING ENERGY AND NATURAL RESOURCES IN A SECONDARY CLASSROOM IN ALMERIA (SPAIN) M.N. Honoré, F.D. Molina-Aiz, M.J. Salazar-Rumí, I.M. Ruiz-Serna	3353
EMBEDDING SUSTAINABILITY IN SUPPLY CHAIN DECISION-MAKING: AN EDUCATIONAL APPROACH P. Cortés-Pellicer, F. Castelló-Sirvent	3360
USING GENERATIVE AI FOR STRATEGIC ANALYSIS? A STUDY ON PERCEIVED UTILITY AMONG INDUSTRIAL ORGANIZATION ENGINEERING STUDENTS F. Castelló-Sirvent, P. Cortés-Pellicer	3365
BREAKING BOUNDARIES: ASSESSING THE IMPACT OF A CROSS-CULTURAL LEARNING ACTIVITY ON STUDENTS' GLOBAL PERSPECTIVES J. Kwon	3373
PROJECT BASED LEARNING IN DESIGN: PERSONAL BRANDING THROUGH PLASTIC TECHNIQUES T. Magal-Royo, J. Armijo Tortajada, B. Jordá-Albiñana	3374
BRIDGING GENDER GAPS GLOBALLY: EDUCATIONAL TRANSFORMATION AND CULTURAL HERITAGE RESTORATION THROUGH THE WOMEN'S LEGACY RESOURCE BANK A. López-Navajas, L. Medea-García	3380
VALIDATION OF THE MOTHERS' SENSITIVITY SCALE (MSS) DURING CHILDREN'S TRANSITION FROM HOME TO KINDERGARTEN S. Tatalović Vorkapić, I. Mihić	3381
RETHINKING THE COURSE OBJECTIVES AND TEACHING METHODOLOGY IN ENGLISH FOR SPECIFIC PURPOSES (ESP) COURSES IN THE POST-PANDEMIC HIGHER EDUCATION CONTEXT A. Knezovic	3390
PROJECT-BASED APPLICATION OF ACTIVE LEARNING METHODOLOGY OF REAL CASES THROUGH THE INVOLVEMENT OF LOCAL COMPANIES 1. Dominguez-Candela, L. Sanchez-Nacher, R. Balart, D. Garcia-Sanoguera, O. Fenollar, J. Lora-Garcia, S.C. Cardona Navarrete, M.F. López-Pérez, V. Fombuena	3400
EARLY CHILDHOOD EDUCATORS' PERCEPTION ON THEIR COMPETENCIES FOR MENTAL HEALTH AND WELL-BEING S. Tatalović Vorkapić, E. Pereša	3406
AUTOMATION OF KAHOOT! BY THE HUMANOID ROBOT PEPPER – THE WAY PEPPER CAN ANSWER RUDELY A. Dannecker	3417
STRATEGIC IMPERATIVES FOR BRIDGING THE INNOVATION DIVIDE: THE OSEAN INITIATIVE IN EUROPEAN OUTERMOST REGIONS E. Leite, A. Leite	3426
A PROPOSAL TO INTEGRATE ARTIFICIAL INTELLIGENCE TOOLS IN CHEMISTRY TEACHING IN HIGHER EDUCATION R. Perezzan, S. Montalvo-Quirós, R. Rama-Ballesteros, D. Herráez-Aguilar	3435
RELEVANCE OF ARTIFICIAL INTELLIGENCE COMPONENTS IN WORKFLOW-BASED STUDENT PROJECTS A. Dannecker, L. Meyer	3442
SCHOOL SUPPORT TEAM IN INCLUSIVE EDUCATION IN SLOVAK SCHOOLS M. Mikulcová, M. Matulčíková	3451
DEVELOPMENT OF AN INTERACTIVE LEARNING RESOURCE BASED ON COMICS USING A DESIGN THINKING APPROACH M. Mota, C. Manuela Sá, C. Guerra	3461

COMMUNITY EDUCATION AS AN INNOVATION TO EDUCATION OF CHILDREN AND PUPILS IN EDUCATION IN SLOVAKIA M. Mikulcová, A. Wiegerová	3462
INTERNATIONAL COOPERATION PARTNERSHIPS IN SCHOOL EDUCATION TO PROMOTE YOUNG INNOVATORS FOSTERING CITIZEN ENGAGEMENT FOR SUSTAINABLE AND FAIR TRANSFORMATION AND INNOVATION C. Calderón-Guerrero, R. Rupp, M. van Pul, I. Todorova, L.M. Ramírez-Benavides, M. Landaberea, P.	3472
van Der Hofstad	
NATURE-BASED SOLUTIONS FOR DRUG-DEPENDENT SHELTERS AND DAY CENTRES FOR WOMEN IN SITUATIONS OF SEVERE EXCLUSION THROUGH SERVICE-LEARNING IN MADRID (SPAIN): INFRAVERDE-2022/23 C. Calderón-Guerrero, L.M. Ramírez-Benavides, C. Arteaga-Bustamante	3483
ERASMUS AND LATIN AMERICAN STUDENTS COIL COLLABORATION: GENERATING A MULTICULTURAL MINDSET THROUGH INTERNATIONAL COOPERATION C. Martin	3494
OPPORTUNITIES AND CHALLENGES PRESENTED BY GOOGLE CLASSROOM AS A LEARNING MANAGEMENT SYSTEM (LMS) IN ENGLISH FOR SPECIFIC PURPOSES (ESP) COURSES A. Knezovic	3498
INCENTIVIZING STUDENT WRITING THROUGH IMPROVEMENT-BASED GRADING M. Sama, M. Shoura, L. Lewandowska	3509
EVALUATING THE EFFICACY OF COLLABORATIVE TEST-TAKING IN UNDERGRADUATE STATISTICS COURSES M. Shoura, M. Sama, D. Chan, O. Lewandowska	3510
TEACHER PATHWAYS AND PERSPECTIVES ON EDUCATING DIVERSE LEARNERS AFTER MA-TDL A.O. Davidson, M. Milian	3511
ADVANCING ADULT EDUCATION WITH AI AT OPEN UNIVERSITY MALAYSIA: TAILORING LEARNING EXPERIENCES FOR COGNITIVE DEVELOPMENT Z. Hamidon, M.L. Abdullah, Y. Yusoff, M.N. Ismail	3512
ICT LEARNING SUPPORT FOR NEURODIVERSITY: A CASE STUDY T. Takabayashi	3523
ACTIVE LEARNING: A STORY-TELLING AND STORY-MAKING APPROACH TO EMBRACE STUDENT LEARNING STYLE FOR CLASSROOM ENGAGEMENT A. Ko	3529
MOBILE LEARNING FOR SOFT SKILLS ENHANCEMENT IN UNDERGRADUATE STUDENTS M. Staboulis, M. Sytziouki, I. Lazaridou	3530
TEACHING PARAMETRIC MODELLING SKILLS TO CIVIL ENGINEERING STUDENTS B. Uremović, D. Šojat	3541
USING DESCRIPTIVE GEOMETRY COMPETENCES FOR 3D PARAMETRIC MODELLING IN A MASTER THESIS PROJECT, A CASE STUDY B. Uremović, D. Šojat	3549
INVESTIGATING THE TRANSFORMATIVE POWER OF AI-DRIVEN INTELLIGENT TUTORING SYSTEMS IN ONLINE LANGUAGE LEARNING ENVIRONMENTS T. Sbardella, A. Pakula	3557
EMOTIONAL PROBLEMS AND SELF-EVALUATION OF HIGH SCHOOL STUDENTS WITH LEARNING DISABILITIES B. Sender, K. Bielcikova, K. Kudlova	3563
DEVELOPMENT OF A FRAMEWORK THAT INCLUDES THE NEEDS, VALUES, AND PREFERENCES OF INDIVIDUALS WITH COPD WITHIN THE DIGITAL HEALTHCARE SYSTEM: A META-SYNTHESIS C. Schmidt, K. Borgnakke, A. Frølich, L. Kayser	3569
ARTEPHYLETICS AS A CONSTRUCT OF SOCIAL-PSYCHOLOGICAL SUPPORT FOR STUDENTS WITH LEARNING DISABILITIES B. Sender, K. Bielcikova, E. Zovinec	3570
EMPOWERING GENERALIST TEACHERS: A CASE STUDY ON IN-SERVICE TEACHER TRAINING FOR DIGITAL PROFESSIONAL COMPETENCES IN ARTS LEARNING V. Pavlou	3577

FROM RATIONALISM TO EMPIRICISM IN EDUCATION OF SOFTWARE TESTING USING GAMIFICATION N. Doorn, T.E.J. Vos, B. Marín	3586
THE POSITION OF THE UNIVERSITY TEACHER IN INCLUSIVE EDUCATION IN THE SLOVAK REPUBLIC M. Sirotová, V. Michvocíková	3596
WORKING SUSTAINABILITY IN A SUBJECT ABOUT PACKAGING DESIGN O. Ampuero-Canellas, J. Gonzalez Del Rio, J. Armijo Tortajada	3604
TRAINING NEEDS FOR THE TUTORS OF RESILIENCE IN SOCIAL SERVICES ENVIRONMENTS M.A. Tomiță, R. Ungureanu	3611
IMAGE, TEXT AND CONTEXT: COMMUNICATION TECHNIQUES IN THE PRESENTATION OF THE ARCHITECTURAL PROJECT A.M. Capraru, S. Paduretu, L. Vultur	3612
LEARNING DEEP-TECHNOLOGIES THROUGH AN INTERGENERATIONAL SERVICE- LEARNING PROJECT D. Facal, M.C. Gutierrez-Moar, L. Perez-Blanco, M. Gandoy-Crego, M.J. Diz-López, S. Valladares- Rodríguez	3618
EU DIGITAL FABLAB: A VIRTUAL SHOE FABLAB USING AR FOR PRACTICAL FOOTWEAR MANUFACTURING SKILLS C. Biancotto, A. Marcato	3623
PROBABILITY OF CHEATING BETWEEN TWO STUDENTS USING THE COHEN'S KAPPA INDEX R. Nalda-Molina, A. Ramon-Lopez, J.J. Perez-Ruixo	3629
APPLICATION OF ARTIFICIAL INTELLIGENCE DURING CONTINUOUS EVALUATION IN A PHARMACY DEGREE A. Ramon-Lopez, R. Nalda-Molina., E. Barrajon-Catalan, J.J. Perez-Ruixo	3634
DEVELOPING PERSONAL LEADERSHIP AND LEADERSHIP SKILLS FOR BETTER IMPLEMENTATION IN THE JOB MARKET: INVOLVING STUDENTS IN REAL-LIFE PROJECT MANAGEMENT IN HIGHER EDUCATION B. Petjärv, H. Kiis, R. Juurikas	3638
FOSTERING LEARNING COMMUNITIES AMONG INTERNATIONAL STUDENTS IN HE FOR LANGUAGE COMPETENCE AND INTERCULTURAL COMMUNICATION S.C. Munteanu, A.M. Capraru, S. Paduretu	3646
EXPERIENTIAL OUTDOOR INFORMAL LEARNING ACTIVITIES IN VILNIUS UNIVERSITY BOTANICAL GARDEN, LITHUANIA R. Ryliškienė, D. Ryliškis, G. Jurkevičienė, I. Raubaitė	3650
A MODEL FOR ASSESSING THE EFFECTIVE INTEGRATION OF TECHNOLOGY INTO EDUCATIONAL PRACTICE FROM A PEDAGOGICAL PERSPECTIVE P. Polymeropoulou, K. Potsis, A. Kameas	3651
BRIDGING THE GAP: ENHANCING GRADUATE ATTRIBUTES OF IT HONOURS STUDENTS THROUGH A COLLABORATIVE INDUCTION PROGRAMME L. Drevin, D. Snyman, G. Drevin	3659
ANALYSIS AND VALIDATION OF THE APPLICATION OF PEER CO-EVALUATION AS A METHODOLOGY FOR THE EVALUATION OF A COLLABORATIVE WORK ACTIVITY IN A CHEMICAL ENGINEERING DEGREE COURSE B. Garcia-Fayos, J.M. Arnal, B. Ruvira, B. Garcia-Gimeno	3669
DESIGNING BY STUDENTS FOR STUDENTS: AN EDUCATIONAL ROADMAP IN THE DESIGN OF UNIVERSITY CAMPUSES L. Sossini, F. Guarnieri, L. Grossi, L. Donvito, B. Del Curto, G. Gerosa	3677
ANALYSIS OF THE TEACHING-LEARNING METHODOLOGY FOR THE DEVELOPMENT OF FLOW DIAGRAMS IN THE CHEMICAL ENGINEERING DEGREE B. Garcia-Fayos, J.M. Arnal, B. Ruvira, B. Garcia-Gimeno	3687
STUDENT ACCEPTANCE OF AI-BASED FEEDBACK SYSTEMS: AN ANALYSIS BASED ON THE TECHNOLOGY ACCEPTANCE MODEL (TAM) D. Otto, V. Assenmacher, A. Bente, C. Gellner, M. Waage, R. Deckert, M. Siepermann, F. Kammer, J. Kuche	3695
ON DESIGN OF INCLUSIVE AND ENJOYABLE EDUCATIONAL GAMES - THE GAMING4CODING CONCEPT	3702
L. Sällvin, P. Mozelius, N. Humble, A. Calvo-Morata, B. Fernández-Manión, R. Pechuel, T. Kreuzberg	

NAVIGATING NEW SPACES IN EDUCATION ENVIRONMENTS: A COMPARISON WITH EYE-TRACKING BETWEEN 360-DEGREE WALKS AND IMAGE-TEXT COMBINATIONS D. Zaglmann, M. Haack	3711
THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE PRODUCTION OF TEXTS FOR SPECIFIC PURPOSES: WRITING FOR THE WEB D. Baptista	3721
USING LARGE LANGUAGE MODELS (LLMS) TO DEVELOP AN EDUCATIONAL APP FOR GENDER BASED VIOLENCE Z. Qureshi, I. Zualkernan	3729
CO-OPERATIVE EDUCATION SYSTEM IMPROVEMENT FOR CREATIVE INDUSTRY EDUCATION A. Kiratisin, B. Phichaikamjornwut, P. Roungpanyaroj, P. Rujinarong, K. Jaihan	3736
EXPLORING THE IMPACT OF AI ON DIGCOMPEDU COMPETENCES FOR HIGHER EDUCATION TEACHING A. Jantos, L.M. Langesee, N. Volkmann, M. Lindner	3742
EMPOWERING EDUCATION: DESIGN AND IMPLEMENTATION OF A WEB APP FOR MONITORING STUDENTS' PROFESSIONAL PRACTICE T. Matijasic, L. Nacinovic Prskalo	3752
"I AM HERE TO GUIDE YOU": A DETAILED EXAMINATION OF LATE 2023 GEN-AI TUTORS CAPABILITIES IN STEPWISE TUTORING IN AN UNDERGRADUATE STATISTICS COURSE	3761
W. Qiu, C.L. Su, N.B. Jamil, S.S.H. Ng, C.M. Chen, F.S. Lim	
ACADEMIC PERFORMANCE PREDICTION IN HIGHER EDUCATION THROUGH INTERACTION WITH EDUCATIONAL VIDEOS	3771
G. López-Crespo, S. Escriche- Martínez, M.C. Blanco-Gandía, C. Ferrer-Pérez, N. Sánchez-Pérez, C. Fidalgo, S. Valdivia-Salas, T.I. Jiménez, C. León-Moreno, M. Alcaraz-Iborra, F. Guil-Reyes, I.C. García-Acedo	
TOWARDS USING LARGE LANGUAGE MODELS TO AUTOMATICALLY GENERATE READING COMPREHENSION ASSESSMENTS FOR EARLY GRADE READING ASSESSMENT I. Zualkernan, S. Shapsough	3772
ENHANCING FUNDAMENTAL CONCEPTS IN ACADEMIC AND PROFESSIONAL	3783
PROJECTS V.G. Lo Iacono Ferreira, A. Hilario Caballero, B. Micó Vicent, J. Jordán Núñez, V. Lerma Arce, P. Ferrer Gisbert, J.E. Solanes Galbis, I. Miró Orozco, J. Capó-Vicedo, J. Lora-García, M. Pérez Sánchez, J.A. Maestro Cano, R. Vercher, C. Quijada, L. Santos Juanes-Jordá, J.I. Torregrosa-López, A.M. García Bernabeu	
THE DIGICOMPASS TRAINING COURSE: A FLIPPED AND AI-BASED APPROACH TO CONTENT CREATION	3791
P. Mazohl, A. Yeratziotis, C. Tsouris, C. Mettouris, G. Papadopoulos	
FORMATIVE ASSESSMENT STRATEGY IN A VIRTUAL ENVIRONMENT. THE CASE OF IT GOVERNANCE SUBJECT L. Cuenca, L. Osete, A. Boza	3798
PSYCHOLOGICAL AND PEDAGOGICAL APPROACH TO THE MORAL SETTINGS OF PRIMARY SCHOOL TEACHERS Z. Zacharová, Š. Ferková	3806
THE NEEDS OF THE PRIMARY AND SECONDARY SCHOOL CLASS TEACHER IN THE FIELD OF PREVENTION IN THE CONTEXT OF MORAL EDUCATION Š. Ferková, E. Tóblová, V. Zemančíková	3814
MOBILE AUGMENTED REALITY APP WITH 3D MODELS: THE EDUCITY APP R. Rodrigues, L. Pombo	3824
GIRLS GO STEM: IMPLEMENTING THE GENDER PERSPECTIVES IN STEM EDUCATION V. Čotić Poturić, A. Bašić-Šiško, I. Dražić	3831
BRIDGING THE GAP: ENHANCING PARENT-EDUCATOR COMMUNICATION IN PRESCHOOLS WITH "KINDERGARTEN CONNECT" APPLICATION M. Roža, L. Nacinovic Prskalo	3836
MOTIVATION AS A PREDICTOR OF STUDENT SUCCESS IN UNIVERSITY MATHS COURSES V. Čotić Poturić, A. Bašić-Šiško, I. Dražić	3844

PRELIMINARY ASSESSMENT OF THRESHOLD CONCEPTS IN A FIRST-YEAR GENERAL GENETICS SUBJECT M. Leiva-Brondo	3851
A CRITICAL ANALYSIS OF OPEN EDUCATIONAL RESOURCES ASSESSMENT STRATEGIES C. Serrat, G. Alsina, M.M. Bruguera, A. Uukkivi, O. Labanova, E. Safiulina, M.R. Estela, X. Marcote, J. Guàrdia, A.P. Lopes, F. Soares, S. Softic, E. Schirgi, Y. Andriichenko, V. Bocanet, F. Serdean, T. Tamberg, A. Seletski	3860
DESIGN AND EVALUATION OF A MOOC ON THE INTERNET OF THINGS TO UPSKILL ADULT EDUCATORS F. Lazarinis, T. Panagiotakopoulos, A. Kameas	3870
IMMERSIVE TOPOGRAPHIC ENVIRONMENT USING 360-DEGREE PHOTOS C. Carbonell-Carrera, J.L. Saorin	3878
EXAMINING STUDENT DROPOUT IN ESTONIAN VOCATIONAL SCHOOLS: RISKS AND PREVENTIVE MEASURES A. Uukkivi, N. Maksimova, O. Labanova	3883
SHOULD WE USE A DIFFERENT METHODOLOGY WHEN TEACHING ESP (ENGLISH FOR SPECIAL PURPOSES) TO GENERATION AI (ARTIFICIAL INTELLIGENCE)? O. Lomakina	3889
THE VALUE OF SHORT-TERM STUDY TRIPS FOR UNDERGRADUATES IN THE POST PANDEMIC ERA C. Sinclair, C. Botting	3890
INTEGRATIVE VERSUS INSTRUMENTAL MOTIVATION AMONG FOREIGN LANGUAGE ONLINE LEARNERS B. Ivanova, D. Kuzmanovska, A. Vitanova-Ringaceva, D. Marolova	3895
THE NEED TO ADDRESS THE RAISE OF COMPLEXITY: RELAUNCHING SYSTEMS THINKING IN EDUCATION P. Água, V. Conceição, A. Correia	3902
STATIONS OF CREATIVITY P. Lane, R. Lafferty	3912
ENHANCING K-12 STUDENTS' PERFORMANCE IN CHEMISTRY THROUGH CHATGPT-POWERED BLENDED LEARNING IN THE EDUCATION 4.0 ERA D. Ortiz de Zárate, R. Castañeda, L. Mercade, V.J. Gómez, A. Diaz Rubio, F.J. Díaz-Fernández, M. Sinusia Lozano, J. Navarro-Arenas, A. Barreda, M. Gomez Gomez, E. Pinilla-Cienfuegos	3920
DIGITAL APTITUDE TESTS IN HIGHER EDUCATION: HOW ARE THEY SUCCESSFULLY DESIGNED AND IMPLEMENTED? M. Baume, E. Dörfler	3930
STATE LANGUAGE AS A FOREIGN LANGUAGE AT A HIGHER EDUCATION INSTITUTION WITH A LANGUAGE OF INSTRUCTION OF A NATIONAL MINORITY E. Prokopcová	3941
DJANGO GIRLS IN SECONDARY SCHOOL: ENHANCING PROGRAMMING RESOURCES AND SKILLS THROUGH PROJECT-BASED LEARNING R. Rama-Ballesteros, S. Montalvo-Quirós, R. Perezzan, D. Herráez-Aguilar, C. Fernández-Jiménez	3949
IN SEARCH OF THE METHOD TO ASSESS JAPANESE STUDENTS' READINESS FOR GLOBAL CITIZENSHIP K. Matsumoto, T. Takeuchi	3959
BENCHMARKING AS PART OF MODERNIZATION OF BIOTECHNOLOGY EDUCATION AND TRAINING IN TUNISIA S. Mubaraz, J. Tuominen	3960
TEAMWORK SKILLS IN A FACE-TO-FACE AND AN ONLINE CONTEXT: A COMPARISON AND CONTRIBUTION TO TEAMWORK EFFICIENCY A. Polak, P. Gradišek	3969
FROM THEORY TO PRACTICE: HOW TO USE MEDIA LITERACY AS TOOL FOR FOSTERING POLITICAL AWARENESS R. Tkotzyk, J. Lategahn	3970
SUMMATIVE EXAMS WITH THE USE OF CHATGPT: VISION OR REALISTIC ALTERNATIVE TO TRADITIONAL EXAMS? M. Baume, E. Dörfler, M. Etchegaray Bello, C. Schauer	3980
THE IMPACT OF INCLUSIVE EDUCATION ON THE INTELLECTUAL LEVEL OF ROMA PUPILS INVESTIGATED THROUGH THE ANALYSIS OF HUMAN FIGURE DRAWING L. Horňák, L. Končeková	3991

A HORIZONTAL CROSSDISCIPLINARY APPROACH TO SCIENCE TEACHING USING DIGITAL AND BLENDED LEARNING ENVIRONMENTS Z. Asimakopoulos, Z. Smyrnaiou	3999
EAGLE PROJECT: COVERING THE TRAINING GAP IN DIGITAL SKILLS FOR EUROPEAN SMES MANPOWER B. Baruque-Zanón, J.E. Sierra-Garcia, H. Cogollos-Adrián, L. Keane	4008
LEARNING TOOL TO FACILITATE THE ON-SITE TRAINING OF PERSONAL ASSISTANTS	4016
M. Santamaría-Vázquez, J.H. Ortiz-Huerta, A.M. Lara-Palma, B. Baruque-Zanón, J.E. Sierra-Garcia INTEGRATING TECHNOLOGY IN EDUCATION TO ADDRESS CONCEPTUAL MISUNDERSTANDINGS: THE ARGUMENTATION-BASED DIGITAL STORYTELLING (DS) FLOW MODEL P. Köseoğlu, A. Altun, G. Mercan	4026
A CASE STUDY ABOUT FEEDBACK LITERACY: PROVIDING INFORMATION AND MANAGING AFFECT R. Faria, D. Pedrosa, B. da Silva Lopes, F.C. Ribeiro Faria	4033
EQUALITY, DIVERSITY AND INCLUSION IN THE BUSINESS MANAGEMENT EDUCATION, TRAINING AND PROFESSIONS: A NATIONAL STUDY ABOUT THE STATE-OF-THE ART IN GREECE P. Polymeropoulou, K. Mantzos, E. Georgakakou, A. Kameas	4039
EXPERIENTIAL LEARNING IN SCIENCE EDUCATION: AN INCLUSIVE APPROACH TO INDIGENOUS KNOWLEDGE AND PERSPECTIVES? N. Louis, E. Lemaire	4048
ENABLING SELF-DETERMINED LEARNING SPEED IN UNDERGRADUATE CONTROL SYSTEMS LABS BY PROVIDING STUDENTS ACCESS TO VIRTUAL TWINS THAT RUN IN A CENTRALIZED ENVIRONMENT J.C. Kuhr, C. Tokaji	4049
ADVANCING VIRTUAL LEARNING: A REVIEW OF MOODLE FOR THE OPTIMIZATION OF ONLINE EDUCATION I. Lanza-Cruz, R. Montoliu Colás, A. Martínez-Martínez, I. Remolar Quintana	4056
KNOWLEDGE OF VOCATIONAL SCHOOL PUPILS IN THE FIELD OF SEXUALITY AS A PREREQUISITE FOR BETTER PARTNER RELATIONSHIP L. Horňák, B. Ulapová	4065
ENHANCING TEACHING INNOVATION THROUGH MENTORING AT REY JUAN CARLOS UNIVERSITY M.C. De la Calle-Durán, A.J. Lopez-Galisteo, R. Montes-Diez	4066
INTEGRATING TECHNOLOGY TO CULTIVATE CRITICAL THINKING SKILLS AMONG STUDENTS M. Mikeladze, T. Nakashidze-Makharadze, N. Samnidze, M. Diasamidze	4067
SUPPORT RESOURCES IN A RESEARCH LABORATORY: DESIGN AND INNOVATION B. Nieto Rodríguez, J.C. García Vázquez, T. Lloret, M. G. Ramírez, I. Pascual, M. Morales Vidal	4073
INNOVATION AND EDUCATION: A CHALLENGING RELATIONSHIP P. Dobrescu, L. Vladu, F. Durach	4079
ROLE OF INTERNATIONAL RESEARCH PROJECTS IN SHARING KNOWLEDGE AND IMPROVING EDUCATION QUALITY M. Aroshidze, M. Loria, N. Aroshidze	4086
INSTRUCTIONAL DESIGN AND CO-REGULATION LEARNING STRATEGIES IN DISTANCE EDUCATION: A FRAMEWORK PROPOSAL F.C. Ribeiro Faria, D. Pedrosa, B. da Silva Lopes, R. Faria	4092
USING A DIGITAL ENVIRONMENT TO FOSTER WRITING AS A LEARNING AND REFLECTIVE TOOL: THE ORWELL PROJECT R. Villalon Molina, M. Gallardo Gómez, D. García Saiz, K. Tsadima	4096
TOOLS FOR ENHANCING EQUALITY, DIVERSITY AND INCLUSION IN HIGHER EDUCATION INSTITUTIONS: SUPPORTING GENDER & LGBT+ INCLUSION IN TERTIARY EDUCATION K. Mantzos, E. Georgakakou, A. Kameas	4102
COHERENCE BETWEEN TRAINING AND CONSCIOUS EVALUATION OF UNIVERSITY TEACHING M. Martín-Lope, R. Montes-Diez, D. De Haro	4109
NEW CHALLENGES IN MATHS TEACHING - EXPLORING THE POTENTIAL OF CHATGPT M. Štefan Trubić, N. Črnjarić	4110

PRIMARY SCHOOL TEACHERS' VIEWS ON THE MENTOR'S ROLE IN THE PROFESSIONAL-EDUCATIONAL DEVELOPMENT P. Konstantopoulou, E. Zenakou, K. Koutrouba, S. Kasapi	4119
INNOVATIVE FORMS OF EDUCATION USING VIRTUAL AND AUGMENTED REALITY. SCENARIOS AND SIMULATIONS AND THEIR POSSIBILITY OF USE IN THE TEACHING PROCESS A. Kuricová, S. Kočkár, K. Hollá	4128
LEARNING COMMUNITIES AS INSTRUMENTS TO INTERTWINE WORKING, LEARNING AND INNOVATION 'ON THE JOB'?: INSIGHTS FROM THE LOGISTICS AND TRANSPORT SECTOR	4136
L. Woudstra, E. Rusman, J. de Jong, W. van Zwol, B. van Der Heijden COMPUTER SCIENCE ACADEMICS' PERSPECTIVES REGARDING THE SHARING OF THEIR TEACHING-RELATED KNOWLEDGE: QUALITATIVE STUDY M. Alharbi, M. Devlin, J. Warrender	4137
ENGAGING STUDENTS AS PARTNERS IN THE CO-CREATION OF EXEMPLARS FOR AUTHENTIC PLACEMENT INTERVIEW ASSESSMENTS: A CASE STUDY IN THE MTU SCHOOL OF BUSINESS D. McSweeney, C. Murphy	4145
BUSINESS EDUCATION AND PLATFORM ECOSYSTEMS DEVELOPMENT: RUSSIAN EXPERIENCE O. Molchanova, S. Shchelokova	4146
WORKING TOWARD SHARED GOALS ON A VIRTUAL INTERNATIONAL EXCHANGE: AUSTRALIAN-JAPANESE COLLABORATION S. Sekiguchi	4147
FOUR STAGES OF IMPLEMENTING DIGITALIZATION IN SCHOOLS - A BEST PRACTICE APPROACH AT A GERMAN VOCATIONAL SCHOOL N. Lemke, K.O. Tiburtius, J. Siemon	4148
AWARENESS-RAISING ON ENVIRONMENTAL SUSTAINABILITY THROUGH INTEGRATING THE SDGS INTO HIGHER EDUCATION M.N. Rivas Márquez, P. Cabrera Reyes, M.C. Recio Ruiz, F.J. García Mateos, M.J. Valero Romero, J. Rodríguez Mirasol, T. Cordero, J.M. Rosas	4155
BLENDED ROTATION LEARNING MODEL TO REINVENT MAINSTREAM CLASSROOMS N. Eteokleous, N. Kyriacou, A. Albanese, M.J. Guerreiro Figueiredo, M. Mitsiaki, S. Zammit Pulo, E. Xeni	4161
INTERNATIONAL HIGHER EDUCATION STUDENTS: NEEDS, CHALLENGES, AND OPPORTUNITIES A. van Der Meulen, S. Armenia, M. Bonsangue, C. Carlini, O. Casey	4169
RELATIONSHIP BETWEEN DYNAMIC LEARNING FOR CAREER AND EMPLOYABILITY A. Valickas, V. Rapuano	4178
UNVEILING SCHOOL COMMUNITY DYNAMICS IN ENERGY TRANSITION: THE GREENGAGE INITIATIVE N. Romero Herrera, A. Singh, M. Wellink, E. Doherty, E. Clifford, B. Arthur Delmonte, S. Smit, E. McLoughlin, N. Roudil, A. Hill	4183
FORMATIVE ASSESSMENT AS A SUPERIOR TOOL FOR THE TEACHERS TO AVAIL THE STUDENTS TO HAVE DEEPER INSIGHTS IN THEIR LEARNING PREFERENCES AND TO ENHANCE THEIR OVERALL ACADEMIC PERFORMANCE T. Dilaverova, S. Dumbadze, T. Kapanadze, N. Kharati, N. Dorofeeva	4189
TYCHE ALGORITHM: MARKOV MODELS FOR GENERATING LEARNING PATHS IN LEARNING MANAGEMENT SYSTEMS S. Staufer, F. Bugert, F. Hauser, L. Grabinger, T. Ezer, V.K. Nadimpalli, D. Bittner, S. Röhrl, J. Mottok	4195
PRE-SERVICE TEACHERS' PERSPECTIVES: EXPLORING THE INTEGRATION OF ARTIFICIAL INTELLIGENCE APPLICATIONS IN EDUCATION H. Cirali Sarica	4206
THE INFLUENCE OF INTERLOCUTORS' EXPERIENCE IN THE PERCEPTION OF NON-NATIVE SPEECH FOR ESTABLISHING SMOOTH GLOBAL COMMUNICATION AND THE ROLE OF VCL IN ESP CLASSES S. Dumbadze, T. Dilaverova	4212
AN INNOVATIVE METHODOLOGY FOR THE TRAINING OF ADULTS WITH OBSTACLES THROUGH UNDERTAKING AND EMPLOYABILITY IN THE THIRD SECTOR	4219
R. Navarro Cerveró, R. Sixto Iglesias, L. Gómez Estrada, L. Gómez Estrada, J.L. Gómez Ribelles	

LEARNING ELEMENTS IN LMS - A SURVEY AMONG STUDENTS S. Staufer, F. Hauser, L. Grabinger, D. Bittner, V. K. Nadimpalli, F. Bugert, T. Ezer, S. Röhrl, J. Mottok	4224
WOMEN IN ENGINEERING AND ARCHITECTURE: EVOLUTION IN THE NUMBER OF STUDENTS ENROLLED AND ACTIONS TO PROMOTE VOCATIONS IN THE UNIVERSITY OF ALICANTE	4232
M.F. Gomez-Rico, E. Gimeno, A. Font, M. Sempere, C. Rizo, S. Spairani, V. Gilart, M.D. Andujar, M.J. Moya, R. Perez, S. Vazquez, J.A. Nescolarde, L. Aragones	
IS ARTIFICIAL INTELLIGENCE A MOTIVATION ANGEL FOR LANGUAGE LEARNERS? E. Pipia, E. Kintsurashvili, T. Gurgenishvil	4242
A DESIGN-DRIVEN APPROACH TO FOSTER SENSORIAL LEARNING IN EARLY CHILDHOOD EDUCATION C. Regni	4251
THE ENGLISH-ONLY FALLACY AND GLOBAL COMPETENCE: RETHINKING LINGUISTIC DIVERSITY IN HIGHER EDUCATION B. Kjellgren, T. Richter	4260
ENGINEERS OF THE FUTURE: STRATEGY TO CULTIVATE FEMALE TALENT THAT OPENS PATHS IN STEM A. Font, C. Rizo, M. Sempere, E. Gimeno, M.F. Gomez-Rico, S. Spairani, V. Gilart, M.D. Andujar,	4265
M.J. Moya, R. Perez, S. Vazquez, J.A. Nescolarde, L. Aragones BEST PRACTICES AND RECOMMENDATIONS IN EDUCATION TO ENABLE THE INTEGRATION OF REFUGEES INTO THE EUROPEAN UNION HEALTH CARE PROVISION SYSTEMS Z. Valero-Ramon, M. Segura, K. Karlgren, N. Stathakarou, M. Harjani, I. Dratsiou, A. Varella, P.	4273
Bamidis, S. Konstantinidis, V. Traver	4201
COMPETENCY MODEL OF MANAGEMENT STUDENT: COMPLIANCE WITH THE EMPLOYER'S REQUEST (CASE OF LOMONOSOV MOSCOW STATE UNIVERSITY) S. Shchelokova, I. Suslova	4281
EXPANSION OF THE ERASMUS+ PROGRAMS IN NON-EU COUNTRIES AND CHALLENGES: INTEGRATION OF PARTICIPANTS COMING FROM CONFLICTING COUNTRIES G. Teksöz, B. Akpınar	4282
TEACHING SCIENCE AND CREATIVITY THROUGH CHALLENGE-BASED LEANING: A FORMATIVE PROPOSAL FOR PRE-SERVICE TEACHERS E. Ribeiro, A. Rodrigues, J. Katz-Buonincontro	4287
ERASMUS+ PROGRAMS AND THEIR IMPACT ON THE PARTICIPANTS' INFORMATION AND AWARENESS OF THE EU B. Akpınar	4288
AI LITERACY MEETS SOCIO-EMOTIONAL LEARNING: ASSESSING TRANSFORMATIVE EDUCATIONAL PRACTICES IN SLOVENIA A. Lipovec, S. Gartner, M. Krašna	4295
DRIVERS AND BARRIERS TO THE ADOPTION OF GAMIFICATION TO SUPPORT LOCAL ADMINISTRATORS IN POSITIVE ENERGY DISTRICTS IMPLEMENTATION: AN ITALIAN CASE STUDY G. Marinensi, B. Botte, S. Biancifiori, N. Caballero	4300
EXPLORING COMPLEX LANDSCAPE: CHALLENGES AND OPPORTUNITIES FOR INTERNATIONAL STUDENTS AND STARTUP ENTREPRENEURS WITH FOREIGN BACKGROUNDS IN FINLAND O. Bogdanova, P. Rantanen	4301
STRATEGIES FOR SUCCESS: EXPLORING EFFECTIVE TEACHING APPROACHES TO DEVELOP COLLABORATION SKILLS IN HIGHER EDUCATION R. Juurikas, B. Petjärv, H. Kiis	4307
DEVELOPING DIGITAL LEARNING DESIGNS – THE DIGITAL TEACHING AND LEARNING LAB (DIGITELL) S. Zeaiter	4314
AIED FOR BUILDING AN INDIVIDUAL LEARNING TRAJECTORY FOR STUDENTS IN THE ACQUISITION OF KNOWLEDGE AND FOR TEACHERS IN THE DEVELOPMENT OF PROFESSIONAL COMPETENCIES	4324
O. Tapalova, N. Zhiyenbayeva, S. Tapalov, K. Seitimbetova, S. Zhiyenbayeva, A. Seitmetov, Z. Zhiyenbayeva, Z. Yerkinaliyeva, Z. Utesheva	

ENHANCING ENGLISH EDUCATION IN JAPAN: GIGA SCHOOL CONCEPT, ICT TRAINING, AND INNOVATIVE APPROACHES FOR ASPIRING ENGLISH TEACHERS S. Sekiguchi	4330
DEMO LESSONS OBSERVATION, REFLECTION, AND IMPROVEMENT TO DEVELOP PROFESSIONAL COMPETENCY IN THE ENGLISH LANGUAGE TEACHING (ELT) TRAINING PROGRAM AT THE NATIONAL UNIVERSITY OF EDUCATION (UNAE) IN ECUADOR U. Recino	4331
INNOVATIVE TECHNOLOGIES IN MUSEUMS: A REVIEW OF GAMIFIED AUGMENTED REALITY EXPERIENCES B. Botte, G. Marinensi, V. Malakuczi, W. Vitaletti	4338
ONLINE LITERACY ASSESSMENT ALSO AS A LEARNING STRATEGY: A PROPOSAL FOR ASTRONOMY I.A. Costa, P. Jadhav, N. Murthy	4346
USING MYTHOLOGICAL IDIOMATIC EXPRESSIONS IN A FOREIGN LANGUAGE CLASSROOM - BRIDGING THE PAST AND THE PRESENT V. Koceva, D. Kuzmanovska, A. Vitanova-Ringaceva, T. Ulanska	4351
VIRTUAL PRODUCTION: A CLOSER LOOK AT DIGITAL INNOVATION AND HEALTH G. Cruz, J. Raimundo, M. Madureira	4358
ENHANCING SUPPORT STRATEGIES FOR PROFESSORS AND QUALITY	4367
ASSURANCE IN DESIGNING AND FACILITATING ONLINE MASTER'S DEGREE COURSES R.A. Pozo Rocha, M. Nuñez, E. Ramirez	4307
FORMATION OF TEACHER'S ELECTORAL CULTURE I. Baykhanov, V. Pisarenko	4375
EXPLORING THE IMPACT OF HAPTIC FEEDBACK ON LEARNING IN VIRTUAL AND AUGMENTED REALITY ENVIRONMENTS: A (COMPREHENSIVE) LITERATURE REVIEW P. Varney, D. May, A. Richert	4385
PARTICIPATION IN REMEDIAL ACTIVITIES TO OVERCOME A LACK OF BASIC SKILLS IN MATHEMATICS: ANALYSIS OF THE EVOLUTION OF THE STUDENT'S RESULTS INVOLVED IN AN ASSESSMENT DEVICE IN A PSYCHOLOGICAL AND EDUCATIONAL SCIENCES PROGRAM J. Liemans, L. Lacourt, L. Santoro, D. Cauchie, M. Bruyninckx	4390
RACIAL MICROAGGRESSIONS EXPERIENCED BY UNIVERSITY STUDENTS FROM IMMIGRANT BACKGROUNDS IN FRENCH-SPEAKING BELGIUM: ANALYSIS OF THE EFFECTS OF RACISM ON THEIR WELL-BEING, ACCULTURATION ORIENTATIONS AND SOCIAL INTEGRATION D. Cauchie, O. Ezzemami	4398
A POLY CRISIS IN CACAO P. Lane, E. Gomez, W. Chavez	4406
STACT - A RESEARCH PROJECT WITH AND BY SCHOOL PUPILS C. Rudloff, S. Zauchner, R. Bauer, C. Baum	4414
BLENDED LEARNING IN TEACHING A FOREIGN LANGUAGE TO MULTICULTURAL GROUPS OF PHARMACY STUDENTS I. Nalimova, K. Sakhibullina, N. Soboleva	4421
EVIDENCE-BASED EDUCATIONAL POLICY IN SPAIN: STATE OF THE ART J.L. Arco-Tirado, F.D. Fernández-Martín, L. Moral-Soriano	4427
DESTABILISING STEREOTYPES TO CREATE BELONGING FOR COMPUTING STUDENTS R. Awan	4428
MEANINGFUL USE OF GENERATIVE AI IN VISUAL ARTS EDUCATION A. Korepanova, A. Annus, T. Väljataga	4433
CULTURAL EXCHANGE PROGRAM AS A WAY OF LEARNING LANGUAGE AND TEACHING PRACTICE K. Sakhibullina, I. Nalimova, N. Soboleva	4442
INCORPORATING PROJECT-BASED X-REALITIES INTO STUDENTS' REALITIES L. Müller, V. Varney, T. Keller, N. Buck, J.N. Terschüren	4446
DEEP TECHNOLOGIES ENTREPRENEURSHIP FOR PHD STUDENTS. CASE STUDY: SUPPORTING NEW LONGEVITY MODELS S. Valladares-Rodríguez, D. Facal, C. Dosil-Díaz, R. Iglesias-Rodríguez	4451

DESIGN OF A SPECIAL EDUCATIONAL ENVIRONMENT FOR THE FORMATION OF TEACHERS ELECTORAL CULTURE I. Baykhanov	4456
THE CLASSROOM IS NOT DESIGNED FOR ME: A STUDY ON THE EMOTIONAL IMPACT AND PREFERENCE OF FOUR CONTEMPORARY ARCHITECTURAL STYLES J. Figueroa-Castillo, W. Rondero-Palestino, C. Llinares Millán, J.L. Higuera-Trujillo	4466
PRIORITIZING AFRICENTRIC EDUCATION FOR HEALTHCARE: HOW WE DID IT AND WHAT WE LEARNED M. Brown, B. Hamilton-Hinch	4472
PHYSICS MATERIALS FOR STUDENTS AND TEACHERS, EVALUATED BY DIFFERENT STAKEHOLDERS K. Susman, S. Dolenc, J. Pavlin	4473
EXPLORING LARGE LANGUAGE MODELS FOR THE EDUCATION OF INDIVIDUALS WITH COGNITIVE IMPAIRMENTS A. Fiora, F. Piferi, P. Crovari, F. Garzotto	4479
THE DESIGN FOR CIRCULARITY WORKSHOP. MERGING CONSTRUCTION INDUSTRY CHALLENGES WITH EDUCATIONAL GOALS L. Daglio, E. Ginelli	4488
MOTIVATIONS FOR CHOOSING REMOTE TEACHING/LEARNING TOOLS AT A UNIVERSITY OF HEALTH SCIENCES IN THE POST-PANDEMIC PERIOD: THE TEACHERS' ATTITUDES E. Butrime, D. Gudaityte, L. Dulksniene, V. Tuomaite	4494
TEACHERS' ENGAGEMENT AND STUDENTS' ACADEMIC PERFORMANCE J. Calleja-Blanco, A. Núñez-Carballosa	4502
STUDENT-CENTRED TEACHING IN THE NATURAL SCIENCE VISITS COURSE K. Susman, M. Vošnjak, J. Pavlin	4508
WORDLE IN THE CLASSROOM: A GAME-CHANGING APPROACH TO ACTIVE LEARNING S. Cavero, E. G. Pardo, M. González de Lena	4513
USING HARDWARE TO SUPPORT ARTIFICIAL INTELLIGENCE IN EDUCATION R. Fojtik	4519
MOOC-ENHANCED LEARNING IN AN UNDERGRADUATE ENGINEERING COURSE J.A. Pow-Sang, D. Corta	4525
ASSESSMENT OF STUDENTS' ACHIEVEMENTS USING DIGITAL TOOLS E. Mesic, A. Pongrac Pavlina, K. Pavlina	4530
EUROPEAN UNIVERSITY ALLIANCES: A CASE STUDY OF PORTUGAL N. Gogadze, E. Cunha, J. Aguiar, T. Carvalho	4537
RESPONDING TO THE CHALLENGES OF MODERN LANGUAGE TUITION THROUGH INTER-UNIVERSITY COOPERATION BETWEEN FOUR UNIVERSITIES IN THE HELSINKI METROPOLITAN AREA P. Kudel, J. Viinanen	4547
AI IN EDUCATION: A COMPARATIVE STUDY OF RHIZOMATIC AND CONNECTIVISM PEDAGOGICAL THEORIES A. Correia, P. Água, V. Conceição	4548
IMPROVING LEARNING OUTCOMES BY LABELING SLIDES BASED ON THE COMPLEXITY OF THEIR CONTENT D. Ortega Del Campo, V. Ruiz Parrado, M. González de Lena, S. Cavero, J. Vélez	4556
ADOLESCENCE AND CYBERBULLYING: A RESTORATIVE APPROACH V. Guardabassi, P. Nicolini	4562
COMMUNICATING SCIENCE THROUGH A PODCAST: THE CASE OF "POD'ISTO?" G. Reses, E. Lima, R. Rodrigues, M. Lucas	4571
APPROACHING SUSTAINABLE DEVELOPMENT FROM A FINANCIAL ACCOUNTING PERSPECTIVE D. Gallardo Vázquez, J. Vega Cervera	4572
ADAPTIVE LEARNING THROUGH AI: REINFORCEMENT LEARNING IN TEACHING MULTIPLICATION TABLES L. Drožđek, I. Pesek	4576
TEACHERS' OPINION ABOUT THE APPLICATION OF AI IN THE EDUCATION M. Krašna, B. Arcet, S. Gartner, A. Lipovec	4581
SUPPORT FOR ASYNCHRONOUS DISTANCE LEARNING R. Fojtik	4590

DEVELOPING EDUCATIONAL LEADERSHIP IN THE SCHOOL SYSTEM: ANALYSIS OF CASE STUDIES G. Moretti, A. Morini, P. Giovane	4596
USING DIGITAL TECHNOLOGY TO PROMOTE COLLABORATION AND TEAMWORK AMONG UNIVERSITY STUDENTS: A CASE STUDY P. Gradišek, A. Polak	4605
TEACHING MODERN PERSPECTIVES ON ATOMIC STRUCTURE IN JUNIOR HIGH SCHOOL D. Toumazatos, N. Papadimitropoulos	4606
ARE B2 LEARNERS' WRITTEN PERFORMANCES ASSESSED AS B2? J. Bérešová	4611
EDUCATIONAL ROBOTICS RESOURCES FOR THE DEVELOPMENT OF DIGITAL SKILLS OF PRESERVICE TEACHERS S. Cruz-Naranjo, J. Encalada, M. Arboleda, J. Chamba	4616
THE IMPACT OF AI ON IMPROVING WRITTEN PERFORMANCES J. Bérešová	4625
THE RADIOLAB PROJECT FOR THE MEASUREMENT OF ENVIRONMENTAL RADIOACTIVITY IN THE CLASSROOM: THE EXPERIENCE IN THE SARDINIA REGION V. Fanti, D. Barrale	4630
OUTDOOR EDUCATION AS AN INCLUSIVE PRACTICE D. Chiusaroli	4635
BEYOND INFORMATION: CREATING AN EXPERIENCE TO DEVELOP EMPATHETIC CONNECTIONS USING IMMERSIVE VIRTUAL REALITY M. Harris, K. Moody	4640
SERVICE-LEARNING EXPERIENCE IN GEOLOGICAL ENGINEERING PROGRAM, UCSC, CHILE M. Basso, K. Roberts, H. Abarca	4641
THE CONTEMPORARY SCHOOL IN THE DIGITAL AGE: DIFFERENCES BETWEEN TEACHERS AND SCHOOL LEADERS IN THE ASSESSMENT OF DIGITAL COMPETENCE WITHIN THE FRAMEWORK OF DIGCOMP2.2 M. Vičič Krabonja, A. Flogie, B. Aberšek, D. Zemljak	4646
INNOVATIONS IN THE TEACHING OF ARCHITECTURAL PROJECTS: THE ASSESSMENT OF STUDENTS TO NEW METHODOLOGIES BASED ON A SCIENTIFIC-TECHNOLOGICAL APPROACH I. Estrada-Frías, F. Aguirre-Ponce, C. Llinares Millán, J.L. Higuera-Trujillo	4652
THE CONCEPT OF SELF-EFFICACY IN ASSISTANT TEACHERS AND ITS RELEVANCE IN THE EDUCATIONAL PROCESS: A SCIENTIFIC LITERATURE REVIEW IN THE FIELD OF EDUCATION SCIENCES K. Grigaitė-Bliūmienė	4657
BLENDED INTENSIVE COURSES ERASMUS: NEW SUCCESSFUL EXPERIENCES IN EUROPEAN UNIVERSITIES NETWORKS M. Fumo, V. Vitiello, A. Racolta, D. Psychogyios, G. D'Angelo	4665
ACTIVE METHODOLOGIES THROUGH THE "EXTREME GAME EVENT" EXPERIENCE TO ENHANCE RESILIENCE M.S. Medina-Salgado, C. Paredes-Bartolomé, V. Ramírez-Herrero, M. Ortiz-de-Urbina-Criado, M. Llorente-Isidro, J.A. Medina-Merodio, L. Bernal-Sanz	4675
FOSTERING MEDIA LITERACY IN EDUCATION: CONSIDERING THE CHILD DEVELOPMENT APPROACH M. Lozar, I. Pesek, D. Šimunović	4685
CURRICULAR DYNAMICS IN SECOND-CHANCE EDUCATION: A DOCUMENT ANALYSIS OF SCHOOL CURRICULA FOR AT-RISK STUDENTS IN ESTONIAN VET L. Roos, K. Trasberg	4690
ENVISIONING EDUCATION IN 2064: PRE-SERVICE TEACHERS' PERSPECTIVES ON TEACHING SKILLS IN NATURAL AND SOCIAL STUDIES D. Zemljak, U. Martinc, M. Kerneža	4698
ARTIFICIAL INTELLIGENCE THROUGH THE EYES OF UNIVERSITY STUDENTS FOR THE SECOND TIME K. Kilianova, P. Kockova, M. Zavodna, L. Klubal, K. Kostolanyova	4705
EXAMINING THE INDUCTIVE REASONING OF PRIMARY AND SECONDARY SCHOOL CHILDREN R. Madarász	4713

COMPARING ONLINE AND FACE-TO-FACE LEARNING THROUGH THE EYES OF PRIMARY AND SECONDARY SCHOOL TEACHERS M. Závodná, K. Kiliánová, P. Kočková, K. Kostolányová	4722
LEARNING WITHIN UNESCO CULTURAL LANDSCAPES: ERASMUS MUNDUS MASTER'S EXPERIENCES IN COMPARISON G. D'Angelo, M. Fumo, G. Gugg, G. Trinchese	4730
METHODOLOGY AND ACTIVE LEARNING ASSESSMENT: CRITICAL THINKING IN TECHNICAL HIGHER EDUCATION M.D. Reyes Tolosa, Y. E-Martin, L.D. Sánchez Diana	4735
REFLECTING ON THE PARTICIPATORY APPROACH USED DURING EXTERNAL QUALITY ASSURANCE TO IMPROVE STAKEHOLDER PARTICIPATION IN INTERNAL QUALITY ASSURANCE R. Matshoba, E. Johannes	4741
CHALLENGES FOR TODAY'S CONSTRUCTION: FOSTERING CRITICAL THINKING AND SUSTAINABILITY IN BUILDING D. Ferrández, M. Alvarez, A. Zaragoza, C. Morón	4748
COGNITIVE TOPOLOGY-IMAGERY IN SECOND LANGUAGE ACQUISITION: A THEORETICAL INVESTIGATION J. Jia	4754
CHALLENGE-BASED LEARNING IN PHYSICAL PRINCIPLES OF STRUCTURES: A 3D EXPERIENCE M. Alvarez, D. Ferrández, C. Morón, A. Morón	4764
NAVIGATING CHANGE – EXPLORING THE MANDATORY USE OF AI/CHATBOTS IN MANAGEMENT ESSAYS J. Kirch, K. Böttcher	4771
HOW TO COUNTERACT THE DROP IN ADULT READERS: VALIDATION IN THE ITALIAN CONTEXT OF THE LITERARY RESPONSE QUESTIONNAIRE A. Morini, G. Moretti	4778
EXPLORING POSSIBILITIES OF IMPLEMENTING BLOCKCHAIN FOR SECURE, DECENTRALIZED EDUCATIONAL RECORDS A. Minchev, M. Karabaliev, V. Stoykova	4786
THE ROLE OF SCHOOLS IN SHAPING SUSTAINABLE DEVELOPMENT COMPETENCIES IN PRE-UNIVERSITY STUDENTS R. Simut, C. Simut	4787
"DISCOVERING COSMIC RAYS": A HIGH SCHOOL PHYSICS TEACHERS' COURSE AS A LINK BETWEEN EDUCATION AND RESEARCH R. Antolini, C. Aramo, A. Candela, N. D'Ambrosio, M. De Deo, A. Giampaoli, S. Hemmer, A. Iuliano, I. Veronesi	4795
THE PERSPECTIVES OF DISCLOSING INTELLECTUAL CAPITAL IN LEADING RUSSIAN UNIVERSITIES M. Ulyanova, V. Gerasimenko	4803
SOCIAL PEDAGOGUES AND THEIR PROFESSIONAL APPLICATION IN CZECH SCHOOLS J. Šmída, T. Čech, T. Hormandlová, V. Balaban	4811
HEALTH AND WELL-BEING IN EDUCATION: WHAT HEALTH CHALLENGES DO TODAY'S EDUCATIONAL LEADERS FACE? L. Snellman	4817
CEURS: PROGRAM FOR THE CREATION OF A NATIONAL NETWORK OF AGENTS FOR THE MUNICIPALIZATION OF AGENDA 2030 A. Amin, R. Pacheco, M. Carneiro, F. Gauthier	4828
STUDYING METACOGNITIVE LEARNING PROCESSES WITH THE USE OF EYE- TRACKING TECHNOLOGY Z. Jurikova, N. Dostalova, L. Juhanak, V. Jurik	4835
RE.MA.C.: AN INTERCULTURAL EDUCATIONAL INITIATIVE A. Albanese, N. Eteokleous, N. Kyriacou, M.J. Guerreiro Figueiredo, M. Mitsiaki, E. Xeni, S. Zammit Pulo	4836
CHILDREN AS GUARDIANS OF THEIR ONLINE ENVIRONMENT P. Kockova, K. Kilianova, K. Kostolanyova	4844
AN INTERNATIONAL RESEARCH AND DESIGN WORKSHOP: UNPRECEDENTED DYNAMICS OF LEARNING AND RESEARCH G. Trinchese, P. Villoria, A. Verniero, M. Del Rio Merino	4849

DOUBLE MEANINGS: DISCOVERING THE GEOSCIENCE MEANING OF DAILY LIFE WORDS IN A FUNNY WAY S. Amici, M. Dinezza	4859
THE QUEEN DIDO: ARTISTIC, MUSICAL, LITERARY AND MATHEMATICAL GEOMETRIES - AN INTERDISCIPLINARY EDUCATIONAL PATH FOR HIGH SCHOOL STUDENTS I. Veronesi	4864
MOTIVATION TO STUDY IN CONTEXTS OF ORGANIZED CRIME C.L. Moccia, F. Sabatano	4873
INSIGHT INTO OPEN BOOK MANAGEMENT IN TRANSPARENT INTERNAL PERFORMANCE REPORTING D. Šteffko, D. Trubač, J. Papula	4878
THE ART OF BEING AN ARCHITECT: ARCHITECTURAL EDUCATION IN THE CONTEXT OF THE 21ST CENTURY I. Voronkova	4886
EXPLORING THE POTENTIAL OF LARGE LANGUAGE MODELS FOR ENHANCED VIRTUAL NON-PLAYER CHARACTER INTERACTIONS A. Anand, E. Polyak	4895
LEARNING BY DOING: PARTICIPATORY DESIGN AND ADAPTIVE REUSE TO REVITALISE AN OLD HAMLET A. Violano, M. Fumo, G. D'Angelo, M. Merola, G. Trinchese, R.G. Aenoai	4899
EVIDENCE FOR IMPROVING EDUCATION FOR SUSTAINABILITY IN CHILE: AN APPLIED PERSPECTIVE ON LEARNING INTERACTIONS L.M. Cerdá Suárez	4909
INTRODUCTION OF PROBLEM BASED LEARNING FOR TRANSFORMATION MANAGERS IN THE AUTOMOTIVE INDUSTRY U. Kaschka, J. Kirch	4916
IMPORTANCE OF TUTORIALS IN LEARNING THE SUBJECT OF ANALOG ELECTRONICS J.J. Galiana-Merino, B.Y.N. Benabdeloued, J.A. Jornet-Monteverde	4925
DEVELOPING STUDENTS' ENTREPRENEURIAL MINDSET A. Soler-Domínguez, J.C. Matallín-Sáez, L. Morales, L. Pop	4931
DEVELOPING A METHODOLOGICAL APPROACH AND FRAMEWORK TO ASSESS STUDENTS' ETHICAL APPROACHES TO GENERATIVE AI UTILISATION FOR ASSESSMENTS D. Pike, A. Bajgrowicz	4937
TEACHER COUNSELLING SKILLS IN PROFESSIONAL COMMUNICATION WITH PARENTS T.D. Wendler, R. Čepić, S. Skočić Mihić	4944
ENHANCEMENT OF UNDERGRADUATE EMPLOYABILITY BY AD HOC FINAL DEGREE PROJECT L. Vera, L. Rodríguez-Gómez, M.C. Marrero, J. Rodríguez-Sevilla, J.J. Macías	4952
BLENDED INTENSIVE COURSE (BIP), VERNACULAR CONSTRUCTION IN EUROPE AND ENVIRONMENTAL SUSTAINABILITY. HIGHLIGHTS G. García López de la Osa, P. Izquierdo Gracia, D. Gawryluk, A. Dudzinski, G. D'Angelo, G. Rodonò, M. Mosoarca, O. Banescu, V. Vitiello, K. Misiuk, S. González-Rodrigo, J. García Muñoz	4957
ACCREDITATION AND QUALITY IN EDUCATION OF NON-MEDICAL HEALTH PROFESSIONS AND ETHICAL ASPECTS Z. Freitinger Skalická, L. Michalcová, S. Strnad, S. Kavan	4958
TEACHING, LEARNING AND INTERACTING IN A CONSTANTLY EVOLVING DIGITAL ENVIRONMENT: THE 2DIGI2 PROJECT AND ITS OPEN ACCESS, MULTILINGUAL RESOURCES FOR LANGUAGE CENTRE TEACHERS D. Erent, S. Vuonokari-Kämäräinen	4963
DESIGNRESEARCHSLAM. ENABLING ACTIVE LEARNING AMONG DESIGN STUDENTS U. Lagger	4964
TEACHERS' SOCIO-EMOTIONAL AND INTERCULTURAL COMPETENCIES IN THE CONTEXT OF INCLUSIVE EDUCATION S. Skočić Mihić, M. Butković, N. Mrvić	4971
THE IMPACT OF ARTIFICIAL INTELLIGENCE ON PERSONALIZED LEARNING IN STEM EDUCATION N. Barkoczi, M.L. Maier, A. Horvat-Marc	4980

VRET ENVIRONMENTS ARCHITECTURE: ADJUSTING IMMERSIVE VIRTUAL ENVIRONMENTS FOR PSYCHOTHERAPEUTIC TRAINING V. Juřík, K. Varšová, J. Chmelík, O. Janoušek	4990
FOSTERING SCHOOL INCLUSION: THE ROLE OF THE CONTACT EXPERIENCE WITH VISUAL DISABILITY D.C. Di Gennaro, A. Amadoro	5001
WEB ACCESSIBILITY OF INFORMATION SERVICES AT UNIVERSITIES IN MERCOSUR AND THE ECONOMIC COMMUNITY OF AFRICAN STATES: A COMPARATIVE STUDY P. Nso-Mangue, T. Acosta, S. Luján-Mora	5006
SOLVE MATH PROBLEMS STEP BY STEP WITH AI SUPPORT O.E. Horváthné Hadobás, V. Stoffova	5015
MEETING THE SUSTAINABILITY CHALLENGES: AN ASSESSMENT OF ENTREPRENEURIAL EDUCATION A. Zherdeva, I. Madi, A. Alzankawi, L. Pop, A. Soler-Domínguez, J.C. Matallín-Sáez, L. Morales	5024
ACTIVE TEACHING AND LEARNING METHODOLOGIES: THE DEMOLA PROJECT AT THE POLYTECHNIC INSTITUTE OF BEJA E. Rodrigues, P. Cravo, M. Tavares, S. Bailoa, M.J. Silva, A. Carloto, F. Teixeira, M. Amaral, F. Silva, A. Canhestro, A. Horta, J. Rodrigues, D. Morais, H. Martins	5035
RETHINKING PEDAGOGY IN THE 4IR AND INNOVATION-DRIVEN ECONOMY: CHALLENGES AND OPPORTUNITIES R. Tsephe, L. Makoele	5042
EXPLORING BLOCKCHAIN'S HORIZONS IN EDUCATIONAL GAMING G. Jaferian, D. Ramezani, E. Polyak, M. Wagner	5050
WEB ACCESSIBILITY OF TOP-10 UNIVERSITIES OF AFRICA, AMERICA, ASIA, EUROPE, AND OCEANIA: 2023 SNAPSHOT P. Nso-Mangue, T. Acosta, S. Luján-Mora	5059
IMPLEMENTATION OF EXPERIENTIAL LEARNING FOR ENTREPRENEURSHIP BACHELOR PROGRAM AT TEC DE MONTERREY J. Rehak, V.M. Jiménez Rodríguez, P.E. Alonso Galicia	5069
SETU: SAFETY IN EXCAVATION AND TRENCHING FOR YOU A TRAINING AND DECISION-MAKING TOOL FOR WORKER SAFETY IN EXCAVATION AND TRENCHING OPERATIONS IN CONSTRUCTION S. Priyadarshini, E. Cochran Hameen, Z. Shi	5071
THE INTERNATIONAL ATTRACTIVENESS OF THE EU HIGHER EDUCATION SYSTEM P. Sospiro, M. Giurato, J. Pange	5080
PERCEPTION AND PREFERENCES OF LANGUAGE LEARNERS: EDUCATIONAL EXPERIENCE IN VIRTUAL AND DISTANCE LEARNING MODALITIES V. Canese, J. Mereles	5085
MATHEMATICS FOR A SUSTAINABLE FUTURE: UNPACKING HIGH SCHOOL TEACHERS' EXPERIENCES WITH BIG DATA IN PEDAGOGICAL PRACTICES K. Yaro, N. Louis, V. Freiman, J. Kamba, A. Erazo	5095
ENHANCING CYBERSECURITY EDUCATION IN SECONDARY SCHOOLS: A CYBOK-BASED ANALYSIS AND STRATEGIC APPROACH M. Alotaibi, Y. Cherdantseva, O. Rana, C. Teehan	5096
TECHNOLOGIES FOR SITUATIONAL AWARENESS IN AUTONOMOUS SHIPPING AND THEIR IMPACT ON MARITIME TRAINING AND EDUCATION D. Rostek, M. Baldauf	5105
RE-EXAMINING THE REQUIREMENTS FOR A VLE (VIRTUAL LEARNING ENVIRONMENT) FOR A POST-COVID AND POST-AI AGE D. Pike, F. Islam	5115
AN INVESTIGATION INTO THE EDUCATIONAL POSSIBILITIES OF METAVERSE IN THE CONTEXT OF EDUCATIONAL GAMING: A REVIEW D. Ramezani, G. Jaferian, M. Wagner	5120
SOCIAL ENTREPRENEURSHIP AND COMPLEX THINKING: AN EXPLORATORY STUDY WITH A GENDER PERSPECTIVE OF STUDENTS AT A MEXICAN UNIVERSITY P.E. Alonso-Galicia, J.C. Vázquez-Parra, M.S. Ramírez Montoya, J. Rehák	5130
ADDRESSING THE FEAR OF PROSPECTIVE INTERNATIONAL MEDICAL GRADUATES JOINING THE NHS N.T. San, K.R. Rahman, A. Mahmood, K. Brahmbhatt, E. Kavanagh, J. Hodson, J.R. Wongsikhee, C. Grantham, D. Fidoe, D.J. Bowrey	5138

A PROGRAMME-BASED APPROACH TO BUILDING AUTHENTICITY INTO ASSESSMENT AND FEEDBACK PROCESSES THROUGH CONSULTATION WITH PROFESSIONAL, STATUTORY AND REGULATORY BODIES R. Harding, D. Dodd, N. O'Neill, J. Harvey	5139
IMPROVING EXPECTATIONS OF STUDENTS WITH DISABILITIES IN SCIENCE DEGREES E. Johannes	5146
THE "X" FACTOR IN THE RELATIONS OF SOCIO-ECONOMIC STATUS AND "NATIONAL" IDENTITY OF BULGARIANS FROM MOLDOVA, UKRAINE AND SERBIA Z. Dimova	5147
ARTIFICIAL INTELLIGENCE (AI) SKILLS SETS FOR TODAY'S HUMAN RESOURCE MANAGEMENT PROFESSIONALS: RECOGNIZING THE NEED FOR ADDITIONAL TECHNOLOGY TRAINING AND DEVELOPMENT B. Barrett	5148
CLOSING THE WORKFORCE SKILLS GAP M. Hernandez, W. Thompson, B. Zoghi	5153
TRENDING OF VIRTUAL EDUCATIONAL AND BUSINESS CONFERENCES: THE SUSTAINABILITY OF NEW PRESENTATION FORMATS AND THEIR ATTRACTION B. Barrett	5162
THE VERTICAL PROGRAM: ENHANCING DIVERSITY IN STEM LEADERSHIP THROUGH WORKPLACE LEARNING T. James, B. Zoghi	5167
ENHANCING EDUCATION THROUGH MICROSOFT 365: A CASE STUDY AT TEXAS A&M UNIVERSITY G. Jones, S. Thompson, B. Zoghi, W. Lu	5174
THE USE OF COMICS AS AN ACCEPTABLE VISUAL FORM TO COMMUNICATE ACADEMIC CONTENT K. Salvador-Cisneros, W. Wonsang	5181
THE IMPACT OF INTERACTIVE ONLINE FORMATIVE QUIZZES ON ACADEMIC PERFORMANCE IN ONLINE VERSUS IN-PERSON MARKETING COURSES N. Saqib	5192
GROWING THE GARDEN OF TEACHING & LEARNING IN HEALTH EDUCATION M. Brown	5196
ARE HIGHER EDUCATION INSTITUTIONS PREPARED FOR ARTIFICIAL INTELLIGENCE? M.J. Araiza-Vazquez, M.E. Brosig Rodriguez, F.G. Figueroa Garza	5197
THE ETHICAL REPERCUSSIONS OF CHATTING WITH CHATGPT: MULTIPLE LANGUAGE LEARNERS ON AN ENGLISH-BASED HIGHER EDUCATION PLAYING FIELD C. Beaton, T. Parvathappa	5205
THE FLIPPED CLASSROOM BENEFITS AND CHALLENGES: PERSPECTIVES OF PRESERVICE AND IN-SERVICE TEACHERS IN A POST-GRADUATE PROGRAM IN THE UAE M. El Samaty	5211
UNROOTING BELIEFS ABOUT SECOND LANGUAGE LEARNING ANXIETY BY FOSTERING GROWTH MINDSETS IN PRE-SERVICE ELT TEACHERS J. Fonseca Chacana	5212
MULTIMEDIA APPLICATIONS IN EDUCATION V. Stoffova, V. Gabal'ová, S. Hájniková, M. Šuplatová	5219
THE READINESS OF TEACHERS TO TEACH INFORMATICS IN ELEMENTARY SCHOOLS V. Stoffova, H. Hyksová, S. Hájniková	5227
ENHANCING CRITICAL THINKING THROUGH SELF-ASSESSMENT AND PEER REVIEW IN GENETIC ENGINEERING AND SYSTEMS BIOLOGY SUBJECTS A. Sánchez Torralba, C. Blázquez Ortiz, G. Guevara Acosta, M.T. López Conejo, M. Lorente Pérez, J.M. Mateo Mendoza, G. Piedrafita, R. Ranz Valdecasa, S. Rayego Mateos, T. Sánchez Velasco, J.M. Navarro Llorens	5238
TECHNOLOGY'S IMPACT ON STUDENTS' INTELLECTUAL HAPPINESS, COGNITION, AND OVERALL WELL-BEING A. Pearce	5246

EVALUATION OF THE TEACHING-LEARNING PROCESS WHEN USING LANGUAGE MODELS OF ARTIFICIAL INTELLIGENCE SUCH AS CHATGPT R. Rangel-Corona, J.L. Mora-Guevara, B. Weiss-Steider	5257
THE USE OF GAME PLAY IN A COMPARISON OF HUMAN ROBOT INTERACTIONS AND THE ADOPTION OF LEARNING STRATEGIES H. Gerardo, A. Eguchi, R. Twomey	5262
PROMOTING HEALTH HUMANITY: INTRODUCING AN ONLINE HEALTH HUMANITIES COURSE AS PART OF A TRANSNATIONAL MEDICAL EDUCATION PROGRAM P. Brett-MacLean	5269
USING PEER REVIEW TO CREATE COMMUNICATION SITUATIONS IN TEACHING WRITING K. Käpp, E. Miilman	5279
A STEM WORKSHOP FOR KIDS IN EARLY ELEMENTARY SCHOOL GRADES ABOUT SAMPLING THEOREM OF INFORMATION THEORY D. Ikeda	5284
APPROACHING TO THE IMPACT OF SCIENCE DIVULGATION EVENTS: A SURVEY ON THE SOCIAL PERSPECTIVE OF SCIENCE E.J. Delgado-Pujol, G. Martínez Muñoz, M. Merinero, D. Casado, G. Raposo-Hernández, J. Vázquez Cabello, B. Begines, A. Alcudia	5289
APPROACHING TO THE DIFFICULTIES OF SCIENCE DIVULGATION EVENTS: A SURVEY ON THE RESEARCHER PERSPECTIVE G. Martínez Muñoz, E.J. Delgado-Pujol, M. Merinero, D. Casado, G. Raposo-Hernández, J. Vázquez Cabello, B. Begines, A. Alcudia	5297
ADVANCING APPLIED TECHNOLOGY EDUCATION IN BIOMEDICINE THROUGH UNDERGRADUATE-LED COHORT-BASED TRAINING PROGRAMS A. Iyer, A. Kumar, J. Rosen, D. Kumar, A. Shah	5306
AN INVESTIGATION OF PARENTS' AND TEACHERS' PERCEPTIONS OF HOW THE COVID-19 PANDEMIC AFFECTS THE EDUCATION AND MENTAL HEALTH OF PRIMARY AND SECONDARY SCHOOLS' STUDENTS IN ANTIGUA AND BARBUDA M. Joseph, A. Joseph	5317
RE-IMAGINING SUSTAINABLE AND EQUITABLE PROFESSIONAL DEVELOPMENT FOR A NEW DIGITAL ERA: ONLINE COLLABORATIVE ACTION RESEARCH (OCAR) AS TEACHER PROFESSIONAL DEVELOPMENT MODEL M. Pellerin	5327
EMPOWERING SUSTAINABLE TOURISM: THE CRUCIAL ROLE OF EDUCATION AND CONTINUOUS LEARNING M. Ferreira Dias, M. Amorim, M. Macedo, F. Brandão, R. Madureira	5328
REALIZATION OF AN XAPI DATA TRACKING COMPONENT FOR A SIMULATION IN A PSYCHOLOGY STUDY COURSE AT A GERMAN UNIVERSITY R. Srbecky, O. Eckstein, P. Sudkamp, S.A. Wetzel, W. Fraas, M. Winterhagen, J. Dettmers, M. Hemmje	5336
APPLICATION OF NEW TECHNOLOGIES IN ASTRONOMICAL NAVIGATION ON TRAINING FOR DECK CADETS OF THE MERCHANT NAVY B. Jigena Antelo, J.J. Muñoz Pérez, P. Lopez Garcia, F. Contreras de Villar, A. Contreras de Villar, J.	5344
Ayuso Vilacides, P. Diaz-Carrasco, O. Castillo Lopez SOLUTION FOR THE TEACHING PROBLEM OF THE LABORATORY PRACTICES OF A	5354
HYDRAULICS COURSE O. Castillo Lopez, F. Contreras de Villar, A. Contreras de Villar, P. Díaz-Carrasco, P. Lopez Garcia, J. Ayuso Vilacides, J.J. Muñoz Perez, B. Jigena Antelo	
ENHANCING DATABASE PROFICIENCY THROUGH PROJECT-BASED LEARNING IN ONLINE MASTER'S PROGRAMS L. Rajabion, R. Khatami	5362
A COLLABORATIVE STUDY EVALUATING THE PEDAGOGICAL VARIATION MODEL BY MASTERS COURSE STUDENTS AT FEDERAL INSTITUTE (IFRS) BRAZIL M.S. Rogers, A. Grunewald Nichele	5368
"GOOD CYBERCONNECTIONS": EXPLORING ALTERNATIVES TO ASYNCHRONOUS DISCUSSION FORUMS FOR ENCOURAGING MAXIMUM ONLINE STUDENT COMMUNITY M. Dereshiwsky, J. Domingo, S. Carnz	5377
BRIDGING THE GAP: INNOVATIVE ENTREPRENEURIAL SKILL DEVELOPMENT IN HIGHER EDUCATION P. Rantanen, O. Bogdanova	5378

UNDERSTANDING SALARY INEQUALITY AT THE MEXICAN UAM AND ITS RAMIFICATIONS FOR ACADEMIC PROSPECTS N. Dominguez-Vergara, M.A. Abreu-Hernandez	5384
UNVEILING ASPIRATIONS: EXPLORING THE MOTIVATION TO LEAD BEHIND TRANSITION TO SCHOOL PRINCIPALSHIP G. Arastaman	5394
EXPLORING THE IMPACT OF BLOCKCHAIN IN EDUCATIONAL SETTINGS: A COMPREHENSIVE ANALYSIS A.V. Vevera, U.E. Botezatu	5403
GEOSPATIAL SYNERGIES IN EDUCATION: CULTIVATING SUSTAINABLE FUTURES THROUGH GLOBAL LEARNING NETWORKS U.E. Botezatu, A.V. Vevera	5409
REASONING AS AN OBJECT OF MATHEMATICAL GIFTEDNESS AND CREATIVITY? S. Jablonski	5414
GREEN SKILLS IN AUDIOVISUAL ADVERTISING PRODUCTION STUDENTS: A CURRICULAR PROPOSAL TO PROMOTE THE 2030 AGENDA V. Roger-Monzó	5419
ADDRESSING CYBERSECURITY CHALLENGES IN SLOVAKIA FROM THE EDUCATION PERSPECTIVE K. Kampová, M. Madleňák, I. Dolnák	5423
(WHAT IF) ARTIFICIAL INTELLIGENCE RUNS THE CLASS? OPEN QUESTIONS ON TEACHING COMMUNICATION DESIGN IN THE AGE OF GENERATIVE ALGORITHMS L. Bollini	5427
THE IMPACT OF COLLEGE STUDENTS' SERVICE LEARNING ON THEIR COMMUNICATION, LEADERSHIP AND MENTORSHIP SKILLS G. Ragusa	5428
THE SUCCESS STORY OF INNOVATIVE INTERVENTIONS TO IMPROVE STUDENT ENGAGEMENT & EXPERIENCE AT ANGLIA RUSKIN UNIVERSITY BY BEING PROACTIVE IN ACADEMIC & PASTORAL CARE AS WELL AS EARLY INTERVENTION TO REDUCE COMPLICATION FOR STUDENTS S. Hassani, A. Mevoli	5433
MATCHING NATIONAL STRATEGY TO LOCAL CAPABILITY: THE DESIGN OF A NOVEL CYBER RESILIENCE MSC A. Peck, P. Norris, T. Watson, I. Phillips	5435
SABBATICAL FOR CONSOLIDATION OF PROJECTS TO ENHANCE TECHNOLOGICAL INNOVATION WITHIN THE TEACHING AND LEARNING DIVISION AT A UNIVERSITY OF TECHNOLOGY IN SOUTH AFRICA D. Ngidi	5442
USING GENERATIVE AI AND GPT CHATBOTS TO IMPROVE INSTRUCTION R. Davies, M. Murff	5451
AN ANALYSIS OF THE DIFFERENCES BETWEEN FACE-TO-FACE AND DISTANCE LEARNING AND THE EFFECTIVENESS OF MOCK TESTS IN MATHEMATICS EDUCATION TARGETING SOCIAL SCIENCE STUDENTS Y. Miyamoto	5460
ENHANCING DIGITAL CAPACITY IN EDUCATIONAL INSTITUTIONS C. Caneva	5469
EXAMINING THE IMPACT OF DISTANCE LEARNING ON COGNITIVE AND EMOTIONAL LEARNING RATES IN EARLY PRIMARY EDUCATION M. Sadoughi	5470
THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE SCHOOL MANAGEMENT: A STUDY OF OPPORTUNITIES AND CHALLENGES IN JORDAN A. Al-Omari	5478
TRAIN-THE-TRAINER CONCEPTS IN ACADEMIC CONTINUING EDUCATION U. Georgy	5487
THE INNOVATIVE TRAINING OF DIGITAL COMPETENCES FOR SENIOR PEOPLE WITH BLENDED GAME-BASED ASSESSMENT – THE CASE OF "INFINITY" GAME A. Jerman Blažič	5495
FROM PLAGIARISM TO HONESTY IN SCIENTIFIC PUBLICATIONS F. Artegga, A. Peirats	5503

ACADEMIC WRITING AND INNOVATION: FOR AN EFFECTIVE MANAGEMENT IN THE DIRECTION OF ACADEMIC PAPERS F. Arteaga, A. Peirats	5509
UNVEILING CONNECTIONS INTEGRATING CLIMATE STUDIES AND CYBERSECURITY EDUCATION M. Tedeschi	5518
IMPACT OF PROFESSIONAL DEVELOPMENT ON TEACHER UNDERSTANDING OF QUANTUM INFORMATION SCIENCE R. Lopez, K.J. Matsler	5523
EXPLORING THE SERVICE EXPERIENCE OF MUSEUM VISITORS: A REVIEW OF LITERATURE BASED ON VOSVIEWER F. Saghezchi, M. Amorim, M.J. Rosa	5530
THE ROLE OF AUTONOMOUS SCHOOLS AND INTERACTIVE LEADERSHIP STYLE IN THE USE OF INNOVATIVE TEACHING METHODS BY TEACHERS M. Sadoughi	5539
DIGITAL EDUCATION READINESS AND COLLABORATIVE VIRTUAL ENVIRONMENT FOR MATH, INFORMATICS AND PHYSICS EDUCATION Z. Palkova, M. Harničárová, J. Valíček, M. Palko, Š. Srnka, H. Srnková	5547
DIDACTICAL DESIGN PATTERNS - CASE STUDY DESIGN FOR VIRTUAL COLLABORATIVE LEARNING TO FOSTER THE ACQUISITION OF DIGITAL COMPETENCES A. Jantos	5553
THE SUPERVISING OF DOCTORAL THESES: A COMPREHENSIVE GUIDE OF GOOD PRACTICES INCLUDING PSYCHOSOCIAL ASPECTS F. Arteaga, A. Peirats	5563
GOOD EDITORIAL PRACTICES IN SCIENTIFIC JOURNALS: A PROPOSAL TO IMPROVE THE QUALITY IN THE DIFFUSION OF KNOWLEDGE A. Peirats, F. Arteaga	5572
ASSESSING THE IMPLEMENTATION OF DEANS' COUNCIL MEMBERS' ROLES IN PURSUING GOALS WITHIN JORDANIAN PRIVATE UNIVERSITY SETTINGS H. Bany Issa	5581
THE USE OF SOCIAL MEDIA IN THE TEACHING-LEARNING PROCESS IN HIGHER EDUCATION: A STUDY A.P. Lopes, F. Soares, M. Muñoz	5588
ASSESSMENT OF STUDENTS' SATISFACTION AND EXPECTATIONS WITH AN ONLINE MATHEMATICS PROJECT A.P. Lopes, F. Soares	5589
HOW WILL A STUDY ABROAD PROGRAM TO CHINA PROMOTE AMERICAN TEACHER EDUCATION STUDENTS' EXPERIENTIAL LEARNING, TEACHER IDENTITY, AND PROFESSIONALISM? Y. Liu	5599
SYNERGY BETWEEN PROBLEM-BASED LEARNING, LABORATORY PRACTICES AND THEORY IN THE SUBJECT OF STRENGTH OF MATERIALS IN THE MECHANICAL ENGINEERING DEGREE J. Ferreiro-Cabello, E. Fraile-Garcia, J. Los Santos-Ortega, F. Somovilla Gomez	5600
TECHNOLOGY AS A LEARNING TOOL IN THE SUBJECT OF LANGUAGE PROCESSORS T. Alsinet	5605
E-LEARNING COURSE ON MOBILE WEB APPLICATIONS: COMPARISON OF LEARNING A. Schukin, V. Pak, E. Rezedinova	5609
FEEDBACK IN E-LEARNING: COMPARATIVE STUDY V. Pak, N. Scerbakov, E. Rezedinova	5615
ANALYZING, GATHERING, ASSESSING, DEVELOPING AND SHARING MATH OER – IDEAS BEHIND AN ERASMUS+ PROJECT F. Soares, A.P. Lopes, A. Uukkivi, V. Bocanet, J. Kurvits, C. Serrat, S. Softic, Y. Andriichenko, M.M. Bruguera, M.R. Estela, J. Guàrdia, H. Kiis, O. Labanova, X. Marcote, E. Safiulina, E. Schirgi, A. Šeletski, F. Serdean, T. Tamberg, I. Turcin	5620
PROJECT TEACHING AS A PLATFORM FOR ACQUIRING MUSICAL KNOWLEDGE: EXAMPLES OF THE ACADEMY OF MUSIC IN PULA L. Duraković, S. Vidulin	5621

BIBLIOMETRIC ANALYSIS OF RESEARCH ON COMPETENCES IN HIGHER EDUCATION IN THE FIELD OF DESIGN ENGINEERING B. Pacheco-Blanco, M. Arroyo-Vázquez, V. Pérez-Belis, J. Mira-Alfaro	5622
EXPLORING THE BELIEFS OF PRE-SERVICE ENGLISH TEACHERS L. Astruc, M.P. Marin Garcia	5629
LEARNING SITUATIONS THAT COMBINE SUSTAINABLE DEVELOPMENT GOALS AND UNIVERSAL DESIGN IN MATHEMATICS TEACHING X. Gual-Arnau, L. Gual-Vayà	5630
IMPACT OF RESPONSIBLE CONSUMPTION AND PRODUCTION RESEARCH THROUGH A BIBLIOMETRIC PERSPECTIVE B. Pacheco-Blanco, V. Pérez-Belis, M. Arroyo-Vázquez, E. Hontoria-Hernández	5636
COLLAGE MAKING AS A TEACHING TOOL FOR ESL STUDENTS M. Vežienė	5637
PROJECT- BASED LEARNING AND EMERGING TECHNOLOGIES. A STRATEGY TO IMPROVE ACADEMIC PERFORMANCE IN THE TRAINING OF PROJECT MANAGERS S. Zabala-Vargas, M. Jaimes-Quintanilla, D. Ramírez-Martínez	5642
TEACHING SCHOLARS PROGRAM-ALBERTA INSTITUTE WENZHOU MEDICAL UNIVERSITY (TSP-AIWMU): FACULTY DEVELOPMENT IN SUPPORT OF AN INTERNATIONAL PARTNERSHIP IN MEDICAL EDUCATION C. Hodgson	5647
DIDACTIC STRATEGIES FOR TEACHING HOUSING DESIGN: THE EXPERIENCE OF THE ARCHITECTURE AND URBANISM COURSE AT UNILESTE/MG, BRASIL C. Carvalho	5652
VIRTUALISATION OF CAREER GUIDANCE PROCESSES USING THE CPC MODEL M. Suárez-Ortega, M.F. Sánchez-García, A. Fernández-García, M.I. García-Ripa, C. Romero-García	5662
EXPLORING THE EFFECT OF METADISCOURSE MARKERS ON THE COMPOSING COMPETENCE OF POSTGRADUATE STUDENTS AT ALFASHIR UNIVERSITY IN 2022 M. Arga	5668
LOVE AND CARE FOR NATURE – VALIDATION OF THE SCALE AND ATTITUDES OF STUDENTS AND KINDERGARTEN TEACHERS IN CROATIA D. Andić, E. Maurović	5677
IMPLEMENTATION OF EXTRACURRICULAR OUTDOOR ACTIVITIES IN CROATIAN SCHOOLS P. Pejić Papak, D. Anđić, L. Bobanović	5686
EDUCATION AND CONCEPTS OF ETHICAL STANDARDS FOR MEMBERS OF THE FIRE AND RESCUE SERVICE OF THE CZECH REPUBLIC S. Kavan, Z. Freitinger-Skalicka	5692
EXAMINING THE STUDENTS' STATISTICAL LITERACY: THE CASE OF DAILY DIET S.E. Elma, M. Işıksal-Bostan	5698
IS THERE A NEED FOR MORE MODERN AND UPDATED PROFESSIONAL DEVELOPMENT PROGRAMS ON TECHNOLOGY-ENHANCED LEARNING FOR TEACHING STAFF? M. Albahiri	5705
UNDERSTANDING THE LINK BETWEEN FINANCIAL LITERACY AND ENTREPRENEURIAL INTENTIONS IN A UNIVERSITY EDUCATIONAL SETTING A. Molina-García, R. Martínez-Alonso, M.J. Martínez-Romero, J. Diéguez-Soto	5706
PRIMARY ENGLISH PRACTICE PROGRAMME FOR AGES 6/7: THE NEED FOR A TRANSFORMATIVE AND SUSTAINABLE PRIMARY ENGLISH TEACHING AND LEARNING PROCESSES M. Cruz, D. Mascarenhas, P. Medeiros, A. Pinheiro	5707
EXPLORING THE INTEGRATION OF ARTIFICIAL INTELLIGENCE GENERATIVE TOOLS IN TEACHING HISPANO-AMERICAN LITERATURE: A STUDENT-CENTRIC APPROACH M. Cruz	5717
BLENDED LEARNING AND TEACHING IN THE INVERTED (FLIPPED) CLASSROOM, EXEMPLIFIED BY DOIT (DERMATOLOGY ONLINE WITH INTERACTIVE TECHNOLOGY) G. Burg, H. Gollnick, M. Bagot	5728
EMPIRICAL OBSERVATIONS STUDY OF TEACHING TEXTILES DESIGN (LU XUN ACADEMY OF FINE ARTS): VIRTUAL REALITY (VR) COLLABORATION MODELS IN PRACTICE PAINTING PROCESS X. Wang, P. Henry	5729

CHALLENGES AND SOLUTIONS FOR THE REALIZATION OF AN XAPI-BASED LEARNING ANALYTICS INFRASTRUCTURE USING THE H5P MOODLE COMPONENT FOR USER EXPERIENCE QUESTIONNAIRES AND EXAM QUIZZES IN HIGHER EDUCATION R. Srbecky, P. Thiele, V. Cassau, U. Köferl, N. Schönberger, R. Schulte-Holthausen, M. Yevdokymova, S.A. Wetzel, M. Winterhagen, W. Fraas, J. Dettmers, M. Hemmje	5737
THE TRIALOGICAL LEARNING & ASSESSMENT APPROACH: ASSESSMENT FOR LEARNING APPLIED TO TEACHERS' TRAINING N. Sansone	5743
EVALUATION OF THE EDUCATION SYSTEM FOR MEMBERS AND EMPLOYEES OF THE FIRE RESCUE SERVICE OF THE CZECH REPUBLIC S. Kavan	5744
IMPLEMENTATION OF CODES OF ETHICS IN HIGHER EDUCATION INSTITUTIONS IN THE UNITED ARAB EMIRATES: CASE OF THE MINISTRY OF HEALTH AND PREVENTION A. Alwali	5751
IT PRACTICUM – A MORE ACCESSIBLE AND SCALABLE INTERNSHIP MODEL M. Beheshti	5760
EFFECTS OF A SCHOOL-BASED MULTIDISCIPLINARY HPV PREVENTION PROGRAMME FOR ADOLESCENT GIRLS AND PARENTS S.H.S. Lo, J.P.C. Chau, K.C. Choi, V.W.Y. Lee, A.Y.L. Lau, G.C.Y. Lui, K.M. Chan	5765
PROMOTING DISABILITY AWARENESS AMONG SECONDARY SCHOOL AND UNDERGRADUATE STUDENTS: MUTUAL EFFECTS OF A DISABILITY SIMULATION INTERVENTION S.H.S. Lo, J.P.C. Chau, A.W.K. Chan, S.K.Y. Lam, S.Y. Chair, V.W.Y. Lee	5766
PROMOTING LOGICAL THINKING THROUGH CHALLENGES IN HIGHER EDUCATION - A DIDACTIC STRATEGY F. Soares, A.P. Lopes, M.P. Nunes	5767
EXAMINING DIGITAL SKILLS AMONG EDUCATIONAL SUPERVISORS IN OMAN FOR EFFECTIVE EDUCATIONAL PRACTICES N. Salah El-Din, L. Al Qurainiyah	5776
THE ROLE OF MENTORSHIP ON FIRST-YEAR STUDENTS AT HISTORICALLY DISADVANTAGED INSTITUTION IN SOUTH AFRICA H. Schoeman, Y. Nkomo	5782
AGGRESSIVE BEHAVIOUR OF PUPILS AND ITS IMPACT ON SOCIAL DYNAMICS: PREVENTION AND TOOLS TO ELIMINATE DEVALUING COMMUNICATION J. Dzuriaková, E. Diechová	5790
DEMO OF THE E-LEARNING PLATFORM "DERMATOLOGY ONLINE WITH INTERACTIVE TEACHING" G. Burg, H. Gollnick, M. Bagot	5795
ORIENTATING YOUNG NON-DESIGN STUDENTS IN THE DESIGN DISCIPLINE A.G. Manciaracina, G. Gerosa, F. Guarnieri	5796
ONLINE INDUCTION FOR NON-CONSULTANT HOSPITAL DOCTORS IN PSYCHIATRY: DOES IT HELP? B. Oruairc, M. Gallagher, G. Crudden, A. Doherty, A. Guerandel	5806
DEMONSTRATION OF INTERDISCIPLINARITY IN STEM EDUCATION THROUGH THE EXAMPLE OF POLLUTION SPREAD MODELING N. Črnjarić, M. Štefan Trubić	5807
DEVELOPING LANGUAGE SKILLS OF REFUGEE WOMEN THROUGH XR TOOLS: IDENTIFYING THE NEEDS AND CHALLENGES P. Kosmas, E. Xerou, C. Vrasidas	5815
ENTREPRENEURSHIP EDUCATION AS A LONG-LIFE LEARNING STRATEGY: THE CASE OF A PROFESSIONAL MASTER'S IN PORTUGAL I. Saur-Amaral	5821
DELIVERING WEB-BASED WORKFORCE TRAINING INTERVENTIONS: KEY CONSIDERATIONS FOR HEALTH RESEARCH H. Blake, W.J. Chaplin, J. Hassard, L. Thomson	5831
GROUP CONCEPT MAPPING TO FACILITATE PARTICIPATORY DESIGN OF THE WEB-BASED PAIN-AT-WORK TOOLKIT H. Blake, S. Greaves, V. Abbott-Fleming, S. Somerset	5839
11. DUINE, J. GIEUUES, V. AUUULI-FIEIILIIY, J. JUIILISEL	

A COMPARISON OF AUTHORITARIAN AND ADVERSARIAL LEADERSHIP IN MICRO-POLITICS—TAKE BALL (1987) AND BLASÉ & ANDERSON (1995) AS EXAMPLES R.F. Luo	5844
STUDENTS' PERCEPTIONS ABOUT REASONS FOR DROPPING OUT OF SCHOOL: A MULTINATIONAL STUDY P. Paulino, S. Correia, P. Gamito	5853
EXPERIENCES FROM A VIRTUAL INTERNATIONAL MULTICULTURAL PROJECT BEFORE AND AFTER COVID-19 R. Gafni, C. Marsal	5863
NEW DIRECTIONS IN DISCIPLINARY LITERACY T.D. Wolsey	5870
NEW CHALLENGES IN EDUCATIONAL INNOVATION L. Cuenca, A. Boza, M. Fernádez-Diego, L. Ruiz	5876
HOW TO ENSURE INCLUSIVE SCHOOLS? STEPS AND CONTRIBUTIONS OF AN INTEGRATIVE LITERATURE REVIEW G. Castanheira, M. Alves, R. Fidalgo, A. Reboredo, C. Costa-Lobo	5880
LOW STAKES, HIGH REWARD: DEVELOPMENT AND EVALUATION OF AN ONLINE COMPARATIVE JUDGEMENT MARKING SYSTEM T. Gleave, S. Goodman, S. Canning, D. Prescott	5888
THE HISTORY OF CHINESE TEACHER PROFESSIONAL DEVELOPMENT MODEL V. Pisarenko, Y. Hongyang	5893
MODELLING IN EDUCATION SCIENCE V. Pisarenko	5897
USING SERVICE LEARNING PROJECTS TO INTRODUCE SOCIAL MEDIA MARKETING TO SMALL RURAL ORGANIZATIONS S. Weitl-Harms	5907
STUDENT RETENTION: SEASONAL DEPRESSION AND STUDENT MOTIVATION A. Khalil, A. Saleh	5914
AI AND CHATBOTS IN FOOD ENGINEERING EDUCATION: SHIFTING FROM TASK AUTOMATION TO REFLECTIVE LEARNING B.I. Maldonado-Guevara, J.J. Carracedo-Navarro	5919
A COLLABORATIVE APPROACH TO LAUNCHING A CAMPUS MEDIA OUTLET IN CENTRAL PENNSYLVANIA: A CASE STUDY OF HAWKEYE MEDIA C. Terracina-Hartman	5924
EDUCATIONAL COOPERATION BETWEEN ELEMENTARY SCHOOL AND PUBLIC LIBRARIES - A CASE STUDY ON THE HURDLES OF RESEARCH AND COLLABORATION G. Marci-Boehncke, K. Kücük, M. Gaede	5934
DEVELOPMENT OF PROJECT-BASED LEARNING IN CIVIL ENGINEERING Y. Kim, L.L.H. Idris, S. Das, P.C. Yau	5942
VIRTUAL REALITY AS AN INNOVATIVE TOOL FOR UNIVERSITY STUDENTS TO COMPREHEND THE GLOBAL CHALLENGE OF ANTIBIOTIC RESISTANCE M.A. Ruiz-Fresneda, A.M. Newman-Portela, M. Morales-Hidalgo, M.L. Merroun	5949
EDUCATIONAL INNOVATION: EXPLORING FLIPPED CLASSROOM IN THE CONTEXT OF EXPERIMENTAL PRACTICES D. Muñoz-Rodríguez, M. Castillo-Rodríguez, P. Aparicio-Martínez, P. Martínez-Jiménez, A.J. Perea-Moreno	5955
PLAYING OUTSIDE: REFLECTION ON THE PERCEPTIONS OF FAMILIES IN A DAYCARE CENTRE T. Silva, A. Pinheiro	5962
COMPARISON OF DIFFICULTY OF TASKS IN SCRATCH AND PYTHON M. Tomcsányiová	5967
UNLOCKING SUCCESS: THE IMPACT OF TEACHER TRAITS AND PRINCIPAL LEADERSHIP ON SCHOOL OUTCOMES F. Nasser-Abu Alhija, A. Badarneh	5976
ADVANCING SUSTAINABLE EDUCATION: DESIGN A NOVEL STEAMS MODEL INTEGRATING TECHNICAL AND PSYCHOLOGICAL FACTORS J.A. Navarro-Espinosa, D. Muñoz-Rodríguez, M. Castillo-Rodríguez, A.J. Perea-Moreno, P. Martínez-linénez, P. Anaricio-Martínez	5977

QUALITATIVE RESEARCH OF STUDENT VIEWS ON THE IMPACT OF AI IN HIGHER EDUCATION A. Tierney, P. Peasey	5983
BRIDGING THEORY AND PRACTICE: REVOLUTIONIZING STEM EDUCATION WITH JUPYTER E. Khatib	5984
LESSONS LEARNED FROM CONDUCTING PROJECT-BASED LEARNING DEBRIEFING SESSIONS IN THE METAVERSE A. Takashima, A. Takagi, T. Utsumi	5995
FROM PRESERVICE TEACHER PREPARATION TO INSERVICE TEACHER DEVELOPMENT: TEACHER LEARNING IN CONTEXT K. Sato	5999
PROGRESS TOWARDS THE MENTORING PROGRAMME THROUGH FEEDBACK SURVEYS AT THE SCHOOL OF ENGINEERING OF JAÉN J.M. Serrano, J.J. Aguilera, D. Eliche-Quesada, E. Estévez, F.J. Gallego, C. Gutiérrez-Montes, C. Rus-Casas	6000
INTRODUCTION OF AN ELECTRONIC MODULE "ROBOTS, VIRTUAL REALITY AND NEUROROBOTICS IN REHABILITATION CLINICAL PRACTICE" R. Yoshinov, B. Yoshinov, I. Koleva	6007
CRAFT BREWING AS AN INNOVATIVE LEARNING ACTIVITY FOR CHEMICAL ENGINEERING STUDENTS IN UNIVERSIDAD DE LA LAGUNA J.J. Macías, J. Rodríguez-Sevilla, L.A. González-Mendoza, L. Vera, L. Rodríguez-Gómez, K. Rodriguez-Espinoza	6016
ASSESSMENT OF THE NECESSITY OF AN ELECTRONIC MODULE "PHYSICAL PREVENTION, PHYSICAL THERAPY AND REHABILITATION IN THE FIELD OF OBSTETRICS AND GYNAECOLOGY" I. Koleva, B. Yoshinov, R. Yoshinov	6022
ASSESSING THE ACQUISITION OF L3 NORWEGIAN RETROFLEXES BY MEANS OF A DISCRIMINATION TASK K. Hwaszcz, A. Balas, M. Wrembel, K. Kaźmierski	6031
THE IMPACT OF REMOVING SEPTEMBER EXAMS ON PEVAU LOMCE A.J. Zapata-Sierra, E. Salmerón-Manzano, F. Martínez-Gil, B. Nievas-Soriano, M. Gámez-Cámara, A. Alcayde-García, F. Manzano-Agugliaro	6037
UNIVERSITY STUDENTS' PERCEPTION OF AI USE B.A. Naranjo Sánchez, F. Potes Duque	6044
GENERIC SKILLS ASSESSMENT IN THE PHYSIOTHERAPY DEGREE AT UNIVERSITY OF ALMERIA B. Nievas-Soriano, F. Manzano-Agugliaro, E. Salmerón-Manzano, A. Alcayde-García, F. Martínez-Gil, A.J. Zapata-Sierra	6052
IMMERSIVE LABWORK TEACHING USING AN AUGMENTED REALITY APP T. Kaiser, F.W. Lukas, J. Kretzschmar, C. Helgert, T. Pertsch, A. Tünnermann	6060
AIM: ARTIFICIAL INTELLIGENCE FOR MULTIMEDIA GENERATION P. Christ, T. Munkelt	6061
EVALUATION OF FACTORS AND CAUSES OF UNIVERSITY DROPOUT J.C. Aguado Franco, C. Simón de Blas, M.E. Castellanos Nueda, A.E. García Sipols, J. Cano Cancela, G. Jerez López, M.D. Pelu, G. Martínez Moreno, S.I. Elidrisi	6069
USING NONLINEAR LEARNING PATHS IN SELF-DETERMINED LEARNING J.C. Aguado Franco, C. Simón de Blas	6074
OPTO-LINE: AUTONOMOUS LEARNING IN OPTICS AND OPTOMETRY D. de Fez, M.T. Caballero, P. Coloma, C. García, J.J. Miret	6080
LEAGUE - SUPPORTING PREVENTION AND REPORTING OF ONLINE CHILD SEXUAL ABUSE OF UNDERAGED BOYS FOCUSSING ON AWARENESS-RAISING AND EDUCATION ACTIVITIES N. Bessa Vilela, D. Kozhuharova, Z.J. Oplotnik	6084
LEAN MANUFACTURING: THE CASE OF LATIN AMERICAN COUNTRIES E. Calvo, M. Ferrer Vasquez, R. Santa	6085
THE EDUCATIONAL PRACTICE OF HAPPINESS CURRICULUM TAKES THE SEVENTH GRADE STUDENTS OF A SCHOOL AS AN EXAMPLE X. Chen	6091

PROFESSIONAL DEVELOPMENT OF MATHEMATICS TEACHERS: A CASE ANALYSIS BASED ON THE TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE (TPACK) MODEL E. Santana Lisbôa, G. Medeiros Zulato, V. Rosa	6098
HARMONIZING TECHNOLOGY IN SUPPORT OF A TRANSNATIONAL, ONLINE MEDICAL EDUCATION PROGRAM H. Lai, T. Hillier	6104
BANNED, RESTRICTED, OR APPROVED: AN EXAMINATION OF THE NATION'S 20TH LARGEST SCHOOL DISTRICT'S REVIEW OF INSTRUCTIONAL MATERIALS AS A RESULT OF HB1467, FLORIDA'S CURRICULUM TRANSPARENCY LAW. R. Chant, B. Zoellner	6110
STUDENTS' PERSPECTIVES IN OPTIMISING QUALITY IN AN OPEN-DISTANCE UNIVERSITY R. Tsephe, L.L. Lalendle	6111
TEACHING STRATEGIES FOR MANAGEMENT OF INTERNATIONAL MULTIDISCIPLINARY TEAMS FOR THE DESIGN OF INDUSTRIAL PRODUCTS A. Navarro-Arcas, J. Llorca-Schenk, C. Jara, I. Sentana-Gadea	6120
EQUITY: RESTORING ACHIEVEMENT IN MATHEMATICS R. de Andrade	6128
ANALYSIS OF STUDENT PERCEPTION IN MECHANICAL ENGINEERING REGARDING THE USE OF ARTIFICIAL INTELLIGENCE TO APPROACH CASES IN MANUFACTURING TECHNOLOGY D. Abellán, A. Navarro-Arcas, M. Fabra-Rodriguez, H. Campello-Vicente	6138
COMPARING FACE-TO-FACE AND DISTANCE LEARNING TEACHING: CASE STUDY ON AN IT APPLIED IN SOCIAL SCIENCES COURSE A.B. Andreica	6145
INCREASING STUDENT CAPACITY THROUGH INCREMENTALLY COMPLEX PRACTICE USING GENERATIVE AI K.J. Plummer, L. Fischer	6156
ENHANCING STUDENTS' FOREIGN LANGUAGE SKILLS WITH NEUROLINGUISTIC APPROACH A. Raskauskiene	6165
DEVELOPING EVIDENCE-BASED RESEARCH FOR SOCIAL PRESCRIBING IN WALES: CREATIVITY AT THE HEART OF COMMUNITY WELL-BEING M.S. Rogers	6173
MASSIVE OPEN ONLINE COURSES (MOOCS) IN HIGHER EDUCATION: ADVANTAGES, CHALLENGES, AND THE FUTURE OF ONLINE LEARNING L. Kelli da Silva, E. Santana Lisbôa	6182
COMBINATION OF ACTIVE LEARNING METHODOLOGIES: A CUSTOM COCKTAIL F. Sempere-Ripoll, B. Andrés, A. Mengual-Recuerda, R. de la Torre	6187
THE PEDAGOGICAL CHALLENGES OF DIGITALISATION L. Connah	6192
ENHANCING STUDENT ENGAGEMENT AND UNDERSTANDING IN COMPLEX SCIENCE CLASSROOMS THROUGH STORYTELLING K. Kiselyov, C. Schunn	6193
CHATBOTS FOR CAREER GUIDANCE: THE CASE OF CAREPROFSYS CONVERSATIONAL AGENT	6194
M.I. Dascalu, V.A. Brînduşescu, I.C. Stanica, B.I. Uta, I.A. Bratosin, D.A. Mitrea, R.E. Brezoaie READINESS OF FUTURE TEACHERS TO IMPLEMENT INCLUSIVE EDUCATION	6205
A. Umirbekova, L. Butabayeva, L. Shalabayeva OPTIMIZING LEARNING SUPPORT SYSTEMS BASED ON THE MULTI-	6210
DIMENSIONAL STUDENT LEARNING STYLE MODEL T. Akakura	
DIGITAL AND PEDAGOGICAL INNOVATION FOR THE INSTRUMENTAL MUSIC CLASSROOM. A REVIEW OF THE LITERATURE A. Triantafyllaki	6220
DOING DIFFERENT THINGS LOOKING FOR DIFFERENT RESULTS: A PROJECT-BASED EXPERIENCE IN HIGHER EDUCATION CONTEXT A. Santos Rodrigues, S. Pereira Lopes	6225
COMPETENCIES DEVELOPMENT FOR INTERNATIONAL VIRTUAL PROJECT TEAM EFFICIENCY A. Valickas	6229

PROPOSAL OF A METHODOLOGY FOR THE DEVELOPMENT OF FINAL DEGREE PROJECTS: A PRACTICAL AND SYSTEMATIC APPROACH R. Sanchis, R. de la Torre, B. Andrés, G. Calleja	6234
EDUTAINMENT AND BUSINESS SIMULATIONS: PEDAGOGICAL INNOVATIONS IN INTERNATIONAL ENTREPRENEURSHIP EDUCATION M. Pietrzykowski	6244
LEADERSHIP WITH INSIGHT: INDIVIDUALISM AND COLLECTIVISM IN NORDIC AND FENNO-UGRIC ORGANIZATION CULTURES K. Mullamaa	6245
INNOVATION, CREATIVITY AND ENTREPRENEURSHIP: EDUCATIONAL IMPROVEMENT PLAN FOR DEVELOPING NEW LEARNING ACTIVITIES AT UPV, STUDENT PRE-ASSESSMENT G. Rius-Sorolla, A. Llorca-Ponce, E. Navarro-Astor	6246
E-TUTORING IN THE POST-COVID ERA R. Sanchis, G. Calleja, A. Mengual-Recuerda, B. Andrés	6251
PREPARING STUDENTS TO WORK WITH ARTIFICIAL INTELLIGENCE IN EXPERT PROFESSIONAL ACTIVITIES IN THE FIELD OF ECONOMICS AND PUBLIC ADMINISTRATION E. Zarova	6259
ON THE DEVELOPMENT OF MACHINE TRANSLATION POSTEDITING COMPETENCE IN TRANSLATOR TRAINING S. Vasiliauskienė, D. Lisaitė, R. Kasperė	6265
ETHICAL FRONTIERS IN AI-DRIVEN STUDENT DEVELOPMENT: NAVIGATING NEW REALMS OF ENGAGEMENT AND SUPPORT H. Mason	6272
APPLICATION OF IMMERSIVE TOOLS WITH A STEAM APPROACH IN TEACHER TRAINING IN HIGHER EDUCATION J. Matias, S. Cruz, O. Riofrio, Y. Pinto	6273
ANALYSIS OF KEY VARIABLES IN ACTIVE LEARNING USING GAMIFICATION: A NEUROTECHNOLOGICAL STUDY D. Juárez-Varón, A. Mengual-Recuerda, F. Sempere-Ripoll, M.A. Peydró-Rasero	6284
THRIVING IN ACADEMIA: LEVERAGING POSITIVE PSYCHOLOGY FOR ENHANCED STUDENT SUCCESS IN SOUTH AFRICAN HIGHER EDUCATION H. Mason	6292
NEUROTECHNOLOGICAL STUDY OF THE APPLICATION OF THE ACTIVE LEARNING METHODOLOGY OF ROLE-PLAYING D. Juárez-Varón, A. Mengual-Recuerda, R. Sanchis, M.A. Peydró-Rasero	6293
ACTIVE LEARNING INNOVATIONS IN THE CONTEXT OF BUSINESS ORGANISATION A. Mengual-Recuerda, D. Juárez-Varón, B. Andrés, R. de la Torre	6302
ANALYSIS OF THE COMBINED APPLICATION OF GROUP DYNAMICS IN THE CLASSROOM FOR UNIVERSITY STUDENTS A. Mengual-Recuerda, B. Andrés, R. de la Torre, D. Juárez-Varón	6307
PHYSICAL SELF-EFFICACY AND SELF-PERCEPTION: THE BODY AS A PEDAGOGICAL DEVICE FOR CHANGE THROUGH THE CHOREUTIC WORKSHOP M.V. Marchesano, L. Pallonetto, C. Palumbo	6314
BEHIND DIGITAL EDUCATIONAL POVERTY: THIRD LEVEL OF THE DIGITAL DIVIDE AS A CULTURAL DIVIDE BETWEEN STUDENTS AND TEACHERS – THEORETICAL REFLECTIONS AND EMPIRICAL EVIDENCES FROM AN ITALIAN CASE STUDY	6322
S. Patera, S. Murri, D. Scotta PRACTICAL CLASSES IN AUTOMOTIVE ENGINEERING: AN EVALUATION OF	6329
SCENARIO-BASED LEARNING REAL-WORLD APPLICATION L. Serrano, C. Ferreira	002
NAVIGATING THE FUTURE: EXPLORING SYNCHRONOUS HYBRID LEARNING IN HIGHER EDUCATION POST-COVID V. Racheva, R. Peytcheva-Forsyth	6335
IMPLEMENTATION OF NEW TEACHING STRATEGIES IN PRIMARY SCHOOL: THE PROMOTION OF MOTOR ACTIVITY THROUGH AN EXPERIMENTAL TEACHING-MOTOR PROTOCOL R. Perrone, F. Vellone, C. Palumbo	6346

REMOTE TRAINING METHOD TO ASSIST ROBOTIC ACTIVITY IN INDUSTRY W. de Souza Picanço, G. Soprano Machado, M. Melo de Carvalho, C.S. Monteiro da Silva, R.L. Paiva de Medeiros, V. Ferreira de Lucena Jr	6357
MOTIVATION POTENTIAL OF AI-BASED LEARNING ASSISTANTS: A QUALITATIVE CASE STUDY INVESTIGATING AND FURTHER DEVELOPING THE MOTIVATIONAL POTENTIALS OF AI-BASED LEARNING ASSISTANTS IN MATHEMATICS LEARNING FOR STUDENTS USING THE ARCS-MODEL APPROACH M. Wertenauer, J. Gabrian, J. Seitz	6365
AN AUTOMATIC CORRECTION MECHANISM FOR PRACTICAL EXPERIMENTS BASED ON DIGITAL TWINS G. Soprano Machado, T.R. Monteiro Salgado, W. de Souza Picanço, C.S. Monteiro da Silva, R.L. Paiva de Medeiros, V. Ferreira de Lucena Jr	6372
TOWARDS AN ADAPTIVE DATA-DRIVEN ARCHITECTURE TO MAKE EMIS A REALITY IN SUB-SAHARAN AFRICA N.M. Ndiaye, B. Thiongane	6381
DIDACTICS AS THE FOUNDATION FOR TECHNOLOGICAL DEVELOPMENT: THE CASE OF THE VIRTUAL CHEMISTRY LABORATORY AT UNAM M. Kriscautzky Laxague	6388
USE OF CHATGPT IN UNIVERSITY COMPUTER SCIENCE TEACHING: ADVANTAGES AND DISADVANTAGES M. Serrano, A. Santos-Olmo, D. Garcia-Rosado, L.E. Sanchez-Crespo, C. Blanco, E. Fernandez-Medina	6395
PRACTISING FIERCELY - FULFILMENT THROUGH STANCE, STAMINA AND SUPPORTS A PROGRAMME-WIDE APPROACH TO SUPPORTING IDENTITY AND WELLBEING IN A TERTIARY TEACHING PROGRAMME W. Holley-Boen	6396
INCORPORATION OF FLIPPED CLASSROOM IN TEACHING STUDENTS WITH SPECIAL EDUCATIONAL NEEDS TO ENHANCE INCLUSIVE EDUCATION IN HIGHER EDUCATION B. Yovkova, R. Peytcheva-Forsyth	6397
AROMATAWAI: A CONVERSATIONAL APPROACH TO ASSESSMENT IN A PROFESSIONAL PROGRAMME M. Mentis	6407
USING THE PROJECT BASED LEARNING METHODOLOGY WITH SUSTAINABILITY CRITERIA INTO A UNIVERSITY SUBJECT R. Chalmeta, M. Palop Belloch, J. González Darder	6408
"I THINK THIS IS THE BEGINNING OF A BEAUTIFUL FRIENDSHIP." HOW MALAYSIAN AND AMERICAN STUDENTS MAPPED THE FILM CASABLANCA WITH CULTURE/CRITICAL TOOLS K. Crowley, N.Z.N. Mokhtar	6413
THE CASE OF WEIGHTED GPA IN SPANISH UNIVERSITIES Y. Durán, C. Del Campo, A. Hernández, A.L. Cancer	6414
EXPERIENCES IN THE DEVELOPMENT OF A TRAINING AND CAREER GUIDANCE COURSE M. Palop Belloch, R. Chalmeta, J. González Darder	6418
SUPPORT AND IMPLEMENTATION OF VOLUNTEERING IN THE ENVIRONMENT OF THE UNIVERSITY OF OSTRAVA IN THE CZECH REPUBLIC P. Adamus, E. Satinská, E. Nyklová	6424
VOLUNTEERING BY STUDENTS AND EMPLOYEES OF THE UNIVERSITY OF OSTRAVA FOR PEOPLE WITH SPECIAL NEEDS IN THE CZECH REPUBLIC P. Adamus, E. Satinská, E. Nyklová	6437
CHANGE AGENTS AND EDUCATIONAL STRATEGIES FACING RURAL DEPOPULATION IN SPAIN I. Atance, E. Santaolalla, S. Camós	6446
AN AI EDUCATIONAL TOOL FOR DETECTING REDUNDANCY IN DISTRACTORS AND ITEMS WITHIN MULTIPLE-CHOICE TESTS N. Hrich, M. Azekri, M. Khaldi	6454
HOW TO PROMOTE CRITICAL THINKING THROUGH THE FINAL DEGREE PROJECT C. de Gispert Brosa, A. Díaz Álvarez	6459
ENCAPSULATING PERCEIVED INCLUSION (SDG 10: REDUCED INEQUALITIES) IN THE PROCESS OF DEVELOPING A CLASS PROJECT BY STUDENTS FROM SHENANDOAH UNIVERSITY USA AND INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA N.Z.N. Mokhtar, K. Crowley	6465

STRATEGY FOR IMPROVING THE MONITORING AND MEASUREMENT OF THE TRANSIT TO HIGHER EDUCATION OF HIGH SCHOOL GRADUATES OF PUBLIC SCHOOLS IN THE CITY OF BARRANQUILLA, COLOMBIA E. Calvo, M. Ferrer Vasquez, V. Garcia, M. Ojeda, R. Santa	6466
INVESTIGATING THE ROLE OF COGNITIVE FLEXIBILITY IN SHAPING TEACHER ENGAGEMENT IN A SIMULATED VIRTUAL CLASSROOM Ş. Çağlar Özhan, P. Tekeli, A. Altun	6475
REAL-TIME CONTINUOUS STUDENT MONITORING DURING COMPUTER-BASED PROBLEM-SOLVING ACTIVITIES J. Remón, E. Romero	6481
IMPROVING STUDENTS' LAB CLASS PREPARATION THROUGH VIDEO INTRODUCTORY PILLS AT HIGHER EDUCATION E. Romero, J. Remón	6487
HISTOLAB: EXTENDED REALITY PLATFORM FOR HISTOLOGY LEARNING G. Rocha Astorga, Z. Zatarain Barron, R. Zatarain Cabada, M.L. Barrón Estrada	6495
COLLABORATIVE DEVELOPMENT OF ALBERTA INSTITUTE WENZHOU MEDICAL UNIVERSITY (AIWMU), CHINA'S PIONEER COOPERATIVE MEDICAL EDUCATION INITIATIVE T. Hillier, H. Chen, X. Wang, S. Phillips, J. Ruan	6505
EDIT VIDEO CHALLENGE – HACKATHON AND BLENDED INTENSIVE PROGRAM P. Bauer, D. Enne, J. Bauer	6506
CRAFTING A COORDINATED, ADAPTIVE MEDICAL EDUCATION CURRICULUM WITHIN AN INTERNATIONAL LEARNING CONTEXT BETWEEN CANADA AND CHINA	6512
T. Hillier, J. Ruan, H. Chen, P. Brett-MacLean, C. Hodgson, T. Winton, B. Chiu, X. Wang, H. Lai	
STRESS COPING STRATEGIES: EDUCATIONAL STYLES AND EXPERIENCE IN CLOSE RELATIONSHIPS AS PREDICTORS 1. Janković, M. Nikolić, J. Todorović	6513
THE SURGICAL ESCAPE ROOM: AN INNOVATIVE EDUCATIONAL STRATEGY TO FACILITATE UNDERSTANDING OF OPERATION THEATRES IN A RECREATIONAL WAY A. Mahmood, J. George, K.R. Rahman, J. Hodson, M. Seabrook, N.T. San, K. Brahmbhatt, J. Wongsikhee, D.J. Bowrey	6514
NAVIGATE BEE-BOT THROUGH MARKED VS. UNMARKED PATH: ITS INFLUENCE ON VISUAL DISCRIMINATION AND MENTAL ROTATION ABILITIES AMONG PRESCHOOL CHILDREN WITH DEVELOPMENTAL LANGUAGE DISORDER G. Dushnitzky, O. Tova, S. Zilbernagel	6515
THE HIERARCHICAL NESTING EFFECT IN THE STUDY AND INTERPRETATION OF ACADEMIC PERFORMANCE IN THE SOCIAL SCIENCES: A 2-LEVEL MULTILEVEL APPLICATION J.L. Peñaloza Figueroa, C.G. Vargas Pérez, J. Mello	6520
THE GIFTEDNESS AS A SPECIAL EDUCATIONAL NEED: DEVELOPMENT TRAJECTORIES AND PROFESSIONAL PRACTICES IN ITALIAN SCHOOL E. Treglia, A. Giuliani	6527
INNOVATION IN EDUCATION, AS A CREATIVE PRODUCT T. Ichim	6537
LEADERSHIP PRACTICES AND MIDDLE MANAGEMENT AS RESOURCES TO QUALIFY TEACHERS' PROFESSIONAL EXPERIENCES: A CASE STUDY A. Giuliani, E. Treglia	6544
ENRICHING THE POST-PANDEMIC ECOLOGY OF LEARNING FOR LIFE: THE CASE OF SLOW FOOD NARRATIVE LABELS M.C. Dal Pian, L.F. Dal Pian, M. Dal Pian	6554
CONCEPTS OF OPEN INNOVATION IN A PROJECT-BASED LEARNING ENGINEERING COURSE: A CASE STUDY WITH ASSESSMENT OF ACTIVE LEARNING MATURITY LEVEL H. Arruda, A. Passos	6564
INSIGHTS FROM CO-DESIGN WITH ADOLESCENTS TO CREATE INNOVATIVE DATA COLLECTION AND ANALYTIC TOOLS K. Meissel, S. Morton	6574
EXPERIENCE OF TEACHING NON-COMPUTER SCIENCE MAJORS COMPUTER PROGRAMMING Y. Tseng	6575

CHATED: A CHATBOT LEVERAGING CHATGPT FOR AN ENHANCED LEARNING EXPERIENCE IN HIGHER EDUCATION K. Wang, J. Ramos, R. Lawrence	6580
EDUCATING FOR THE FUTURE OF US-CHINA RELATIONS D. Kuhn, S. Xiao	6590
BUILDING CRITICAL THINKERS: REDEFINING PROBLEM SOLVING IN THE AGE OF CHATBOTS J.J. Carracedo-Navarro, B.I. Maldonado-Guevara	6591
STRONGER TOGETHER: DESIGN AND EVALUATION OF A COOPERATIVE GAME-BASED LEARNING FOR NEWCOMER TWEENS O. Bani-Taha, M. El Kouzi	6596
EVALUATION OF CHANGE FOR SCIENTIFIC CONCEPTIONS OF UPPER SECONDARY SCHOOL STUDENTS REGARDING CALCITE BIREFRINGENCE: THROUGH PRACTICAL LESSONS WITH DEVELOPED TEACHING METHODS M. Taga	6605
A BLUEPRINT FOR A NOVEL INTERDISCIPLINARY AND INTERNATIONAL GAME- DEVELOPMENT BASED LEARNING APPROACH IN STEM EDUCATION: DESIGN, INTEGRATION, AND CHALLENGES C. Sperrfechter, N. Ondrusch	6614
ACADEMICS ON TIKTOK?!: AN INTEGRATED LITERATURE REVIEW R. Cutri, E. Whiting	6624
UNVEILING THE POTENTIAL: EMPIRICAL INSIGHTS INTO ONLINE UNDERGRADUATE RESEARCH EXPERIENCES' INFLUENCE ON SCIENTIFIC IDENTITY AND COMMUNITY BELONGING A. Austin, N. Tarr, A. Hale, R. Griffin, A. Ramirez Hall, M. Simon, S. Grayson	6630
PRACTITIONERS VS EDUCATORS IDENTITY CONFLICT: MAPPING OBSTACLES, CHALLENGES AND STRENGTHS N. Katz, O. Lahav, M. Bar Tulien	6640
ONLINE VS. FACE-TO-FACE EXAMS - DETERRENCE THEORY EXPLAINING CHEATING BEHAVIOUR IN SUMMATIVE WRITTEN EXAMS A. Jantos, A.B. Brendel, L. Kilz	6641
NAVIGATING THE "NEW NORMAL" IN HIGHER EDUCATION: INTERPLAY BETWEEN SOCIAL DISRUPTIONS, ACADEMIC ACHIEVEMENTS, AND EMOTIONAL WELL-BEING E. Pipia, L.A. Rawlins Williams	6649
LEARNING DIARY: A TOOL TO CONTRIBUTE TO METACOGNITION DEVELOPMENT P. López-Fresno, M. Ikonen, A. López-García, U. Mäenpää-Crujo, L. González-Díaz	6657
TECHNOLOGY SUPPORT PREDICTS LEARNING OUTCOMES IN INTERPROFESSIONAL EDUCATION: THE MEDIATING EFFECT OF RELATEDNESS X. Shen, J.I.W. Dizon, F.A. Ganotice, Q. He, J. Lei, G.L. Tipoe	6658
TEACHING A COURSE IN ACADEMIC ETHICS AND INTEGRITY TO UNIVERSITY STUDENTS I.A. Drobot	6659
BODY AND LEARNING: THE EMBODIED PEDAGOGY THEORETICAL REFLECTIONS AND EMPIRICAL EVIDENCE FROM AN ITALIAN CASE STUDY D. Scotta	6669
EDUCATIONAL BOTS: HOW CHATBOTS AND INTELLIGENT AGENTS CAN IMPROVE STUDENT EXPERIENCE P. Cheung, I. Chan, R. Guo, B.S. Woo	6673
EMERGING SKILLS IN THE HUMANITIES PANORAMA FACING THE DIGITALISATION DISRUPTION: THE DIGITAL CURATOR TRAINING AND TOOL BOX	6680
R. Quattrini, C. Stefanelli, A. Agapiou	
THE BULLISH GAME: THE ROLE OF VIRTUAL CURRENCY IN INCENTIVIZING HOMEWORK ON THE SKYENG PLATFORM K. Adamovich, T. Chirlina	6690
INTERIOR META-DESIGN FOR INNOVATIVE REACTIVATION OF HIGH-CULTURAL PLACES	6691
A. Rebaglio, L. Brenna, A. Colombo, L. Carugati, F. Mannini, B. Spada	

GOVERNMENT CONSIDERATIONS FOR TRANSITIONING A WORKFORCE FROM A DECLINING SECTOR OF THE ECONOMY TO A GROWING HI-TECH SECTOR S. Creaner, G. Creaner	6700
PLAYMOBIL PRO SYSTEM TO DEAL WITH SOFT SKILLS IN INDUSTRIAL ENGINEERING	6701
B. Andres, R. de la Torre, A. Mengual-Recuerda, F. Sempere-Ripoll COLLECTIVE INTELLIGENCE: A NEW WAY OF E-LEARNING	6708
P. Bautista, S. Valero Tapia	/F1 F
P. Bautista, O. Casanova	6715
SIMULATION TO FACILITATE THE ACQUISITION OF KNOWLEDGE: THE CONCEPT OF PRODUCTIVITY B. Andres, A. Mengual-Recuerda, R. de la Torre, R. Sanchis	6721
INCLUSIVE EDUCATION. A LOOK AT THE ROLE OF INCLUSION SERVICES IN REINFORCING STUDENTS WITH LEARNING DISABILITIES R. de la Torre, G. Calleja, R. Sanchis, A. Mengual-Recuerda	6728
E-LEARNING: NOT ONLY GOOD REPUTATION OF EDUCATIONAL INSTITUTIONS MATTER. HOW SUPPORT PROCESSES MAY AFFECT TRUST P. López-Fresno, T. Savolainen, B. Rojas, A. López-García	6737
DESIGNING INCLUSIVE AND CUSTOMIZED TRAINING SOLUTIONS FOR DIVERSE LEARNER PROFILES	6738
K.E. Stavroulia, K. Demetriadou, M. Emmanouil ROLE-PLAYING EDUCATIONAL GAMES IN MATH LESSONS	6745
Z. Václavíková	6743
PROCEDURE FOR THE DESIGN AND IMPLEMENTATION OF ACTIVITIES TO WORK ON CREATIVITY, ENTREPRENEURSHIP, AND INNOVATION IN HIGHER EDUCATION R. de la Torre, G. Calleja, R. Sanchis, F. Sempere-Ripoll	6750
RECONSIDERING THE ROLE OF TEACHER PROFESSIONAL LEARNING IN SHAPING THE SOCIAL AND PROFESSIONAL IDENTITY OF TEACHERS: REFLECTIONS FROM AN ONGOING STUDY IN BUILDING TEACHER AGENCY THROUGH DIGITAL TECHNOLOGIES G. Zavatta	6756
EXCURSIONS IN SCIENCE EDUCATION. A REVIEW OF THE PEDAGOGICAL PROGRAM OF THE INSTITUCIÓN LIBRE DE ENSEÑANZA (1876-1939) BASED ON THE SUSTAINABLE DEVELOPMENT GOALS M. Corell Domenech	6765
EVALUATION OF QUR'AN MEMORIZATION TECHNIQUES AT AL-ITQAAN ACADEMY KADUNA: A COMPREHENSIVE ANALYSIS OF IMPLEMENTATION STRATEGIES M.N. Muhammad, A.G. Fahm	6769
THE POSTCARD PROJECT: AN INVESTIGATION INTO ENGAGEMENT AND RETENTION ON A LEVEL ONE MODULE AT THE OPEN UNIVERSITY E. Huxor, T. Philcox	6782
HOW QUESTION TYPE AFFECTS STUDENT PRODUCTION IN A DIGITAL COLLABORATIVE LEARNING SPACE S. Orejudo, M. Denoni Bujan	6783
EVOLUTION OF DIGITAL STEREOTYPES OF SECONDARY SCHOOL STUDENTS ON THE COLLECTIVE LEARNING PLATFORM S. Valero Tapia, S. Orejudo	6790
LEARNING ARTIFICIAL INTELLIGENCE / MACHINE LEARNING TECHNOLOGIES BASED ON AMAZON WEB SERVICES SOLUTIONS A. Sierszen, D. Drabek	6798
ENHANCING THE LEARNING OF METACOGNITIVE SKILLS IN HIGHER EDUCATION: EXPERIENCES AND SUGGESTIONS FOR PEDAGOGICAL CHOICES M. Ikonen, P. Lòpez-Fresno, U. Mäenpää-Crujo	6806
APPLYING GENERATIVE AI TO FACILITATE CLASS ORCHESTRATION WITH TECHNOLOGY: CHATGPT AND NEARPOD FOR SEMINAR ACTIVITIES L. Huang, C. Holtham, M. Rich	6807
INCORPORATING A EUROPEAN GLOBAL CITIZENSHIP FRAMEWORK IN ENGLISH AND COMMUNICATION-RELATED COURSES OF JAPANESE UNIVERSITIES K. Matsumoto, T. Kitazawa	6808

CUSHA – COIL A. Deschner, M. Weinmann, R. Barallon	6813
EMPOWERING XR PROFICIENCY: EXPLORING PROFESSIONAL CASE-BASED LEARNING SCENARIOS A. Berglund	6821
ENVIRONMENTAL AWARENESS ON SECONDARY EDUCATION STUDENTS IN SPAIN	6829
M. Vázquez Dominguez, L. Gimeno Sotelo, R. Sorí Gomez, M. Stojanovic, M.J. Valente	
A SYSTEMS THINKING APPROACH TO EMOTIONAL INTELLIGENCE S. Armenia, A. Loporchio, T. De Angelis	6830
THE REAL GAMES: INTERMEDIA, HYBRID AND INTERACTIVE MOVEMENT-BASED PERFORMING ARTS AS AN APPROACH TO EMBODIED LEARNING N. Cappello	6835
AN INCLUSIVE PROGRAMME TO LEVEL UP ASSESSMENT LITERACY AND TACKLE AWARDING GAPS IN BIOMEDICAL SCIENCE STUDENTS K. Hargreaves, A. Hidalgo-Bastida	6836
TEACHER TRAINING IN IMPLEMENTING VIETNAM'S 2018 GENERAL EDUCATION PROGRAM: CHALLENGES FOR LOCAL UNIVERSITIES AND SOLUTIONS T. Hoang	6837
OPTIMIZING DISTANCE LEARNING EDUCATIONAL PROGRAMS: THE RATIONALE AND METHODOLOGY OF AN INNOVATIVE AND EFFECTIVE FRAMEWORK G. Aretoulis, S. Armenia, D. Miricescu, J. Papathanasiou, J. Stanković, G. Tsaples, E. Aretouli	6845
THE IMPACT OF ACADEMIC ENTREPRENEURSHIP ORIENTATION ON CAREER MOTIVATION G. Sart	6853
THE IMPACT OF SERVICE QUALITY IN HIGHER EDUCATION ON CORPORATE IMAGE G. Sart	6854
ANALYSIS OF METHODOLOGIES, ACTIVITIES AND EVALUATION FOR LEARNING CREATIVITY, INNOVATION AND ENTREPRENEURSHIP A. Llorca-Ponce, G. Rius-Sorolla, E. Navarro-Astor, M. Sancho, A. Herrero-Debón, P.O. Letelier Torres, A. Sapena-Bañó, D. Furió Vita, I. Fernández-Plazaola	6855
AUTONOMY AND SOCIAL RESPONSIBILITY OF A LOCAL UNIVERSITY IN VIETNAM: CURRENT SITUATION, CHALLENGES AND SOLUTIONS T. Hoang	6861
AUDIOVISUAL DISTURBANCES IN ONLINE EDUCATION – AN OVERVIEW OF CURRENT RESEARCH AND A SUGGESTED FUTURE RESEARCH INITIATIVE T. Swenberg	6869
XRTL – EXTENDED REALITY TWIN LAB FOR PRACTICAL TRAINING IN PHOTONICS HIGHER EDUCATION F.W. Lukas, F. Sojka, C. Henkel, J. Domke, J. Kretzschmar, T. Kaiser	6881
ILLUMINATING AND NURTURING TEACHER KNOWLEDGE FOR IMMERSION EDUCATION: A SOCIOCULTURAL PERSPECTIVE T.J. Ó Ceallaigh, G. Nig Uidhir	6882
TOWARDS A PRACTICAL COMPUTER NETWORKING PLATFORM FOR ONLINE LEARNING ABOUT NETWORKS IN SCIENCE AND TECHNOLOGY COURSES E. Ndassimba, Y.P.K.S. Dodoagnen, N.G. Ndassimba, G. Mendy, S. Ouya	6883
A SYSTEMIC MODEL FOR EVALUATING ONLINE COURSE DESIGN: A CRITICAL REALIST APPROACH P. Reddy, D. Pratt	6892
ETHICAL ISSUES ON ARTIFICIAL INTELLIGENCE AND HUMAN RELATIONSHIPS R. Romano	6902
PERCEPTION AND BEHAVIOUR OF BALTIC AND FINNISH COMPANIES CONCERNING THE EMPLOYEES' TRAINING IN HIGHER EDUCATION INSTITUTIONS E. Titov, M. Kantanen, L. Pihel, A. Kvelde	6910
BREAKING BARRIERS: EMPOWERING NON-STEM STUDENTS IN DATA SKILLS THROUGH INQUIRY-BASED AND COLLABORATIVE LEARNING J. Andritsch, D. Sobnath, S. Ahmad	6918
TECHNOLOGY-ASSISTED SOCIAL WORK PRACTICE WITH CHILDREN AND YOUTH: DISCIPLINARY RELEVANCE FOR THE TWENTY-FIRST CENTURY	6925

ENHANCING EDUCATION & RESEARCH: 3D BONE ANATOMY OF THE WHITE-	6926
TAILED EAGLE (HALIAEETUS ALBICILLA) A. Miguel-Batuecas, J.A. De Pablo-Moreno, L. Bendito-Buhles, P. Plaza, F. González, M.I. García-Real, E. Mínguez-Pereira, L. Revuelta	
CHARACTERISTICS OF TROLL RESPONSES CREATED BY PRIMARY SCHOOL STUDENTS ON THE COLLECTIVE LEARNING PLATFORM M. Denoni Buján, O. Casanova	6928
THE INFLUENCE ON PRESERVICE TEACHERS AS THEY ENGAGE WITH STUDENTS WITH DISABILITIES IN SERVICE-LEARNING ENVIRONMENTS A. Hussein, J. Kelly, L. Mitchell	6934
THE INFLUENCE OF MULTITASKING ON ADHD ELEMENTS IN THE ACADEMIC DIGITAL WORLD C. Chiorean, S. Malaescu	6935
DESIGNING INTERDISCIPLINARY RESEARCH IN EDUCATION L. Dantas, C. Galego, J. Oliveira	6944
EXPLORING THE EDUCATIONAL POTENTIAL OF GENERATIVE AI: AN APPLICATION FOR SPELLING PRACTICE B. Boras, E. Smolić, G. Gledec, T. Jagušt	6945
TEACHING AND LEARNING CRITICAL THINKING IN PORTUGUESE LANGUAGE COUNTRIES	6953
L. Dantas, C. Galego, J. Oliveira, E. Santo, M.T. Costa, R. Lambo, M.J. Rios, R. Reis	
BUILDING A BRIDGE BETWEEN SCIENCE COMMUNICATION AND SCIENCE EDUCATION TO PROMOTE SCIENCE LITERACY S. Puecher	6954
ENVIRONMENTAL EDUCATION AT SCHOOL: EXPLORING THE INTERPLAY OF ASSUMPTIONS AND OBJECTIVES IN THE EDUCATIONAL PRACTICE AT SCHOOL C. Buzzacchi	6963
EDUCATION FOR CITIZENSHIP: A NARRATIVE REVIEW OF CIVIC EDUCATION PROGRAMS AND PEDAGOGICAL APPROACHES C. Buzzacchi	6964
ENHANCING EVIDENCE-INFORMED PRACTICE IN YOUTH WORK: THE ACTIVE YOUTH HUB PROJECT D. Vlachopoulos, C. Debu, C. Oala, O. Eleftheriou, M. Giangkampotzidou, D. Elek, D. Tsekouras	6972
A THEORETICAL FRAMEWORK FOR RESEARCH-INTEGRATED STEM LEARNING MODULES: FOSTERING COGNITIVE DEVELOPMENT AT EVERY EDUCATIONAL STAGE Z. Ahmad, N. Siby, N.J. Al-Thani	6981
THE BIOT-SAVART LAW IN MODERN PHYSICS EDUCATION: UTILIZING MOBILE	6982
MAGNETOMETERS C. González-Pavón, P. Arizo-García, S. Castiñeira-Ibáñez, D. Tarrazó-Serrano	6982
TEACHING FOR EQUALITY STARTS WITH TEACHER'S TRAINING: THE WOMEN	6989
LEGACY PROJECT STEAM COURSE M. Delgado-Pinar, M.C. Sánchez-Monserrate, L. Vilar-Bohigues, I. Pont-Niclós, S. Castarlenas-Sobreviela, E. Delgado-Pinar, A. López-Navajas	0909
DATA STORYTELLING IN EDUCATION: A SYSTEMATIC REVIEW H. Cirali Sarica, D. Yildirim	6990
PROJECT ATHENA: A CASE STUDY ON ONLINE FASHION DESIGN COURSES G. Guedes, P. Gomes	6998
STRATEGIES TO PROMOTE RELATIONSHIP BETWEEN MASTER STUDENTS AND ENTREPRENEURSHIP	7008
M.D. La Rubia-García, D. Eliche-Quesada, J.D. Aguilar-Peña, C. Rus-Casas	
CONNECTING HIGH SCHOOL STEM CONTENT WITH FUTURE CAREER PATHWAYS J. Cwikla, M. Dannreuther, D. Reider, R. Mohn	7014
ON A MISSION TO CREATE EQUITABLE AND INCLUSIVE CLASSROOMS: THE INCLUSIVE SCHOOL HUB PROJECT D. Vlachoppellon, M. Christodovlidov, A. Vanallakoppellov, V. Vronanhove, E. P. Vanhol	7019
D. Vlachopoulos, M. Christodoulidou, A. Kanellakopoulou, K. Kronenberg, E.R. Kambel	500
BODILY IMAGINATION IN EDUCATIONAL RESEARCH: EMBODIED AND EXPERIMENTAL METHODS FROM MOVEMENT-BASED PERFORMING ARTS N. Cappello, L. Daher, D. Cañabate	7026

TRAINING PROCESSES IN TECHNOLOGICAL SKILLS RELATED TO ARTIFICIAL INTELLIGENCE, EMOTIONAL AND FINANCIAL INTELLIGENCE TO PROMOTE DIGITAL TRANSFORMATION PROCESSES AT THE UNIVERSIDAD NACIONAL DE COLOMBIA L. Díaz-Santamaría, N.P. Parra-Ortiz, J. Garcia, L.K. Herrera-Quintero	7027
NURTURING LANGUAGE PROFICIENCY IN SPANISH-SPEAKING CHILDREN THROUGH DIGITAL COMPETENCE R. Jolley Rangel	7034
ARTIFICIAL INTELLIGENCE AS A DIDACTIC TOOL IN THE TEACHING OF INFECTIOUS DISEASES A. López-Arencibia, C. Expósito-Izquierdo	7042
WOMEN'S EXPERIENCES OF A VIRTUAL AVATAR-BASED SESSION TO EXPLORE POWER AND LEADERSHIP AS PART OF A BLENDED EXECUTIVE EDUCATION DEVELOPMENT PROGRAM D. Bayntun-Lees, C. Paine Schofield	7051
GAMIFICATION IN THE DEVELOPMENT OF RESEARCH PROTOCOLS: PERSPECTIVES ON UTILITY AND CHALLENGES AMONG UNDERGRADUATE STUDENTS IN ADMINISTRATION AT THE UNIVERSITY OF VERACRUZ, MEXICO L. Perea Ramírez, C.A. Torres Gastelú, C.B. González Calleros	7061
"I'M NOT GONNA LET THEM WIN" - AN ONGOING EXPLORATION OF YOUTH ENCOUNTERS WITH HATE SPEECH AND CYBERBULLYING ON SOCIAL MEDIA C. Ong, S. Krongard	7070
INCORPORATING LEARNING SCIENCES' BEST PRACTICES INTO STEM COURSEWARE C. Gordon, J. Snare, Y. Rajasekhar	7076
OUTREACH VIDEOS CREATED BY STUDENTS AS A MEANS OF ACQUIRING CROSS- DISCIPLINARY SKILLS IN THE FOOD SCIENCE AND TECHNOLOGY DEGREE S. Morante-Zarcero, J. Gañan, N. Casado, I. Sierra	7086
ACHIEVING EQUITY, DIVERSITY, AND INCLUSION IN ONLINE LEARNING THROUGH AN INCLUSIVE CURRICULUM COMMUNITY OF PRACTICE T. George	7096
TOWARDS AN AGILE AND DATA-DRIVEN WORK PROCESS FOR SUSTAINABLE INFRASTRUCTURE DESIGN IN MUNICIPALITIES A. Svensson, J. Einarsson, A. Kumar Mishra, T. Pederson	7097
A TRANSNATIONAL EUROPEAN MULTI-CASE STUDY FOR IDENTIFYING A GREEN TOURISM AGENDA S. Armenia, G. Chryssikos, E. Franco	7103
ETHICAL CONSIDERATIONS IN IMPLEMENTING TELEMENTORING AND VIDEO MODELLING FOR SURGICAL EDUCATION: A CASE STUDY OF THE CLINICALMODELLING PROJECT N. Gerbaudo-Gonzalez, R. Rodriguez-Gonzalez, D. Facal, M. Pazos-Couselo, D. Rey-Bretal, M.	7112
Gandoy-Crego AI4EDU: AN INNOVATIVE CONVERSATIONAL AI ASSISTANT FOR TEACHING AND LEARNING A. Vacalopoulou, V. Gardelli, T. Karafyllidis, F. Liwicki, H. Mokayed, M. Papaevripidou, G. Paraskevopoulos, S. Stamouli, A. Katsamanis, V. Katsouros	7119
PROPOSAL OF ARONSON'S PUZZLE TECHNIQUE TO IMPROVE THE DESIGN, ANALYSIS, AND INTERPRETATION OF GROUP EXPERIMENTS PERFORMED BY MASTER STUDENTS IN AGRONOMY P. Arizo-García, N. Pascual-Seva, C. González-Pavón, D. Tarrazó-Serrano, S. Castiñeira-Ibáñez, A. San Bautista	7128
PROJECT-BASED LEARNING IN INTRODUCTION TO ENGINEERING DESIGN COURSE J. Song	7135
ORGANIZING COMMUNICATION SUPPORT FOR BUSINESS ACTIVITY: A COURSE FOR UNDERGRADUATE STUDENTS AND PROFESSIONALS M. Frolova	7140
NAVIGATING THE INTEGRATION OF FORM-FOCUSED INSTRUCTION IN IMMERSION EDUCATION: UNRAVELING KNOWLEDGE DEMANDS AND PROFESSIONAL DEVELOPMENT PERSPECTIVES C. Ní Mhurchú, T.I. Ó Ceallaigh, S. Ní Aogáin	7146

IMPORTANCE OF COLLABORATION BETWEEN UNIVERSITIES AND BUSINESSES FOR THE VALORIZATION OF MADE IN ITALY WITH A VIEW TO SUSTAINABILITY AND CIRCULARITY B. Chiti, G. Pontillo, G. Lotti	7147
STUDENTS' PERCEPTIONS OF PRESENCE AND REALITY IN VIRTUAL REALITY ENVIRONMENT P. Tekeli, A. Altun	7156
LEADERSHIP TRAINING MODELS FOR JUNIOR OFFICERS AND CAPTAINS IN EUROPE F. Kiluange, J.C. Dias Rouco, A.P. Silva, L.G. Fragoso Baio	7162
GREEK UNIVERSITY STUDENTS' PREFERRED LEARNING STYLES IN THE CONTEXT OF DISTANCE EDUCATION G. Aretoulis, E. Aretouli, P. Digkoglou, D. Manou, J. Papathanasiou, G. Tsaples	7169
DESIGNING A SUSTAINABLE COMMUNICATION CAMPAIGN BY IMPLEMENTING AGILE METHODOLOGIES L. Andreu, E. Bigné, P. Hauptfeld, C. Pérez-Cabañero	7177
IMPLEMENTATION OF QUALITY IMPROVEMENT PLANS: EFFECTIVENESS OR COMPLIANCE? A VIEW FROM THE SOUTH Z. Mdledle, E. Johannes	7186
A GAMIFIED COURSE FOR TEACHERS TO GAMIFY THEIR TEACHING S. Arkün Kocadere, Ş. Çağlar Özhan, J. Marti-Parreño	7193
THE ROLE OF CRITICAL AND CIVIC THINKING IN CITIZENSHIP EDUCATION A. Nuzzaci, F. Orecchio, R. Romano	7198
RECOMMENDER SYSTEMS TO SUPPORT STUDENTS' EMPLOYABILITY: THE CASE STUDY OF CAREPROFSYS	7208
R. Birzaneanu, M.I. Dascalu, I.C. Stanica, I.A. Bratosin, A. Vasilateanu, T.M. Ursachi, R.E. Brezoaie ACTIVE DIGITAL LEARNING TO ENHANCE PRACTICAL SKILLS AND MOTIVATION OF STUDENTS IN A COORDINATED MANNER ACROSS SUBJECTS RELATED TO	7218
FOOD ANALYSIS S. Morante-Zarcero, N. Casado, G. Casado-Hidalgo, B. Fernández-Pintor, J. Gañan, L. González-Gómez, G. Martínez-García, I. Martínez-García, D. Pérez-Quintanilla, J. Rodríguez-Castaño, I. Sierra, F.L. Vera-Baquero	
POSSIBILITIES AND LIMITS OF USING THE GOLDEN PROFILER OF PERSONALITY (GPOP) IN THE CONTEXT OF THE DEVELOPMENT OF UNIVERSITY STUDENTS' COMPETENCIES R. Pospíšil, P. Škobrtal	7228
FOSTERING CREATIVITY IN ARCHITECTURAL DESIGN EDUCATION THROUGH GAME-BASED SKETCHING L. Alkhodari, S. Yıldız	7235
DISTANCE EDUCATION PROGRAMS AND GREEK UNIVERSITY INSTRUCTORS: DEFINING AND ASSESSING THEIR TEACHING STYLES PREFERENCES G. Aretoulis, E. Aretouli, P. Digkoglou, D. Manou, J. Papathanasiou, G. Tsaples	7243
LEVERAGING SOCIAL MEDIA AND NETWORKS IN LANGUAGE EDUCATION: ENHANCING MOTIVATION AND ASSESSING ACQUISITION C. Pardo-Ballester	7249
IMPLEMENTING CONTENT CURATION AS A STRATEGY FOR INTEGRATING THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) INTO MATERIALS SCIENCE COURSES	7259
M.D. La Rubia-García, C. Rus-Casas, J.D. Aguilar-Peña, D. Eliche-Quesada SOCIOECONOMIC EQUITY POLICY IN THE PORTUGUESE EDUCATION SYSTEM: THE PERSPECTIVES OF POLICYMAKERS C. Toledo, T. Neves, E. Enchikova, R. Trindade, G. Nata	7265
IMPLEMENTATION OF ACTIVE PEDAGOGICAL PRACTICES IN TEACHING CONSTITUTIONAL LAW TOWARDS DEMOCRACY D. Alves, D. Castilhos	7266
EXPLORING PISA'S INFLUENCE ON SOCIOECONOMIC EQUITY IN PORTUGUESE EDUCATION C. Toledo, T. Neves, E. Enchikova, R. Trindade, G. Nata	7273
LECTURERS' VIEW AT UNIVERSITAT POLITÈCNICA DE VALÈNCIA (SPAIN) ABOUT TRAINING INNOVATION, CREATIVITY AND ENTREPRENEURSHIP TRANSVERSAL	7274
COMPETENCE E. Navarro-Astor, A. Llorca-Ponce, G. Rius-Sorolla, M. Sancho, M.A. Baviera Puig, A. Sapena-Bañó, P.O. Letelier Torres, G. García Martínez, P. García Segovia, A. Herrero-Debón	

DIGITAL AGE FORESIGHT IN SERBIAN UNIVERSITY STRATEGIC PLANS IN DISRUPTIVE TIMES O. Sedlak, R. Korhec, S. Stojkovic, J. Eremić Đođić	7284
ENRICHING THE HIGH SCHOOL STEAM CURRICULUM USING ARDUINO: THE CASE OF AGUASCALIENTES D. Cuartielles, I. Fajardo	7291
FAVOURABLE LEARNING ENVIRONMENT FOR MODERN STUDENTS AND MEASURES FOR ITS IMPROVEMENT R. Poceviciene	7298
PERFORMANCE ANALYSIS OF VIRTUAL ASSISTANTS - A CASE STUDY BASED ON THE CROATIAN LANGUAGE M. Asenbrener Katic, E. Miletic, S. Candrlic	7305
DEVELOPMENT OF MULTICULTURAL LITERACY OF NATIONAL AND INTERNATIONAL STUDENTS IN HIGHER EDUCATION R. Poceviciene	7316
GENDER DIFFERENCES IN BELIEFS AND PREFERENCES ABOUT DISTANCE LEARNING AMONG EDUCATORS: EVIDENCE FROM FOUR EUROPEAN COUNTRIES E. Aretouli, J. Papathanasiou, E. Konstantinopoulou, S. Armenia, D. Miricescu, J. Stanković, G. Tsaples, G. Aretoulis	7323
21ST CENTURY SKILLS IN FOREIGN LANGUAGE LEARNING Z. Strakova, I. Cimermanova, M. Sepešiova	7329
COMPUTATIONAL THINKING AND PROBLEM SOLVING IN THE PISA ERA J. Bilbao, E. Bravo, O. García, C. Rebollar, V. Dagienė, V. Masiulionytė-Dagienė, A. Jankauskienė, M.J. Laakso, H. Kaarto, D. Lehtonen, M. Parviainen, I. Güven, Y. Gulbahar, T. Öztürk, F. Özdemir Öncül, N. Tan Yenigün, Z. Pluhár, P. Sarmasági, A. Pears	7335
TRANSFORMING EXECUTIVE AND PROFESSIONAL DEVELOPMENT BY HIGHER EDUCATION THROUGH GENERATIVE AI-BASED PEDAGOGY C. Holtham	7343
TEACHER EDUCATION AND THE CHALLENGES OF TRAINING NEW TEACHERS FOR NEW ERA Z. Strakova, I. Cimermanova, M. Sepešiova	7344
CHEMISTRY TEACHERS' BELIEFS ABOUT READING COMPREHENSION OF SCIENTIFIC TEXTS S. Rojas, C. Flores, M.I. Rojas	7351
DILABORATION - A DIGITAL LAB AGAINST DISADVANTAGED OPPORTUNITIES IN SOCIO-SPATIAL SEGREGATION IN GERMAN CITIES, ESPECIALLY FOR SOCIALLY DEPRIVED RESIDENTS OF CERTAIN NEIGHBORHOODS M. Koplin	7352
DATA DIVING: EXPLORING THE UTILITY OF DIGITAL TRACES FOR MEASURING SELF-REGULATED LEARNING IN BLENDED COURSES A. Gorbunova, R. Sutarmina, M. Boitcov, A. Kapuza	7359
THE INFLUENCE OF THE STUDENT'S GENDER IN THE EXPERIENCE OF DISTANCE EDUCATIONAL PROGRAMS: THE CASE OF GREEK STUDENTS G. Aretoulis, P. Digkoglou, D. Manou, J. Papathanasiou, G. Tsaples, E. Aretouli	7364
A PROPOSAL FOR THE INTEGRATION OF THE SUSTAINABLE DEVELOPMENT GOALS IN THE TEACHING OF PSYCHOLOGY OF PHYSICAL ACTIVITY AND SPORT S. Agut, L. Sales	7369
LEVERAGING ON AI MENTOR TO BOOST LEARNING EFFECTIVENESS AND EFFICIENCY B. Bán	7375
GENERATIVE ARTIFICIAL INTELLIGENCE IN HEALTH PROFESSIONS: A BIBLIOMETRIC DESCRIPTIVE ANALYSIS A. Alves Lopes	7384
THE IMPACT OF MULTITASKING ON THE COMPREHENSION, LOGICAL COHERENCE, AND RETENTION OF STIMULI IN POSTGRADUATE BIOMEDICAL STUDENTS	7390
S. Malaescu, C. Chiorean, V. Petronikolou, A. Anagnostopoulou, D. Petsani, K. Tagaras, K. Mitsopoulos, P. Antoniou, P. Bamidis, E. Konstantinidis	
TRANSFORMING SOCIAL RESONANCE - A CREATIVE PROJECT TO STRENGTHEN SOCIAL COHESION M. Kovlin	7400

DEVELOPING A MINDSET FOR INCLUSION IN PRE-SERVICE TEACHERS' DIGITAL COMPETENCE A. Luís, C. Rodrigues	7405
TEACHING DICTIONARY SKILLS AT THE ACADEMIC LEVEL: AN EXAMPLE OF DICTIONARY-BASED ACTIVITIES IN A BUSINESS ENGLISH COURSE I. Planinšek-Čikara, M. Linčir Lumezi	7411
VALUATION AND FUNDING OF SCIENCE I. Rosanda Žigo, J. Lasić Lazić, M. Milković, M. Šantalab	7422
STRENGHTENING THE METHODOLOGY SKILLS OF POSGRADUATE STUDENTS: NETNOGRAPHY RESEARCH ON COUNTERING MISINFORMATION ON MASS SCHOOL SHOOTING D. Mikulec, S. Stibohar, Z. Bagaric	7430
NEW CHALLENGES FOR THE FIELD OF HIGHER EDUCATION I. Rosanda Žigo, Z. Tomić, N. Lazić	7437
MAJOR REASONS THAT ENABLE DOCTORAL STUDENTS IN EDD PROGRAMS TO COMPLETE DISSERTATIONS IN PRACTICE J. McAtavey	7443
DEMYSTIFYING SURGICAL TRAINING: SUSTAINABLY ADDRESSING BARRIERS FOR SURGICAL CAREER ASPIRANTS IN THE UK J. George, F. Morgan, R. Lefroy, S. Rajagopalan	7447
REAL-WORLD TEAM PROJECTS AS PART OF THE INTRODUCTION TO SOFTWARE ENGINEERING P. Petrovič	7448
HOW DOES TEACHERS' SENSE OF ACADEMIC CITIZENSHIP AFFECT THEIR PERCEPTION OF TEACHING ABILITIES? I.L. Söderberg, L. Snickare	7459
CHANGE IN EQUALITY OF OPPORTUNITY IN EDUCATION OVER 20 YEARS OF PISA E. Enchikova, G. Nata, C. Toledo, T. Neves	7467
KEEPING PACE WITH EACH OTHER: EXPERIENCES OF AND EXPECTATIONS ON CHATGPT AMONG UNIVERSITY STUDENTS AND TEACHERS S. Engerstam	7468
ASSESSMENT AND MEASUREMENT IN HIGHER EDUCATION WITH MULTIPLE CRITERIA, SCALES, AND RATERS: A THEORETICAL APPROACH AND A PRACTICAL EXAMPLE P. Vossen, S. Ajit	7469
CORRELATION AMONG STUDENTS' PROFILE AND DISTANCE EDUCATIONAL PROGRAMS G. Aretoulis, P. Digkoglou, D. Manou, J. Papathanasiou, G. Tsaples, E. Aretouli	7476
INEQUALITY OF EDUCATIONAL OUTCOMES: A COMPARATIVE REVIEW OF NATIONAL TRENDS BASED ON THE 2000-2022 PISA E. Enchikova, G. Nata, C. Toledo, T. Neves	7483
LACK OF STAKEHOLDERS ENGAGEMENT DURING QUALITY ASSURANCE IN INFORMATION SYSTEMS DEVELOPMENT R. O'Chiobi	7484
USING INTERDISCIPLINARY UNPLUGGED CS ACTIVITIES TO SUPPORT THE DEVELOPMENT OF PRESCHOOL CHILDREN F. Özdinç, N. Kandemir-Özdinç	7492
EXPERIENTIAL LEARNING AS A CONSTRUCT FOR CHILD MOTIVATION S. Querido, I. Freire Ribeiro, E. Mesquita	7497
CITIZENSHIP EDUCATION IN INITIAL TEACHER TRAINING: PERCEPTIONS OF THOSE TRAINING TO TEACH I. Freire Ribeiro, E. Mesquita, A. Pereira	7502
THE ABC FOR PICS FROM BASIC TO COMPLEX PROBLEMS R.J. Díaz Martínez, R. Villalpando Hernández, J.L. Ibarreche Cueto, G.A. Peña Ugalde, D.E. González Cabrero, D.E. Calderón Hurtado, L.C. López Motola, P.A. Arenas Morales, S.K. Uribe López Ávila	7507
SHAPING THE CULTURE OF QUALITY IN HIGHER EDUCATION IN THE ACADEMIC ENVIRONMENT - THE CASE OF 'UNIVERSITY PLATFORM FOR MUTUAL INSPIRATION' E. Lakoma	7514
COMPARATIVE ANALYSIS OF EXISTING FRAMEWORKS ON TRANSVERSAL COMPETENCES FOR HIGHER EDUCATION E. Osipovskaya, A. Coelho	7518

MONITORING EDUCATIONAL SYSTEMS EQUITY THROUGH PISA: THE POTENTIAL AND LIMITATIONS FOR A COMPREHENSIVE ASSESSMENT OF SOCIOECONOMIC EQUITY G. Nata, E. Enchikova, C. Toledo, T. Neves	7525
BENEFITS, CHALLENGES AND CONTROVERSIES OF ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: ALL IN OR ANXIETY INDUCING J. DeBello	7526
ENHANCING REHABILITATION FOR SPINA BIFIDA: INNOVATIVE SOLUTIONS FROM THE FACULTY OF ENGINEERING R.J. Díaz Martínez, R. Villalpando Hernández, A.J. Vallejo Guevara, D.E. González Cabrero, C.A. Cisneros Rodríguez, P.A. Arenas Morales, A.J. Franco Reyes, J. Aguilera de la Cruz, F.G. Zamudio Ortiz, G.A. Peña Ugalde, A.S. Gallegos González, R.U. Martinez Muñoz, D.A. Flores Carrillo, N.A. Luján, A.E. Cansino González, J.L. Ibarreche Cueto, M. González Muñoz, D.E. Calderón Hurtado, L.C. López Motola, E. Medina Leal, S.K. Uribe López Ávila	7527
ASSESSING POLICY EFFECTIVENESS THROUGH PISA: ANALYSIS ON THE RELATION BETWEEN PORTUGAL'S EQUITY CHANGE AND THE IMPLEMENTATION OF EQUITY POLICIES (2000-2022) G. Nata, C. Toledo, E. Enchikova, T. Neves	7533
THE GEOLOGIC YELLOWSTONE EXPERIENCE: FROM VIRTUAL MINECRAFT LEARNING TO ACTIVE IN-PERSON EXPLORATION S. Arnold	7534
SPECIAL TOPICS COURSES IN ABET ACCREDITED COMPUTER SCIENCE DEGREE CURRICULUM: BENEFITS AND CHALLENGES J. DeBello, P. Ghazizadeh, F. Keshtkar	7535
TRENDS OF PRESENT DAY EDUCATION: STUDENT SUPPORT AND MOTIVATION IN INTERPRETING CLASSES R. Mukhametzyanova, A. Gainutdinova, O. Akimova, I. Kurmaeva	7536
IMPROVING SPEAKING SKILLS THROUGH COMMUNICATIVE GRAMMAR A. Gainutdinova, O. Akimova, R. Mukhametzyanova, I. Kurmaeva	7537
MULTIPLE USES OF A SENSORY GARDEN FOR SUSTAINABLE EDUCATION I. Coutinho Marinho, A. Graziela Gomes Travassos, K. Gomes Lima, J. Ramires Rodrigues Silva, P. Gabrielly Jacyntho Freire, C. Calvi Anic Cabral, J. Mesquita Vidal Martínez de Lucena	7541
DEVELOPMENT OF A MOTIVATION IMPLEMENTATION CHECKLIST FOR COLLEGE COURSES Y. Suzuki, R. Matsuba, S.I. Kubota	7548
COMIC STRIPS AND ITS POTENTIAL IN RESEARCH COMMUNICATION INNOVATIVE WAYS TO COMMUNICATE RESEARCH IN THE HUMANITIES: COMIC STRIPS K. Salvador-Cisneros, W. Wonsang	7553
ADOLESCENT TECHNOLOGY USERS' ATTITUDES, PERCEPTIONS, EXPERIENCES, AND ENGAGEMENT WITH PROBLEMATIC INFORMATION AND INFORMATION-BASED COGNITIVE CYBERATTACKS R. Honomichl	7554
EVALUATION OF SURGICAL SKILLS TRAINING IN FOUNDATION TRAINEES: FACTORS FOR LONG-TERM COURSE SUSTAINABILITY S.W. Lwin, K.F.K. Suen, S.P. Koh	7565
A SYSTEMATIC REVIEW OF THE PERUSALL APPLICATION: EXPLORING THE BENEFITS AND CHALLENGES OF SOCIAL ANNOTATION TECHNOLOGY IN HIGHER EDUCATION C. Craig, R. Kay	7566
HOW TO BUILD A SCHOOL – THE WORK OF MANUEL TAINHA, ARCHITECT I. Simão, A.M.T. Martins-Nepomuceno, N. Juan-García	7575
INTEGRATION OF ARTIFICIAL INTELLIGENCE INTO THE GENERAL EDUCATION CURRICULUM: IMPORTANCE, APPROACHES, CHALLENGES, AND A CONCEPTUAL FRAMEWORK FOR LIBERAL ARTS UNIVERSITIES Y. Tong	7582
OPTICAL SCIENCES EDUCATION BRIDGING THEORY TO PRACTICE THROUGH LOCAL, DOMESTIC, AND INTERNATIONAL OUTREACH INITIATIVES D. Kim	7590
MEASURING UNDERGRADUATE STUDENT SATISFACTION AT THE CONCLUSION OF THEIR INTERNSHIPS USING SENTIMENT ANALYSIS WITH ARTIFICIAL INTELLIGENCE TOOLS	7595
M. Chan-Pavón, V. Menéndez-Domínguez, R. Gil-Herrera, J. Escalante-Eúan	

BASIC DESIGN OF ENTREPRENEURSHIP EDUCATION AS A PERSONAL MATTER A. Takahashi, M. Sasaki	7601
VIRTUAL INTERNATIONALIZATION IN PHYSIOTHERAPY EDUCATION: A THREE-YEAR EXPERIENCE A. Alves Lopes	7606
USE OF DIGITAL TECHNOLOGIES IN VOCATIONAL EDUCATION AND THEIR CONNECTION WITH INDUSTRY 5.0 P. Marinič, P. Pecina	7615
DEVELOPING FINANCIAL LITERACY BY USING DIGITAL COMPETENCES P. Marinič, J. Válek	7622
DECOLONISING THE HIGHER EDUCATION CURRICULUM: A NECESSITY IN THE ANGOLAN CONTEXT F. Kiluange	7632
THE EDUCATIONAL PROCESS AND ITS IMPACT ON THE DEVELOPMENT OF CRISIS MANAGER SKILLS A. Kelíšek, J. Kubás, S. Strelcová, M. Ballay	7633
THE IMPORTANCE OF THE LEVEL OF PROFESSIONAL COMPETENCE OF MEMBERS OF VOLUNTARY FIRE BRIGADES, AS A CRUCIAL FACTOR FOR INCREASING SAFETY IN MUNICIPALITIES M. Ballay, J. Kubás, S. Strelcová, A. Kelíšek	7640
IDENTIFY TRAINING REQUIREMENTS FOR REMOTE CONTROL OPERATORS OF MARITIME AUTONOMOUS SHIPS M. Baldauf, D. Rostek	7646
NAVIGATING THE ETHICAL LANDSCAPE OF AI INTEGRATION IN EDUCATIONAL SETTINGS N. Nur, S.J. Goh, J. Patel, M. Mizrahi	7654
NAVIGATING THE CHALLENGES: UNDERSTANDING ANXIETY AMONG INTERNATIONAL GRADUATE STUDENTS IN THE UNITED STATES S. Sudhakaran, N. Nur, A. Zarraa	7664
PEDAGOGICAL CONTRIBUTIONS FOR ENGLISH LANGUAGE TEACHING A. Luís	7673
TECHNOLOGY ACCESSIBILITY. PROMOTING INCLUSION FROM THE UNIVERSITY J. Díaz, M.A. Osorio, P. Amadeo, A. Schiavoni, I. Harari	7679
OPEN SOCIETY UNIVERSITY NETWORK: GLOBAL LEARNING IN A NETWORKED FORMAT A. Tarnai, E. Egensteiner	7689
COMMUNITY ENGAGEMENT IN THE CLASSROOM: A CASE STUDY, OPEN SOCIETY UNIVERSITY NETWORK A. Tarnai, E. Egensteiner	7690
DEMOCRATIZING LEARNING P. Hunter	7691
NAVIGATING THE EVOLUTION OF ARTIFICIAL INTELLIGENCE: TOWARDS EDUCATION-SPECIFIC RETRIEVAL AUGMENTED GENERATIVE AI (ES-RAG-AI) A. Elmessiry, M. Elmessiry	7692
LEARNING ABOUT THE CONSTRUCTION OF CITIZENSHIP FROM THE IMPLEMENTATION OF THE PEACE CHAIR IN CARTAGENA DE INDIAS – COLOMBIA L. Garcia-Noguera, I. Silva, Ó. Otálvaro	7698
THEMATIC ANALYSIS OF STUDENT PERCEPTIONS OF A VIRTUAL SIMULATION ENCOUNTER AND PEER-LED DEBRIEF K. Langston, B. Tran, J. Roye, K. Campbell	7702
A PROFILE OF THE PREFERRED INSTRUCTOR FOR DISTANCE EDUCATION AS CONSIDERED BY ITALIAN STUDENTS T. De Angelis, L. Balleri, G. Aretoulis, S. Armenia, I. Messuri	7708
CRITICAL THINKING EDUCATION AS A TOOL OF INCREASING MEDIA LITERACY V. Soltes, V. Adamova, B. Liska	7715
AMSHI: ADVANCED SOLUTIONS FOR MITIGATING THE IMPACT OF HEAT ISLANDS ON URBAN ROADS THROUGH AN INTER-ACADEMIC AND MULTIDISCIPLINARY INTERNATIONAL HONOUR PROGRAM B. Di Prete, C. Mastratoni, M. Mazzolani	7723

BRIDGING STEAM AND INCLUSIVE EDUCATION IN THE SPICE PROJECT N. Spyropoulou, G. Sakellaropoulou, A. Kameas	7732
A METHODOLOGY FOR DEVELOPING TRAINING AND MENTORING PROGRAMS: EMPOWERING INSTRUCTIONAL DESIGNERS TO CREATE COURSES ALIGNED WITH THE DIGCOMP FRAMEWORK N. Spyropoulou, A. Kameas, R. Kalantzi, G. Vonitsanos	7737
INTEGRATION OF BLENDED LEARNING IN ARCHITECTURE: FROM DIGITAL DESIGN TO PARAMETRIC FABRICATION N. Araujo, J. Eiji	7744
THE CONNECTION BETWEEN EDUCATION IN THE FIELD OF CRIMINALISTICS AND STUDENT RESEARCH ACTIVITIES V. Adamova, V. Soltes, M. Madlenak	7748
GOVERNANCE MODELS FOR HIGHER EDUCATION INSTITUTIONS A.K. Tripathy	7758
DIVERSE HIGHER EDUCATION INSTITUTIONS AND STANDARDISED INTERNATIONAL RANKINGS N.S. Bisht, A.K. Tripathy	7762
PROJECT-BASED LEARNING IN THE COMPLETION OF VOLUNTARY TASKS TOGETHER WITH THE PERFORMANCE AND SUCCESS RATES OF ENGINEERING STUDENTS N. Uriarte, I. Uriarte	7766
ENHANCING STUDENT LEARNING J. Elmer, A. Dingli	7771
CVRRICULUM PROGRAM: EMBEDDING VIRTUAL REALITY AS AN EXPERIENTIAL EDUCATION MEDIUM TO TEACH EMPATHY E. Peisachovich, L. Appel	7780
TEACHING EMPATHY TO HEALTHCARE PROVIDERS AND CAREGIVERS OF PERSONS LIVING WITH DEMENTIA USING AUGMENTED REALITY E. Peisachovich, K. Kapralos, G. Hollaender, C. Culver, A. Dubrowski	7781
AN INTERDISCIPLINARY APPROACH: EXPLORING ENVIRONMENTAL IDENTITY IN EAST TIMOR THROUGH THE GUIDANCE OF AN ACADEMIC THESIS F.L. Soares Pereira, R. Florencio da Silva	7785
DEVELOPING AND IMPLEMENTING CHILD RIGHTS EDUCATION IN DIVERSE GLOBAL SETTINGS: A PARTICIPATORY ACTION RESEARCH PROJECT WITH TEACHERS AND CHILDREN IN UGANDAN AND CANADIAN SCHOOLS S. Jones, K. Manion	7789
AWARENESS THROUGH ENVIRONMENTAL EDUCATION ON THE POTABLE WATER SITUATION IN MOZAMBIQUE R. Florencio da Silva, F.L. Soares Pereira, A.J. Mc Namara Valdes, M.N. Mabui Dimande	7790
TEACHING SKILLS IN THE USE OF ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION	7795
J.L. Armijos Carrión, Y.M. Portela Leiva, S.D. Reyes Loaiza, D.G. Solano Sisalima, Y. Esquivel Rivero KNOWLEDGE DIALOGUE AS A PEDAGOGICAL STRATEGY TO REDUCE THE	7800
EDUCATION DIGITAL DIVIDE Y.M. Portela Leiva, J.L. Armijos Carrión, M.E. Palomeque Solano, T.P. Vega Henríquez, Y. Esquivel Rivero, M.C. Loján Carrión	7600
TEACHING ELECTRICAL ENGINEERING STUDENTS THROUGH CREATIVE MOVEMENT ON THE TOPIC OF "GREEN TRANSITION"; VALIDATION THROUGH PSYCHOPHYSIOLOGY V. Geršak, G. Gersak	7806
FLUENCY UNLOCKED: TEACHING LANGUAGE THROUGH CONTEXTUALIZED PRAGMEMES AND CULTUREMES H. Al Sharoufi	7807
FIELD TRIPS AS A TOOL TO HOLISTICALLY LEARN STRUCTURAL DESIGN I. Payá Zaforteza, E. García-Castillo, C. Lázaro-Fernández	7808
BRIDGE INSPECTION AND MAINTENANCE IS IMPORTANT! AN AWAKENING EXPERIENCE IN A CIVIL ENGINEERING COURSE ON PHILOSOPHY OF STRUCTURES E. García-Castillo, I. Payá Zaforteza, R. Mansilla-Ruiz	7815

THE EVOLUTION OF TRAINING METHODOLOGIES IN A 16-YEAR EXPERIENCE IN THE FRAMEWORK OF THE BETTER TRAINING FOR SAFER FOOD PROGRAMME: SCALABLE AND TRANSFERABLE LESSONS LEARNED AND BEST PRACTICES F. Pompei, C. Albanello, A. Falconi, O. Pediconi, M. Piersanti, B. Alessandrini, S. D'Albenzio	7823
UNVEILING THE NEXT WAVE OF LEARNING: NAVIGATING CHATGPT'S IMPACTFUL APPLICATION IN EDUCATION S. Jancheska, M. Jancheski	7833
UNLOCKING THE FUTURE OF EDUCATION: A COMPREHENSIVE ANALYSIS OF KEY DOCUMENTS SHAPING ARTIFICIAL INTELLIGENCE IN EDUCATION M. Jancheski, S. Jancheska	7834
DEVELOPMENT OF NUMERICAL STRATEGIES IN INTEGRATED PHYSICS AND MATHEMATICS COURSES <i>AJ. Sánchez Hernández, DD. Jiménez Suro, EM. Hernández Cooper, RD. Santiago Acosta</i>	7835
DEVELOPMENT OF SKILLS IN SOLVING PROCEDURAL AND MATHEMATICAL MODELING PROBLEMS IN HIGHER EDUCATION CALCULUS STUDENTS THROUGH A PLATFORM WITH SYMBOLIC RESPONSE DD. Jiménez Suro, AJ. Sánchez Hernández, RD. Santiago Acosta, EM. Hernández Cooper	7843
WHAT IS A COMMUNITY OF MEANING? S. Azulay	7847
ASPECTS OF FOREIGN LANGUAGE TEACHING TO MULTIETHNIC AND MULTICULTURAL STUDENT GROUPS. CASE STUDY OF INCOMING UKRAINIAN STUDENTS G.A. Necula	7848
ASPECTS OF GENDER EQUALITY IN SPORTS EDUCATION IN THE REPUBLIC OF MOLDOVA G. Braniste	7849
DISCOVERING INSECTS TO OVERCOME STEREOTYPES. A DIDACTIC RESEARCH IN BIOLOGY EDUCATION IN KINDERGARTEN E. Puller, G. Veronese, S. Pacchini, E. Piva, S. Schumann, G. Vanzan, P. Irato, G. Santovito	7850
EDUCATE ABOUT THE RICHNESS OF BIODIVERSITY. USING THE SQUARE TECHNIQUE TO DISCOVER THE ECOLOGICAL VALUE OF BIOLOGICAL VARIETY IN AN OUTDOOR SCHOOL M. Morello, E. Piva, S. Pacchini, S. Schumann, G. Vanzan, P. Irato, G. Santovito	7860
DIGITAL PLATFORMS IN HIGHER EDUCATION IN LIGHT OF INDUSTRY 4.0 I. Milošević, J. Ruso, A. Rakić	7870
CAN ONE SIMULATE THE ENTIRE ENTREPRENEURIAL PROCESS IN A PHYSICAL CLASSROOM - LEARNINGS FROM DEPLOYMENT OF AN EDUCATIONAL BOARD GAME ESHIP: NAVIGATING UNCERTAINTY AT A MASTERS LEVEL ENTREPRENEURSHIP COURSE R.V. Basaiawmoit	7875
USE OF INTERNET RESOURCES IN FOREIGN LANGUAGE LEARNING N. Sigacheva, G. Eremeeva, M. Sigachev	7876
DEVELOPING ORAL COMMUNICATION SKILLS - ROMANIAN AS A FOREIGN LANGUAGE - LEVEL A1- A2 G. Ciobotaru	7884
A REVIEW OF COMPETENCY BASED EDUCATION IN COLLEGE ECONOMICS COURSES K. Adzima	7889
STUDENT SELF-SELECTION OF THEIR FINAL EVALUATION: AN EDUCATIONAL EXPERIENCE FOR INSTRUCTORS AND STUDENTS J. Richards	7890
COERCIVE MEASURES WITH AN EDUCATIONAL CHARACTER A. Nastas	7891
GETTING TO KNOW SCIENCE FROM SCIENTISTS - ENCOURAGING SCIENTISTS TO TALK ABOUT SCIENCE L. Halbrügge	7892
CAPACITAR PROJECT: SKILLS FOR ACCESS TO THE WORLD OF WORK. A PARTNERSHIP BETWEEN THE COMPANY ALLOG GROUP AND INSTITUTO CRESCER IN DEVELOPING A PROFESSIONAL QUALIFICATION COURSE FOR BRAZILIAN YOUNG PEOPLE L Bondicz, M. Bornes, A. Caregnato	7893

CRESCER PROJECT: LEADERSHIP FOR THE 21ST CENTURY – INTERNATIONAL PARTNERSHIP BETWEEN FUNDACIÓN MAPFRE AND INSTITUTO CRESCER TO DEVELOP A PROFESSIONAL QUALIFICATION COURSE FOR BRAZILIAN YOUNG PEOPLE AND ADOLESCENTS J. Bondicz, M. Borges, A. Caregnato	7894
ENHANCING AWARENESS OF THE PROS AND CONS OF GROUP LEARNING: COLLABORATING WITH EDUCATORS TO NAVIGATE CHALLENGES IN DESIGNING EFFECTIVE ACTIVITIES M. Milani	7895
DEVELOPING ENTREPRENEURSHIP AND MARKETING SKILLS THROUGH BUSINESS GAMES C. Pérez-Cabañero, E. Bigné, E. Caplliure, A. Cuenca, C. Martínez, J.E. Selma	7900
VISUAL CODES AND MULTIMODAL LEARNING: ENHANCING ENGLISH LANGUAGE ACQUISITION IN HISPANIC CHILDREN FROM AN EARLY AGE R. Jolley Rangel, P. Paredes, V. Vinuesa	7904
EVOLUTION OF TEACHING METHODS FOR ENTREPRENEURSHIP: A COMPARATIVE ANALYSIS OF IN-CLASS AND ONLINE TRAINING APPROACHES FOR ADULT LEARNERS A.P. Pavel, A.R. Iordache-Munteanu	7905
ADAPTING EDUCATIONAL APPROACHES FOR SUSTAINABLE AIR TRANSPORT A.P. Pavel, S.E. Zaharia, A.R. Iordache-Munteanu	7913
SYNCHRONIZED IOT BASED DIGITAL TWIN MANAGEMENT PLATFORM FOR FLEXIBLE WIND FARM OPERATION – SYNC-TWINWIND ACADEMIC PROJECT S. Skok, M. Mak, A. Vaccaro, S. Djokic	7921
STUDENTS AS CO-CREATORS OF AN ENVIRONMENT-FRIENDLY CAMPUS IN TIMISOARA M. Cernicova-Buca, V. Gherheş, A. Palea, G.M. Dragomir	7929
RELATIONSHIP BETWEEN STUDENTS' ICT INTERACTIONS AND SCIENCE ACHIEVEMENT: SEM ANALYSIS F. Örnek, E. Afari, S. Alaam	7938
INSTRUCTIONAL LEADERSHIP PRACTICES THAT ENHANCE SCHOOL PERFORMANCE: CASE STUDY OF SELECTED QUEENSTOWN, EASTERN CAPE SCHOOLS K. Nyikanyika, M.S. Mkhomi	7943
THE DIGITAL DIVIDE: DIGITAL TRANSFORMATION, EMPLOYMENT AND INCLUSIVE GROWTH IN SOUTH AFRICA N.C. Lesame	7954
APPRAISAL ON THE USE OF DIGITAL TECHNOLOGY AS A MEANS OF ACHIEVING LEAN PROJECT DELIVERY A.B. Sholanke, J. Eleagu	7963
THE USE OF THE INTERNET FOR STUDENT PERFORMANCE AT SELECTED SOUTH AFRICAN UNIVERSITIES STRUGGLING WITH DIGITAL DIVIDES N.C. Lesame, N.C. Baloyi	7972
HISTORY OF SCIENCE AND TECHNOLOGY IN STEAM APPROACHES: IMPACTS OF A NON-FORMAL EDUCATION PROJECT ON THE DEVELOPMENT OF PARTICIPANTS' SCIENTIFIC LITERACY C. Venturine, I. Malaquias	7980
DEVELOPMENT OF A PSYCHOMETRIC INSTRUMENT TO DIFFERENTIATE STUDENTS' PERSONAL CHARACTERISTICS IN MASTER'S PROGRAMS IN THE FIELD OF EDUCATION A. Terekhova, E. Sidorkina	7989
APPROACHING SOLUTIONS FOR INCLUSIVITY THROUGH THE USE OF 3D- PRINTING IN THE END-OF-DEGREE PROJECT: A SERVICE-LEARNING METHODOLOGY A. Jimenez Suarez, A. Cortés, S. García-Rodriguez, A. Rodriguez Lorente	7993
NATIONAL AND INTERNATIONAL EXPERIENCES IN THE FIELD OF SOCIO- EDUCATIONAL INCLUSION OF YOUNG PEOPLE WITH DISABILITIES S. Racu, N. Cebotaru	7994
DEVELOPMENT OF A CLIMATE CHANGE INTEGRATED SCIENCE EDUCATION CURRICULUM FOR PRE-SERVICE TEACHERS: A MULTIDISCIPLINARY PERSPECTIVE TO KNOWLEDGE INTEGRATION K. Booi	7999

DESIGN, DEVELOPMENT, AND EVALUATION OF THE ROUNDNESS OF MACHINED PARTS IN PRACTICAL TRAINING M. Brazina, Page M. Patieta, I. Del Cale I. Calegoria, I.M. Varanari, Martinera,	8005
M. Ramirez-Peña, M. Batista, I. Del Sol, J. Salguero, J.M. Vazquez-Martinez IMPROVEMENT IN THE PRACTICAL TEACHING OF SAND-CASTING PROCESSES THROUGH THE USE OF ADDITIVE MANUFACTURING TECHNIQUES J.M. Vazquez-Martinez, M. Batista, I. Del Sol, J. Salguero, M. Ramirez-Peña	8011
IMPROVING THE STANDARD OF TEACHING AND LEARNING OF LIFE SCIENCES AT A SOUTH AFRICAN SECONDARY SCHOOL THROUGH INTEGRATION OF ICTS Z. Mkhanyiswa, K. Booi, M. Moyo	8017
GENERATIVEREADER: EXPLORING THE USE OF GENERATIVE AI IN ENHANCING READING EXPERIENCES FOR CHILDREN WITH DYSLEXIA N. Li	8023
ARE HISTORICALLY DISADVANTAGED RURAL SCHOOLS IN SOUTH AFRICA CAPACITATED TO ENGENDER A CULTURE OF SOCIAL JUSTICE AMONGST THEIR LEARNERS? N. Gqeba, L. Gqeba	8028
SELF-EVALUATION ROLE IN TEACHING AND LEARNING L.B. Peral, P. Ebrahimzadeh, M.F. Barbés, M.A. Argüelles, I.F. Pariente	8034
SIMPLE LINEAR REGRESSION OF SOCIAL MEDIA ACTIVITY AND STUDENT PERFORMANCE IN MINE SURVEYING STUDIES M. Mpanza	8035
ENSURE EDUCATIONAL ENCOURAGEMENT FOR STUDENTS IN LEARNING MATHEMATICS USING THE DIGITAL PLATFORM AS A TECHNOLOGICAL APPLICATION IN THE TEACHING PRACTICE OF TEACHERS IN A SCHOOL CONTEXT A. Henriques	8044

VET TEACHERS: FACING THE CHANGES IMPLEMENTED IN VET EDUCATION IN SPAIN

Laura Gómez Estrada¹, Luis Gómez Estrada¹, C. Zoli², S. Randaccio², L. Pietra², R. Sixto Iglesias³, R. Navarro Cerveró³, J.S. Nunes⁴, P. Karampelas⁵, J.B. Tormos Capilla⁶, L. Miltiadis⁻, J.L. Gómez Ribelles՞

¹ikasia Technologies SL (SPAIN)
²smallcodes SRL (ITALY)
³redtree Making Projects Coop.V. (SPAIN)
⁴somatica, Materials & Solutions (PORTUGAL)
⁵1st Epalgematiko Lykeio Kato Achaias (GREECE)
⁶IES Enrique Tierno Galván (SPAIN)
⁷Ergastiriako kentro kastorias (GREECE)
⁸Universitat Politècnica de València (SPAIN)

Abstract

Faced with the challenges experienced since the pandemic of 2020, the European Commission has made Vocational Education and Training (VET) an axis of the common policy, making it a reference for economic and social reconstruction. In this context, the member countries of the European Union have started to implement educational laws adapting Vocational Training to the new guidelines in order to achieve the objectives proposed by Europe.

In the case of Spain, the new Organic Law 3/2022, of March 31, 2022, on the organization and integration of Vocational Training for the modernization of these studies in Spain, was approved. The law introduces flexible learning pathways, and updates and develops new educational programs to meet the demands of the future labour market and make VET studies more attractive to young people.

However, the road to the implementation of this new law is not simple and teachers need tools and guides to support and help them in the implementation of the new law and in the adaptation of student mobility in the technology sector.

In this communication, we present the contents of the "Guide for VET teachers: the teacher facing a new and more inclusive VET model", developed in the framework of the Erasmus Plus Project "Building the vocational training of the future: companies and educational centres facing the challenge of the organization and integration of a more inclusive and digital VET". This is a guide for VET teachers that explains the consequences of the changes brought about in VET education as a result of the new regulation. Our aim is to provide methods and tools that from our point of view can help to adapt classroom and in-company teaching as well as student mobility in the technology sector to a new model of VET that is more updated, international and oriented to the needs of the labour market. Not only that, but we also want to pay special attention to the objective that the changes that will be developed in the coming years do not leave aside the VET students with obstacles that require this training to access the labour market and achieve a full social, personal, labour and educational inclusion.

Keywords: Vocational training, technology, critical thinking, methodology, research, students, evaluation.

1 INTRODUCTION

In a context in which the youth unemployment rate in the countries of the European Union in 2022 and 2023 is so high [1], it is particularly important to implement changes in Vocational Training with the aim of making it more focused on access to the labour market. In the case of Spain, in 2022 the new Organic Law 3/2022, of March 31, on the organization and integration of Vocational Training [2] was approved with the aim of implementing changes that guarantee learning opportunities for all with a unified, flexible and easily accessible system.

One of the essential points of the reform of vocational training in Spain is the introduction of coresponsibility between educational centers and companies in the training of students. In the business world and in society in general, the training that a worker acquires in the company where he/she works has always been valued. Work experience provides training in transversal skills such as commitment and responsibility, integration in work teams, oral and written communication and others. However, what is now on the table goes much further. The dual nature of vocational training means that in vocational certificates and in vocational training cycles a significant part of the curriculum, at least 25%, is taught in the company and that the distribution between the part taught in the company and in the educational centre is the result of an agreement between these two actors and is reflected in an individual training plan for each student [3].

The wide variety of professional families considered in the VET curricula, the variety of productive sectors, size, activity and business plans of companies means that student training plans have to be adapted to the circumstances surrounding each specific case and it is therefore difficult to propose general guidelines. However, we consider it of great importance to initiate a dialogue between companies and vocational training centres on the key ideas that should guide the process of generating each student's training plan.

One aspect to consider is the training capacity of a specific company. The law states that "companies or equivalent organizations must have a professional with high technical skills, high knowledge of the organization and operation of the company, pedagogical skills and sufficient time dedication, as a tutor". The company's activity must be sufficiently broad to help the student develop the range of competencies that make up an important part of his or her curriculum.

In this sense, technology-based companies can accredit an important training capacity in competencies that the recommendations of the European Union and Spanish legislation consider key in the training of a student. The fact that they are innovation-based companies means that their day-to-day work raises issues related to skills such as learning to learn, searching for, organizing and critically analysing information, critical analysis of experimental results and quality control, teamwork, entrepreneurship, oral and written communication, multilingualism and others.

In this context in the CRITICALTHINKING4VET network we are developing the Erasmus Plus project "Building the vocational training of the future: companies and educational centres facing the challenge of the organization and integration of a more inclusive and digital VET" with which we try to provide ideas and methodologies to help teachers in educational centres and companies to adapt their teaching plans to the innovation posed by the new vocational training systems. These ideas and opinions are collected in the guide "Guide for VET teachers: the teacher facing a new and more inclusive VET model" for Vocational Education and Training teachers". Our analysis focuses especially on the application of the new training plans to students who suffer obstacles to their social and labour integration, as the Organic Law 3/2022 explicitly states in its preamble.

In this communication, we would like to give some hints of the results that the discussion carried out within the CRITICALTHINKING4VET network is reaching.

2 METHODOLOGY

The Erasmus+ project "Building the vocational training of the future: companies and educational centres facing the challenge of the organization and integration of a more inclusive and digital VET" involves three small or medium-sized technology-based companies, a cooperative specialized in innovative methodologies in education and three vocational training educational centres, with the collaboration of university researchers. The participants are based in Portugal, Greece, Italy and Spain and have a long history of participation in innovative projects in vocational training methodologies within the framework of the CRITICALTHINKING4VET network, which includes a wider group of technology companies and vocational training schools.

Teachers, company technicians and researchers participated in the discussions, following the script of the Spanish Organic Law 3/2022, highlighting the points that seem to deserve special attention for the implementation of the changes in the curricula and in the drafting of individualized training plans for each student.

As a result, it is proposed to set out the programming of the activities to be carried out by each student during their stay in the company in a "student training programming and monitoring notebook" in which the relationship between the learning outcomes agreed to be the responsibility of the company and the activities carried out in the company by the student is established.

The discussion of the working group of this Erasmus + project has focused on the preparation of a template of this document designed so that the student has to reflect on each aspect of his activity. They will set out in writing the objectives of their work, which will have been explained to them by their tutor

in the company, they will present the results obtained with the help of tables and graphs, will explain the mathematical treatment of the data they obtain, will look for the information they need to analyze the data and draw consequences, they will judge the reliability of the results of their tests or the quality of the parts they have produced. On the other hand, conceptual questions and exercises will be posed in the notebook related to the competences included in the training plan that are the responsibility of the company. The student's tasks in the company will probably be specific and will not cover some of the conceptual or application aspects included in the training plan. The student will have to look for sources of information (internet, textbook or technical information), study them and complete in the notebook the exercises that are proposed to him/her. All of this with the help of their tutor and other company personnel.

In this paper we focus on presenting the considerations we have come to on possible in-company student activities related to the development of basic competences for their professional career, inclusive activities for students with barriers, the development of critical thinking, e-learning and internationalisation. These considerations serve as a basis for the preparation of the individualised incompany training plan.

3 RESULTS

Our analysis of innovation in vocational training focuses on the point of view of teachers, researchers and professionals on what small and medium-sized technological companies can contribute to the training of students. We set out our analysis under a series of headings that have attracted our interest but are not intended to be exhaustive; they represent a point on the road to an analysis that will have to take a long time, like the development and application of the Law itself.

3.1 Assessing the training capacity of a company. Relationship between the training activities in the company and the key competences to be developed by the student

Over time, it is to be expected that information and indicators of the experience of companies in the training of VET students will accumulate, but in any case it is a challenge for teachers and management teams of educational centres to establish contacts with companies that provide the necessary training capacity, beyond the collaborations that undoubtedly already exist for curricular internships in the current curricula. It seems necessary to develop criteria to establish the suitability of a company for dual training in a given field of specialization. The Organic Law 3/2022 establishes the participation in the Vocational Training System of collaborators with the profile of "prospecting person of companies and similar organizations".

In this sense, we would like to emphasize that the Vocational Training System is student-centred. The focus of their training plan should be directed to the development of their competence in aspects that will enable them to develop their professional career. The skills and knowledge acquired must enable them to adapt to the changes that are continually occurring in a company's technology, or in its adaptation to the economic, ecological and digital transition in which the world is immersed. The competencies acquired during this training period must make it possible to respond to changing professional interests and expectations throughout a lifetime.

The suitability of a training plan for a student must be established according to the relationship between the training activities foreseen in the school and in the company and the competencies established in the curriculum.

As we said above, it is difficult to give general guidelines in this regard because of the variety of possible situations and curricula in vocational education, but we can raise some ideas as to which activities of those that students can perform in a technology company can make a significant contribution to their progress in achieving the key competencies set out in the recommendation of the Council of the European Union of May 2, 2018 for the end of basic education [4].

3.1.1 Literacy competence

In accordance with the operational descriptors of this competency, it is expected that at the end of basic education the student will express him/herself orally or in writing coherently, correctly, with a cooperative and respectful attitude, that he/she will understand, interpret and critically evaluate oral or written texts in order to participate in an active and informed manner in different contexts, to locate and contrast in a

progressively autonomous way information from different sources, to read with autonomy progressively more complex texts, to put their communicative practices at the service of democratic coexistence, the dialogued resolution of conflicts and the equal rights of all people.

In this direction, the student's activity in the company should be programmed within a working group in which objectives and tasks are programmed and the results obtained and the progress in achieving the objectives are analysed. We recommend that the student fill out a workbook in which, similar to a laboratory notebook in which not only experimental data or other results are collected but critically analysed and the student demonstrates his understanding of the problem being addressed as a whole [5]. It is going to become clear that the skills of effective and respectful communication and resolution of discrepancies that arise is essential to make progress in completing a task or achieving specific objectives. The incorporation into an innovative project clearly shows the student the importance of acquiring these skills and how linguistic ability has an impact on their integration into the group, their personal satisfaction and the achievement of their own objectives and those of the group as a whole.

3.1.2 Mathematical competence and competence in science, technology and engineering

According to the descriptors of this competency, students are expected to use inductive and deductive methods in known situations at the end of their basic training, to select and use problem-solving strategies and critically analyze the solutions found (STEM1), to use scientific thinking, to pose questions and test hypotheses through experimentation and inquiry, showing a critical attitude towards the scope and limitations of science (STEM2), to propose and develop projects by designing and manufacturing prototypes or models to generate or use products that provide a solution to a need or a problem in a creative way and seeking the participation of the whole group (STEM3), interpret and transmit the most relevant elements of processes or reasoning (STEM4) and undertake scientifically based actions to promote physical and mental health and preserve the environment and living beings (STEM5).

Many of the specific aspects related to this competency are not easy to acquire if they are presented to the student isolated in the different subjects he/she is taking or through concrete examples, academic problems or texts. The fact of being immersed in a work with objectives in the field of technological innovation makes the importance of facing the professional activity following the scientific method in line with the descriptors of this competence very evident. The student will see how intuition is not enough to move in the direction of achieving a technological objective, that providing a solution to a problem or a need requires method, critical and scientific thinking. The participation in research and development projects is an important contribution for the student to be convinced of the value of dedicating an effort to acquire these methodologies of reasoning and work.

3.1.3 Multilingual competence

In relation to this competence, it is expected that at the end of their professional training studies, students will effectively use one or more languages other than their own, transfer between different languages as a strategy to communicate and expand their individual linguistic repertoire, and know, value and respect the linguistic and cultural diversity present in society.

Day-to-day work in the company often requires the use of foreign languages, in particular English. On the one hand, in the search for documentation that we have already mentioned in relation to other competences, it will be seen that in the field of technology much of the information relevant to a specific project is only available in English and students will have to deal with the handling of these texts. On the other hand, communication with foreign personnel of the company itself and in the relationship with other companies is frequent. It will be evident for all students that the mastery of languages other than their own is an essential communication tool in the development of their professional careers.

3.1.4 Digital competence

In relation to this competence, students are expected to be able to search the Internet with a critical sense, taking into account criteria of validity, quality, timeliness and reliability. They are also expected to handle digital tools for information processing, adapting them to the task they are performing and to their lifelong learning needs. To communicate and exchange information using virtual tools or platforms. Identify risks and adopt preventive measures to protect devices and personal data. To develop simple computer applications and sustainable technological solutions.

The proposed activities will be based in most cases in digital environments, both in the handling of the company's equipment and in data analysis. On the other hand, the search for information related to the specific project will be carried out on the Internet and special emphasis will be placed on critical thinking

skills that allow the reliability of the information obtained to be analyzed. We also focus on digital tools for the organization of the information collected and its presentation to the colleagues of the working group.

3.1.5 Entrepreneurship competence

At the end of this educational stage, students are expected to be able to analyze needs and opportunities and face challenges with a critical sense, taking stock of their sustainability and assessing the impact they may have on the environment. They must evaluate their strengths and weaknesses using strategies of self-knowledge and self-efficacy and understand the basic principles of economics and finance and apply this knowledge to concrete situations. They are also expected to develop the process of creating valuable ideas and solutions and making decisions in a reasoned manner, and to be able to create innovative and valuable prototypes.

We give special value to the example that the technology company itself sets for the students. At the beginning of the work, special importance is given to the company explaining to the students how the objectives of the project that is proposed to them fit into one of the company's lines of business. Either on their own initiative or in response to the students' curiosity, they will talk about the origin of the company, which will probably have been born on the initiative of some researchers and will be based on a technological development that arose from their own research. At least this is the case of the companies currently integrated in the network of this Erasmus+ project.

3.1.6 Personal, social and learning to learn competence.

Upon completion of basic education, the student should regulate and express emotions, strengthening optimism, resilience, self-efficacy and the search for purpose and motivation towards learning; to consolidate healthy lifestyles; to proactively understand the perspectives and experiences of others and incorporate them into their learning to participate in group work, accepting tasks and responsibilities; to carry out self-evaluations on their learning process and to set medium-term objectives and develop metacognitive feedback processes to learn from their mistakes in the process of knowledge construction.

In this sense, group work on a project with a common objective is a powerful tool to show the student the importance of critical thinking skills for communication with other people, intellectual honesty, the ability to self-evaluate their reasoning and critical analysis of the information they receive from other people and from the media or scientific or technical publications. In the development of his training in the company the student will check which way of approaching the learning necessary to carry out the work is more effective for him and how the interaction with the colleagues of the group can make that the objectives are reached efficiently or that the work turns out to be an absolute waste of time and effort.

3.1.7 Citizenship competence

Students are expected to analyze and understand ideas related to the social and civic dimension of their own identity, showing respect for the rules, empathy, fairness and constructive spirit in the interaction with others in any context; to analyze and assume the principles and values that emanate from the European integration process; to analyze and understand fundamental and current ethical problems; to understand the systemic relationships of interdependence, eco-dependence and interconnection between local and global actions.

Depending on the sector in which the company's activity is located, the impact that industrial manufacturing processes have on the global environment will be revealed to a greater or lesser extent. It is the role of the tutors both in the company and in the classroom to open the discussion of these aspects among students and encourage them to reflect, seek information and analyze the sustainability of manufacturing processes and their impact on the environment, for example, focusing on the recyclability of the materials used in their designs or the treatment of waste in the industrial processes involved.

3.1.8 Cultural awareness and expression competence

Students must know and critically appreciate and respect cultural and artistic heritage, involving themselves in its conservation and valuing the enrichment inherent in cultural and artistic diversity. They must enjoy and analyze with autonomy the most outstanding artistic and cultural manifestations. Express ideas, opinions and feelings and emotions through cultural and artistic productions and know, select and creatively use various media and media.

The fact of suggesting to students from the beginning of their training creative activities in the field of technology can make them relate in a more open way with the cultural and artistic expressions of their environment.

3.2 Apply the tools of critical thinking to the drafting of individual student training plans

In the CRITICALTHINKING4VET network we have insisted on the importance of introducing in the training activities of VET students elements that develop their critical thinking skills applied to technology and professional life. The aim is to show the power of evaluating one's own reasoning when accepting information as true, making a decision, analyzing experimental results or solving a problem. The elaboration of individualized training plans by teachers in schools and companies would benefit from the application of critical reflection both on the fundamental aspects of the collaboration between the school and a specific company and on the specific training activities to be carried out in the company and in the school. In particular, it is important to critically reflect on whether the reasons that have led to a certain decision or a certain agreement between company and school are student-centered as the Vocational Training System intends. It is obvious that the training plan will have to take into account the existing limitations due to the available means, the time of dedication of the tutors in the centre and in the company and others, it is important to critically reflect if all the external conditioning factors do not end up seriously compromising the objectives of the training. On the other hand, the training plan itself should establish the mechanisms for the continuity of this critical analysis throughout the training period in order to be able to adapt the activities to the characteristics of the student and his/her progress in the achievement of the competencies.

3.3 Extending vocational training opportunities to all. Overcoming personal or social barriers to integration

The preamble of the Organic Law 3/2022 states that the creativity and innovation of an economy lies in the training of its population as a whole, not only in the talent of a few elites. The Vocational Training System aims not to leave any person behind due to personal or social obstacles and to reduce the structural imbalances that are present in society, particularly in rural environments and in demographic decline. Extending the dual nature of vocational training to students with obstacles and to disadvantaged environments requires the development of strategies that require a significant amount of funding to be provided by the public administration.

It is necessary to sufficiently finance the mobility of students to give them access to training in companies that are identified as suitable for their training but are not located in the vicinity of the educational center or the student's family home. Without bold actions in this direction, the training deficits at intermediate skill levels in regions with little business presence may be perpetuated. The Erasmus+ program has been used efficiently by schools in disadvantaged regions of Europe to provide their students with internship training opportunities in companies in other countries. The volume of mobility needed to effectively implement dual education in Spain may require similar programs within the country and to other European countries.

Another aspect that needs to be considered is the relevance of extending the semi-virtual or virtual training provided for in Organic Law 3/2022 to training provided by the company or at least to a part of it. It is a discussion that will need to be addressed since it would have both positive and negative aspects. On the one hand, it can facilitate a quality training directed by the company virtually, but on the other hand it can make the System avoid the responsibility of giving all the students the opportunity of an onsite training in the company.

We briefly analyze the aspects of mobility and virtual in-company training in specific sections below.

3.4 Virtual internships in the company as a tool for extending the dual nature of vocational training to environments with less access to companies

Company internships are a characteristic feature of vocational training. Giving students the opportunity, during their vocational training studies, to have work experience is considered especially valuable, and in this sense a whole network of collaborations between educational centres and companies for curricular internships has been developed. However, it is often difficult to find companies in the immediate vicinity of the educational center where on-site work experience is valuable for the intermediate level of training sought in intermediate or high level training cycles. The problem is more acute in the case of students with personal, economic or social obstacles and in disadvantaged regions.

Different options have been tested to have this work experience in a semi-virtual or virtual way. In previous projects, the CRITICALTHINKING4VET network has proposed virtual internships in technology-based

companies [6] and also through development projects in which the vocational training classroom is converted into a company's research and development department for a certain period of time [7].

Through virtual internships, a group of students carry out an innovative project proposed and directed by company personnel and with technical and manufacturing support in-house. An example might be the design of equipment to be produced by additive manufacturing. Students design the parts in computer-aided design programs, choose materials, prepare control files for printing machines, identify components that are commercially available and do not need to be manufactured. The prototypes are manufactured at the company and, if possible, the students come to the company to carry out the assembly, testing and fine-tuning of the equipment. The experience of the pilot tests carried out with the participation of educational centers and companies from different countries is very encouraging. The activities carried out contribute very positively to the development of transversal and specific competencies that are fundamental for the students' professional life [6].

The research or development projects carried out in the classroom have been designed to be undertaken by a complete classroom at the beginning of intermediate vocational training studies. The project is proposed by one of the companies in the network and has a single objective for which the entire group is responsible. With the help of the teacher in the classroom, the work plan is distributed among the different subgroups that are organized to undertake the tasks. The exchange of information and presentation of results with the tutor in the company (based in the same country or in another country of the European Union) is carried out by telematic means. Participation in these projects is expected to have a significant motivating effect on students for the vocational studies they are starting. It makes them see the skills they need to acquire to be effective in solving problems and to achieve specific professional objectives: teamwork, oral, written and digital communication, searching, understanding and organizing information, communication skills in other languages, critical thinking, debate and decision-making in teams and others. The development of the work itself will make them advance in the acquisition of these skills.

The experience in these methods of semi-virtual or virtual training in the company is proving very promising, and could contribute to the dual nature of vocational training and the co-responsibility of the school and the company in the training of students.

3.5 The internationalization of vocational training

Linked to the previous points is the internationalization of vocational training, which must involve a more open training of professionals, making them participants in technologies and ways of working in the different countries of the European Union, as well as contributing to European integration. Reducing the structural imbalances in the European Union requires the training of the majority of the population in all regions of the EU at intermediate levels of training between primary and university education. The mechanisms of internationalization in European education are well known. The Erasmus program has had a recognized impact on the education of young Europeans and on European integration. These mechanisms should be used to the fullest extent to provide training opportunities in the workplace for vocational training students. The participation of schools in Erasmus+ program projects together with companies from other European countries is a source of opportunities for students.

4 CONCLUSIONS

Through the Erasmus Plus Programme project "Building the vocational training of the future: companies and educational centres facing the challenge of the organization and integration of a more inclusive and digital VET", technology-based companies and VET educational centres from Spain, Portugal, Italy and Greece are developing guides, manuals and courses that help teachers and technicians from companies to pave the way for the implementation of the new Vocational Training law in Spain and for the realization of mobility of VET students with obstacles in and European technology companies

ACKNOWLEDGEMENTS

This work has been funded by the Erasmus + program within the 2022-1-ES01-KA220-VET-000089436 project, granted in 2022 by the Spanish Service for the Internationalization of Education (SEPIE), which has allowed us to develop an innovative project and results that improve the training of VET students, as well as their inclusion and employability in the technology sector.

REFERENCES

- [1] Statista 2023. https://es.statista.com/estadisticas/488897/tasa-de-paro-juvenil-en-los-paises-de-la-ue/
- [2] Ley Orgánica 3/2022, de 31 de marzo, de ordenación e integración de la Formación Profesional. «BOE» núm. 78, de 1 de abril de 2022, (80 págs.)
- [3] Real Decreto 278/2023, de 11 de abril, por el que se establece el calendario de implantación del Sistema de Formación Profesional establecido por la Ley Orgánica 3/2022, de 31 de marzo, de ordenación e integración de la Formación Profesional.
- [4] Council recommendation of 22 May 2018 on key competences for lifelong learning (Text with EEA relevance) (OJ C, C/189, 04.06.2018, p. 1, CELEX: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018H0604(01)) accessed 10/01/2024
- [5] Erasmus Plus Programme project 2017-1-ES01-KA202-038469 "CRITICAL THINKING AS A STEP FORWARD IN VET EDUCATION: VET students immersed in high technology teams". http://www.criticalthinking4vet.eu/EP2017/ accessed 10/01/2024
- [6] Erasmus Plus Programme project 2020-1-ES01-KA226-VET-094951 "VIRTUAL INTERNSHIPS IN TECH CENTERS: TRAINING VET STUDENTS WITH OBSTACLES INTO A INNOVATIVE DIGITAL METHODS OF REMOTE WORKING AND ELEARNING CREATED FROM COVID-19". http://www.criticalthinking4vet.eu/ep2020/ accessed 10/01/2024
- [7] Erasmus Plus Programme project 2021-1-ES01-KA220-VET-000029545 «TECHVETLAB: A SOLUTION FOR POSTCOVID-19 LABOR MARKET THROUGH A TECHNICAL TRAINING OF VET STUDENTS WITH OBSTACLES». http://www.criticalthinking4vet.eu/ep2021/ accessed 10/01/2024