

# 12TH INTERNATIONAL CONFERENCE ON EDUCATION AND NEW LEARNING TECHNOLOGIES



# CONFERENCE PROCEEDINGS



# 12TH INTERNATIONAL CONFERENCE ON EDUCATION AND NEW LEARNING TECHNOLOGIES

# CONFERENCE PROCEEDINGS

**Published by** IATED Academy iated.org

### EDULEARN20 Proceedings

12th International Conference on Education and New Learning Technologies July 6th-7th, 2020

**Edited by** L. Gómez Chova, A. López Martínez, I. Candel Torres IATED Academy

ISBN: 978-84-09-17979-4 ISSN: 2340-1117 V-1216-2020

Book cover designed by J.L. Bernat

All rights reserved. Copyright © 2020, IATED

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.

#### EDULEARN20 COMMITTEE AND ADVISORY BOARD

Adam Chekour Agustín López Alexander Mikroyannidis Amany Saleh Amparo Girós Ana Lucas Ana Paula Lopes Ana Tomás Anamarija Štefić Andrea Molinari Andrew Youde Anemona Peres Antonija Mitrovic Antonio García Antonio Vieira de Castro Bouan Bontchev Boza Tasic Bozena Mannova Chang-Tik Chan Chelo González Chiew Hong Ng Cristina Sin Danny Weyns David Martí **Dieter Landes** Eladio Duque Elaine Hoter Elena Savova Emma Zimbelmann Eti de Vries Eulalia Tramuns Fausto Brevi Filomena Soares Francisco José Perales Georgios Kouroupetroglou Guy Meredith Halil Guven Hanna-Riitta Kymäläinen Hasan Abu Rasheed Helen Reddy Helen Williams Ignacio Ballester Ignacio Candel Ilana Lavy Ingēra Tomme-Jukēvica Iván Martínez Jan Kucerik Jana Bérešová Iane Davies **Jaqueline Baxter Javier Domenech** Iavier Martí Joanna Lees Jose F. Cabeza

UNITED STATES Jose Luis Bernat UNITED KINGDOM Josipa Matotek UNITED STATES Juanan Herrero PORTUGAL Kurt Wilson SPAIN Laura Zizka UNITED KINGDOM Louise Robson NEW ZEALAND Mª Jesús Suesta BULGARIA Maria Porcel CZECH REPUBLIC Mario Mäeots MALAYSIA Marion Milton SINGAPORE Maryam Rab PORTUGAL Meir Komar BELGIUM Michelle Flood SPAIN Miguel Peiró GERMANY Mohamed Zarouk BULGARIA Nina Helander NETHERLANDS Orlanda Tavares ITALY Peter Haber PORTUGAL Radel Ben-Av UNITED ARAB EMIRATES Sami Ammar GEORGIA Sandra Gomes FINLAND Sean Lancastle GERMANY UNITED KINGDOM IRELAND SPAIN SPAIN ISRAEL LATVIA SPAIN CZECH REPUBLIC SLOVAKIA MALAYSIA UNITED KINGDOM William Rankin SPAIN Xema Pedrós

SPAIN Joseph Walsh SPAIN Kathleen O'Sullivan PORTUGAL Koteshwar Chirumalla CROATIA Leonor Silva de Mattos ITALY Lorena López POLAND Luis Gómez Chova SPAIN Manuel Gericota PORTUGAL Maria Luisa Spreafico CANADA Marilyn Dono-Koulouris SPAIN Martina Bode SPAIN Monika Jakubiak ISRAEL Nathalie Vallès-Parlangeau GERMANY Norma Barrachina ITALY Polona Gradišek SPAIN Rebecca Allen GREECE Remigijus Bubnys Sergio Pérez Soula Mitakidou Stefano Lariccia Teemu Patala Teresa Cardoso Thomas Rachfall Tunde Szecsi Victor Fester Victoria Brennan Wayne Bailey Wendy Gorton SPAIN Xavier Lefranc FRANCE Yazid Benchabane SPAIN Zuzana Kubincová

SPAIN IRELAND CROATIA SPAIN IRELAND SWEDEN UNITED KINGDOM SWITZERLAND UNITED KINGDOM SPAIN UNITED KINGDOM SPAIN SPAIN PORTUGAL ITALY SPAIN UNITED STATES **ESTONIA** AUSTRALIA UNITED STATES PAKISTAN ISRAEL **IRELAND** SPAIN PORTUGAL POLAND FRANCE FINLAND SPAIN PORTUGAL AUSTRIA **SLOVENIA** ISRAEL UNITED STATES LITHUANIA CANADA PORTUGAL UNITED KINGDOM SPAIN GREECE ITALY FINLAND PORTUGAL GERMANY UNITED STATES NEW ZEALAND UNITED KINGDOM UNITED KINGDOM UNITED STATES UNITED STATES FRANCE SPAIN UNITED ARAB EMIRATES SLOVAKIA

### **CONFERENCE TRACKS & SESSIONS**

#### INNOVATIVE EDUCATIONAL TECHNOLOGIES

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

#### DIGITAL TRANSFORMATION OF EDUCATION

Big Data & Smart Technologies Digital Transformation 21st Century Skills Programming & Coding

#### **DIGITAL & DISTANCE LEARNING**

Distance Education in COVID-19 Times Challenges & Practices during COVID-19 Blended & Mobile Learning e-Learning MOOCs & OERs LMS & VLEs

#### **ACTIVE & STUDENT-CENTERED LEARNING**

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

#### STUDENT ASSESSMENT & MENTORING

Assessment & Evaluation e-Assessment Feedback on Learning Mentoring & Tutoring

#### MULTICULTURALITY & INCLUSION

Multicultural Education Diversity Issues Special Educational Needs Student Support & Bullying

#### EDUCATIONAL STAGES & LIFELONG LEARNING

From Pre-school to Secondary Education University & Post-graduate Education Life-long Learning

#### LEADERSHIP & TEACHERS DEVELOPMENT

ICT & Digital Skills Professional Development of Teachers Educational Management

#### **QUALITY & IMPACT OF EDUCATION**

Quality in Education Challenges in Curriculum Design Sustainability & Social Impact of Education University-Industry Collaboration Educational Policies & Internationalization

#### **DISCIPLINE-ORIENTED SESSIONS**

Architecture & Design Engineering Education Computer Science Business Education Health Sciences Education

#### LANGUAGE LEARNING AND TEACHING

Foreign Languages Language Learning Technology for Language Learning

#### **STEM EDUCATION**

Maths & Statistics STEM Experiences

## EDULEARN20 TABLE OF CONTENTS

<b>A WEB ASSIGNMENT TO ENCOURAGE STUDENT-COMMUNITY COLLABORATIONS</b> <i>G. Kontos</i>	1
<b>BEST PRACTICES IN ONLINE TEACHING AND LEARNING</b> G. Kontos	6
<b>TRANSFORMING AN EDUCATIONAL MODEL BY TRAINING AND LEARNING</b> <b>COMMUNITIES</b> <i>T. De Dios Alija</i>	11
VISUALIZATION IN GEOMETRY USING EDUCATIONAL VIDEOS D. Velichová	16
ARTIFICIAL INTELLIGENCE APPLICATION TECHNIQUES FOR DEEP ASSESSMENT OF MULTIPLE CHOICE EDUCATIONAL SYSTEMS A. Elmessiry, M. Elmessiry	26
<b>CHILDREN'S PARTICIPATION AND BIOPHILIC DESIGN IN PRESCHOOL LEARNING</b> <b>ENVIRONMENTS</b> <i>G. Ergunes Kutuk, D. Hasirci</i>	31
PLACE ATTACHMENT IN TURKISH COFFEEHOUSES: IMPLICATIONS FOR INTERIOR ARCHITECTURE EDUCATION S. Ozbicer, D. Hasirci	40
ASSESSMENT OF THE WEAK AND POWERFUL LEARNING OUTCOME OF REMOVABLE PARTIAL DENTURES USING AUTOMATED SOFTWARE AS A UNIVERSAL BENCHMARK TOOL L. Abdulhadi, H. Mohammed, H. Al-Samawi	50
FULLY AUTOMATED INTERACTIVE DIGITAL SYSTEM TO DESIGN METAL FRAMEWORK OF REMOVABLE PARTIAL DENTURES: SYSTEM SPECIFICATIONS AND APPLICATIONS IN TEACHING AND PATIENT MANAGEMENT L. Abdulhadi, A. Mahmoud, H. Al-Samawi	58
LIVING IN AN (IM)MATERIAL WORLD?: HIGHER EDUCATION ENCLOSURE AND DIGITAL DISPOSSESSION H. Glover, H. Collins, F. Myers	67
<b>COMPETENCIES OF HIGHER MATHEMATICS AT RIGA TECHNICAL UNIVERSITY</b> <b>ENGINEERING HIGH SCHOOL</b> <i>I. Volodko, S. Cernajeva, I. Eglite</i>	68
<b>CROSSING OVER : PRACTITIONER TO ACADEMIC TRANSITIONS IN AN ONLINE</b> <b>BUSINESS AND LAW SCHOOL</b> J. Baxter, R. Harding	74
STUDENTS' ALTERNATIVE CONCEPTIONS AND MISUNDERSTANDINGS WHEN LEARNING GEOMETRY. A SOUTH AFRICAN PERSPECTIVE S.M. Chiphambo, N.N. Feza	75
<b>COORDINATION OF INDUSTRIAL ROBOTS UTILIZING PLC</b> C. Kondekar, A. Sergeyev	86
<b>PERCEPTION OF ACCOUNTING ORGANISATIONS NEEDS AND THE ROLE OF</b> <b>HIGHER EDUCATION INSTITUTIONS</b> <i>S. Leite, P. Oliveira</i>	87
ENGINEERING APPRENTICE WORKSHOP "A WORLD UNDER YOUR FEET": A STRATEGY TO PROMOTE ENGINEERING AMONG SECONDARY SCHOOL STUDENTS J.I. López, M. Navarro, B. Alonso, C. Rad, J. López, I. Martín, J.M. Varona, M. Skaf, V. Ortega-López	88
WORKSHOP DESIGN TO APPROACH ENGINEERING TO PRIMARY SCHOOL CHILDREN: "GROWING YOUR OWN ORGANIC GARDEN" M. Navarro, J.I. López, B. Alonso, C. Rad, J. López, I. Martín, J.M. Varona, M. Skaf, V. Ortega-López	93
COGNITIVE COMPUTING IN BIG DATA MANAGEMENT S. Chowdhury	100
COOPERATION BETWEEN THE UNIVERSITY AND INDUSTRY - THE BASIS FOR NEW TECHNOLOGIES AND EQUIPMENT R. Brázda, A. Slíva	103
HOW TO INNOVATE LIFT TECHNOLOGY IN COLLABORATION WITH STUDENTS AND INDUSTRY R. Brázda, L. Hrabovský, A. Slíva	109

CORRELATION BETWEEN PROGRAMMING AND RESEARCH SKILLS OF STUDENTS OF ELECTRIC POWER ENGINEERING PROGRAMMES F. Milano	113
DRAWBACKS OF USING SIMPLIFIED MODELS TO TEACH POWER SYSTEM ANALYSIS F. Milano	121
SOME STRATEGIES TO LEARN CORROSION IN UNIVERSITY: PARTICULAR CASE OF MARINE AND MARITIME ENGINEERING STUDENTS M.V. Biezma, D. Agudo	130
MICRO-SEMINARS AS AN INNOVATIVE METHODOLOGY FOR THE DEVELOPMENT OF UNDERGRADUATE AND POSTGRADUATE HIGHER EDUCATION PROGRAMS. A CASE STUDY J.V. López	137
<b>HIGHER EDUCATION FOCUSED ON PORT MANAGEMENT IN EUROPE</b> N. Cruz-Pérez, J.C. Santamarta, J. Rodríguez-Martín, F. Ioras, M. Bruccoleri	144
INCAMP: MASTER'S DEGREE IN THE CARBON NEUTRAL MANAGEMENT OF SPORT MARINAS	151
N. Cruz-Pérez, J.C. Santamarta, J. Rodríguez-Martín, F. Ioras, M. Bruccoleri EXAMINING THE USE OF ICT IN THE PROMOTION OF SCIENCE LEARNING AND SCIENCE LITERACY IN SELECTED RURAL SOUTH AFRICAN SCHOOLS N. Mtsi	157
<b>EXPERIENCES IN THE DEVELOPMENT OF A SUSTAINABLE SCORECARD FOR</b> <b>ENTERPRISE SUSTAINABILITY COURSE</b> <i>R. Chalmeta, M. Mollar, G. Peris</i>	166
<b>INTEGRATING THE OBJECTIVES OF SUSTAINABLE DEVELOPMENT INTO TEACHING</b> <i>R. Chalmeta, M. Mollar, G. Peris</i>	171
TEACHING STRATEGIES IN WRITING ENGLISH FIRST ADDITIONAL LANGUAGE BY ISIXHOSA BACKGROUND LEARNERS FROM RURAL PRIMARY SCHOOLS T. Mpiti, M. Mbodila	176
INCREASING MOTIVATION TO LEARN A FOREIGN LANGUAGE BY USING VIDEOS IN SCHOOL G. Ismagilova	184
COMMUNICATIVELY ORIENTED APPROACH IN TEACHING VOCABULARY FOR STUDENTS G. Ismagilova	190
STRENGTHENING THE CRITICAL THINKING COMPETENCE G15 USING SOCIAL MEDIA AND ITS ASSESSMENT BY CORUBRICS B. Urbano, D. Carpio, F. González-Andrés	197
AN ACTIVE B-LEARNING PROPAEDEUTIC COURSE ON TELECOMMUNICATIONS ENGINEERING FOR FRESH STUDENTS A. Pérez Yuste, J.A. Sánchez Fernández, F. Pescador Del Oso, J. Meneses Chaus	204
PROSPECTS FOR INTEGRATING ARTIFICIAL INTELLIGENCE AND NEW DIGITAL TECHNOLOGIES INTO TERTIARY EDUCATION O. Chertovskikh	212
ANALYSIS AND COMPARISON OF ACTIVE AGEING POLICIES IN THE UNITED KINGDOM AND SLOVAKIA M. Koricina	219
<b>URBANONYMS AS THE SEMIOTIC SIGNS OF LANGUAGE TEACHING AND</b> <b>LEARNING</b> <i>R. Baranauskiene, I. Mickiene, S. Juzeleniene</i>	229
<b>LIFE IS CELEBRATION METAPHOR IN TEACHING MULTIMODALITY</b> S. Sarkauskiene, S. Juzeleniene, R. Baranauskiene	236
<b>RECOGNISING AND REWARDING TEACHING EXCELLENCE IN HIGHER</b> <b>EDUCATION USING AN EPORTFOLIO</b> <i>G.M. Velan, P. Polly</i>	244
BUILDING MOTIVATION FOR MULTILINGUAL STUDENTS. CHALLENGES OF THE FUTURE G.A. Necula	249
PRACTICAL TRAINING FOR GRADUATES NEED TO APPLY FOR THE LABOUR MARKET FOR ENHANCING REGIONS SAFETY L. Mariš, M. Boroš, Z. Zvaková, M. Felcan	257

USING STATE-OF-THE-ART METHODOLOGICAL APPROACHES TO ENGAGE STUDENTS, IMPROVE SYNERGIES AND INCREASE CONTENT COMPREHENSION M. Docherty, K. Gaubinger	262
DEVELOPMENT OF STUDENTS' COMPUTATIONAL THINKING THROUGH CREATIVE DIGITAL STORYTELLING IN BLOCK-BASED PROGRAMMING ENVIRONMENT V. Voinohovska	272
EDUCATION 2030: ALIGNING SUSTAINABLE DEVELOPMENT GOALS (SDGS) TO AND FOR HIGHER EDUCATION L. Zizka, P. Varga	279
TEACHING CURRENCY: LEVERAGING ON PROSPECTS AND CHALLENGES OF THE 4TH INDUSTRIAL REVOLUTION (INDUSTRY 4.0) IN THE COLLEGES OF TECHNOLOGY IN UNITED KINGDOM K. Adenuga, O. Ogunduyile	285
IMPROVING FACULTY PEDAGOGY THROUGH USE OF ARTIFICIAL INTELLIGENCE- A STUDENT ENGAGEMENT FACILITATION TOOL M.S. Ahmed, P. Chunduri, S. Vivek	294
ANALYSIS OF PHYSICAL EDUCATION APPS FOR COOPERATIVE LEARNING THROUGH GAMIFICATION L. Iglesias Alcón, A. Torres-Toukoumidis, N. Medranda Morales	295
INTEGRATING PROBLEM BASED LEARNING WITH THE JIGSAW METHOD FOR TEACHING IN MANUFACTURING ENGINEERING C.J. Luis Pérez	303
TEACHING METAL FORMING USING ACTIVE LEARNING METHODS IN FUNDAMENTALS OF MANUFACTURING C.J. Luis Pérez	308
<b>INVESTIGATING THE ROLE OF TECHNICAL SUPPORT IN THE ADOPTION OF E- ASSESSMENT IN INDIA</b> K. Adenuga, R. Tripathi, S. Miskon	314
HEALTH-RELATED QUALITY OF LIFE AND EDUCATION - HUMANISTIC ACADEMIC APPROACHES D. Vankova	321
MARCH OF THE ROBOTS? ARTIFICIAL INTELLIGENCE (AI) IS PART OF THE MAINSTREAM IN UK EDUCATION. BUT WHY SHOULD ANYONE CARE? P. Atherton	328
<b>PUBLIC HEALTH EVOLUTION AND EDUCATION IN BULGARIA - 20 YEARS LATER</b> D. Vankova	329
HOW COURSE DESIGN CAN GUIDE TECHNOLOGY INTEGRATION IN BLENDED LEARNING ENVIRONMENTS N. Lopez	338
SOCIAL REPRESENTATIONS OF NON-TECHNICAL PART OF ENGINEERING EDUCATION N. Dubreta	345
<b>PERCEPTIONS OF SCHOOL TEACHERS ON THE USE OF COLLABORATIVE TOOLS</b> <b>AT SCHOOL</b> <i>M. Nunes, A. Oliveira</i>	355
TOWARDS BLENDED LEARNING IMPLEMENTATION IN THE EDUCATIONAL PROCESS FOR THE STUDENTS OF NON-LINGUISTIC SPECIALITIES IN SOUTH URAL STATE UNIVERSITY E. Kiriakova, I. Levina, E. Ponomareva, S. Sanochkina	363
<b>DRIVE-X: A COLLABORATIVE MODEL FOR MAKING MOOCS</b> <i>H. Haugsbakken, I. Langseth</i>	369
<b>PARTICIPATORY DESIGN IN AN ONLINE INFORMATION LITERACY COURSE FOR HIGH SCHOOLS</b> <i>M. Cerny</i>	381
<b>THE POWER OF NUDGING FOR VIRTUAL LEARNING ENVIRONMENTS</b> T. Wernbacher, A. Pfeiffer, S. Kriglstein, S. Bezzina	391
<b>THE ROLE OF BLOCKCHAIN TECHNOLOGIES IN DIGITAL ASSESSMENT</b> A. Pfeiffer, S. Bezzina, T. Wernbacher, S. Kriglstein	395
EMPLOYING CULTURALLY RESPONSIVE PEDAGOGY AND TECHNOLOGIES TO RE- FRAME DIVERSE TEAM WORK CHALLENGES AS COMMON AND IMPROVABLE S. Taylor, M. Ryan, L. Elphinstone	404

<b>TEACHING BEHAVIORS AND COURSE DESIGN IN COMPETENCY BASED</b> <b>EDUCATION</b> J. Bonner, L. Braunstein, L. Portolese	414
TEACHING MATHEMATICS SIMULTANEOUS AND QUADRATIC EQUATIONS USING JAVA PROGRAMMING LANGUAGE: ANOTHER POSSIBLE WAY OF UNDERSTANDING MATHEMATICS A. Dewa	418
LEARNER-CENTERED APPROACHES AS A FORM OF DEVELOPING ENGLISH PROFICIENCY AMONG LEARNERS FROM DISADVANTAGED BACKGROUND B. Makena	430
DO TEACHERS INTEND TO USE VIRTUAL ASSISTANTS? THE MODERATING EFFECT OF THE DIGITAL SKILLS AND THE AGE OF THE TEACHER R. Chocarro, M. Cortinas, G. Marcos	438
STUDENTS` INTEREST IN TECHNICAL STUDY PROGRAMS AND TECHNICAL OLYMPIAD: INVESTIGATION OF THE INTERRELATION A. Hašková, J. Širka	439
<b>PERSPECTIVES ON PRESCHOOL CURRICULUM IN PORTUGAL</b> N. Carrachás, F. Seabra, M. Abelha	443
<b>INNOVATION AND EXTERNAL EVALUATION OF NON-HIGHER EDUCATION</b> <b>SCHOOLS IN PORTUGAL: A STUDY BASED ON EXTERNAL EVALUATION REPORTS</b> <i>F. Seabra, S. Henriques, M. Abelha, A. Mouraz</i>	451
SUSTAINABILITY, EDUCATION AND INTERIOR DESIGN- INTERRELATED ASPECTS: THE CASE OF CYPRUS P. Lapithis, K. Ioannou Kazamia	461
AN ANALYSIS ON GENDER EQUALITY IN THE MARINE, MARITIME AND NAUTICAL ENGINEERING STUDIES IN CANTABRIA UNIVERSITY, SPAIN M.V. Biezma, D. Agudo, M.A. Andrés	471
<b>OPPORTUNITIES AND CHALLENGES FOR EXTENDED REALITY TECHNIQUES IN HIGHER EDUCATION</b> <i>N. Ganz, C. Lecon</i>	481
<b>LITERATURE REVIEW ON THE USE OF MEDIA IN FINANCIAL EDUCATION</b> <i>A. Zureck</i>	491
<b>DEVELOPING DIGITAL AUTHORIAL EDUCATIONAL MATERIAL: THE</b> <b>TRANSFORMATION OF THE CONCEPT OF TEACHING</b> <i>L. de Lima, R. Carlos Loureiro, B. Collyer Aguiar</i>	497
ARCHITECTURAL EDUCATION: THEMATIC RESEARCH-ORIENTED ASSIGNMENTS IN DESIGN STUDIOS K. Kristianova, A. Jaszczak	507
<b>TEACHING INCLUSIVE DESIGN OF PUBLIC SPACES</b> K. Kristianova, A. Jaszczak	512
SCALING SYSTEM IMPLEMENTATION STUDY OF THE STUDENTS MARKS IN SPANISH ENGINEERING STUDIES J.A. Auñon, S. Merino, D.J. Maldonado, F. García-Sánchez, L. Sevilla, G. Castillo, M. González	517
<b>CRITICALLY INTRODUCING AN ONLINE PEER REVIEW CAMPUSMOODLE AUDIT</b> <b>TOOL (CMAT) PROJECT</b> <i>F. Work, S. Luders, K. Goodhand, W. Eboh</i>	525
KYRGYZ STUDENTS' WILLINGNESS AND EXPECTATIONS TO UNDERTAKE JOINT INTERNATIONAL MASTER'S STUDIES IN COMPUTER SCIENCE M. Milosz, N. Israilova, E. Milosz	535
3D INFORMATION TECHNOLOGIES IN CULTURAL HERITAGE PRESERVATION AND POPULARIZATION - A SERIES OF SEMINARS FOR MUSEOLOGISTS MADE BY COMPUTER SCIENTISTS M. Milosz, J. Montusiewicz, J. Kesik	543
ANALYSING TEACHERS, SCHOOL ADMINISTRATORS AND EDUCATION INSPECTORS OPINIONS ACCORDING TO TURKEY'S EDUCATION VISION 2023 ABOUT THE APPOINTMENT AND TRAINING OF SCHOOL ADMINISTRATORS M. Öztürk, A.I. Gümüşeli	550
TEACHING CONTROL THEORY AND ARTIFICIAL INTELLIGENCE CONCEPTS USING A METHODOLOGY BASED ON IMPLEMENTATION OF SIMPLE PARKING STRATEGIES FOR CAR-LIKE ROBOTS	556

C. Buiu, E. Arghire

HOW TO ENHANCE STUDENTS` INTEREST IN TECHNOLOGY STUDY BRANCHES P. Kuna, A. Hašková, M. Palaj, M. Skačan	561
TO WHAT EXTENT DOES A BLENDED "E-LEARNING INDUCTION" PROGRAMME FOR THE NEW ACADEMICS CONTRIBUTE TOWARDS BUILDING COMMUNITIES OF PRACTICE IN A HIGHER EDUCATION INSTITUTE S. Luders	567
<b>CREATIVITY, REFLECTION AND CRITICAL THINKING: THE PORTFOLIO IN</b> <b>DEVELOPMENTAL PSYCHOLOGY</b> <i>M.C. Blanco-Gandía, N. Sánchez-Pérez, M.P. García-Pardo, V.A.V. Blanco-Gandía, S. Montagud-</i> <i>Romero</i>	577
EDUCATION BLOGS: A COMPLETE AND COMPETENT TEACHING-LEARNING MODEL	581
S. Montagud-Romero, J.V. Ferrandis-Domingo, G. Montagud-Romero, M.C. Blanco-Gandía	
<b>EXPLORING THE INFLUENCE OF TEACHER BIOGRAPHY IN PRE-SERVICE PHYSICAL</b> <b>EDUCATION TEACHER EDUCATION</b> <i>W. Barber, W. Walters, C. Temertzoglou</i>	585
<b>EXAMINING THE "RESILIENCE AND GRIT" BEHAVIOURS, HABITS AND</b> <b>ATTITUDES OF PRE-SERVICE TEACHERS</b> <i>W. Barber, I. Brown, W. Walters</i>	591
A JAVA APPLICATION FOR THE GENERATION OF RANDOMLY SELECTED BODIES N. Charitos, E. Papaioannou	596
TEACHING GREEN ANALYTICAL CHEMISTRY PRINCIPLES FROM A PRACTICAL	604
APPROACH C. Ortega-Zamora, J. González-Sálamo, C. Hernández-Sánchez, M.Á. González-Curbelo, J. Hernández- Borges	
DEVELOPING ONLINE COURSES THROUGH UNIVERSITY PROFESSIONAL PARTNERSHIPS	613
W. Barber, R. Van Oostveen, E. Childs, D. McGuckin, S. Vohra	(01
HOW TO FOSTER A SIGNIFICANT CONNECTEDNESS WITH NATURE IN CHILDREN THROUGH THE QUALITY ORGANIZATION OF CHILDREN'S LEISURE TIME AND THE USE OF ICT IN SCHOOL? D. Anđić, P. Pejić Papak, J. Mezak	621
EVIDENCE ON THE EFFECT OF THE FLIPPED CLASSROOM ON STUDENTS' ACHIEVEMENT AND PERCEPTIONS IN A HIGHER EDUCATION CONTEXT M. Cladera	630
PREPARING TEACHER EDUCATORS FOR LANGUAGE-ORIENTED SCIENCE EDUCATION: DESIGN AND IMPACT OF A PROFESSIONAL DEVELOPMENT PROGRAM A. Hotze, M. Gijsel, M. Vervoort, S. Peters, A. Post	636
RESPECTING THE IDENTITY OF A CHILD WITH A DISABILITY: WHAT CAN PARENTS, DOCTORS AND EDUCATORS DO? I. Baranauskiene	644
THE IDEAS OF BAKHTIN FOR ARCHITECTONICS OF QUALITATIVE RESEARCH IN THE CONTEXT OF DISCOURSE ANALYSIS I. Baranauskiene	651
(UN)HAPPY CHILD IN THE WHIRLPOOL OF MODERN SOCIETY - MISCONCEPTION OR TRUTH T. Kokanović	658
RELATED PROFESSIONS AS A TOOL TO DEVELOP SOCIAL ADAPTABILITY OF PEOPLE WITH COGNITIVE IMPAIRMENT IN THE CONTEXT OF 21ST CENTURY DYNAMIC CHANGES B. Lanková, L. Zilcher	665
INFORMATION PORTAL FOR MOBILE LEARNING AND MOBILE ACCESS TO LIBRARY SERVICES AND RESOURCES: NEW RESEARCH PROJECT E. Tsvetkova, S. Denchev, I. Peteva	669
FUTURE TEACHERS WHO THINK CRITICAL ARE LESS PRONE TO UNFOUNDED BELIEFS E. Ballova Mikuskova	676
EMERGING MOBILE AND TABLET TECHNOLOGIES IN EDUCATION: ACCESS TO LIBRARY SERVICES AND RESOURCES E. Tsvetkova, R. Manolova, K. Planska-Simeonova	681

NEW EDUCATIONAL TRENDS FOR MEDIA LITERACY AND THE PREVENTION OF FAKE NEWS E. Zdravkova, S. Yordanova, K. Planska-Simeonova	691
LESSONS LEARNED IN THE IMPLEMENTATION OF THE FIRST DEGREE- APPRENTICESHIP IN INFRASTRUCTURE ASSET MANAGEMENT IN NEW ZEALAND J. Mackay, H. Cadzow	697
<b>FORMATION OF LEADERSHIP POSITIONS AND TRUST IN HIGHER EDUCATION</b> <i>I. Pavlova, D. Stoyanova, M. Pavlova, R. Yotova</i>	706
INNOVATIVE INFORMATION UNIVERSITY ENVIRONMENT, A FACTOR FOR BUILDING A POSITIVE IMAGE OF EDUCATIONAL INSTITUTIONS I. Pavlova, S. Denchev, S. Tsekova, M. Pavlova	710
HOW TO ENCOURAGE CHILDREN'S CONNECTEDNESS TO NATURE BY OUTDOOR LEARNING OF CHILDREN IN CROATIAN AND SLOVENIAN SCHOOLS? M. Pečar, D. Anđić, I. Hergan, D. Skribe Dimec, J. Pavlin	714
TRAINING AND DEVELOPMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES: CHALLENGES AND CHANGES TO HUMAN RESOURCE MANAGEMENT P. Novo Melo, C. Machado	724
THE ROLE OF MIXED REALITY IN THE EDUCATION AND PROMOTION OF CULTURAL AND HISTORICAL HERITAGE I. Peteva, I. Trenchev, K. Bosakova, S. Dimitrova	726
THE APPLICATION OF OBJECT-ORIENTED PROGRAMMING AND GAME ENGINE TO PROMOTE CULTURAL AND HISTORICAL HERITAGE I. Peteva, I. Trenchev, M. Traykov, R. Mavrevski	733
SCHOOLING WITH NATURE, BETWEEN PAST AND PRESENT F. Bertolino, M. Guerra	741
<b>THE BOND BETWEEN CREATIVITY AND OUTDOOR EDUCATION</b> F.V. Villa, M. Guerra	748
<b>EDUCATION FOR A WORLD DISRUPTED</b> <i>C. Cheers, S. Chen</i>	756
PROFESSIONAL SOCIALIZATION OF BULGARIAN TEACHERS IN MULTICULTURAL CLASSES N. Gerdzhikova	763
EDUCATION AND TRAINING IN CYBER/INFORMATION SECURITY K. Halouzka, L. Burita	768
PERCEIVED NEW PROFESSIONALISM OF BULGARIAN TEACHERS WORKING IN PRIMARY AND MULTICULTURAL SETTINGS N. Gerdzhikova, E. Mihaylova	778
GREAT: GRINDING RESEARCH ANALYSIS TOOL DEVELOPED BY STUDENTS AND RESEARCHERS WITH REAL INDUSTRIAL APPLICATION L. Godino Fernández, I. Pombo Rodilla, J.A. Sánchez Galíndez	784
UNIVERSITY OF THE BASQUE COUNTRY AS PART OF THE BASQUE DIGITAL INNOVATION HUB	792
L. Godino Fernández, I. Pombo Rodilla, J.A. Sánchez Galíndez, R. Lizarralde CASE STUDY OF A PROJECT-BASED LEARNING EXPERIENCE AT THE POLYTECHNIC OF VISEU, PORTUGAL V. Delplancq, S. Amante, C. Amaro Costa, A. Costa Lopes, E. Coutinho, S. Fidalgo, R. Gillain, P. Lopez, I. Oliveira, J. Pereira, S. Relvas, P. Roush	800
USING PERSUASIVE COMMUNICATION MODEL TO ENHANCE STUDENTS' INTEREST, LEARNING OUTCOMES AND PARTICIPATION IN CLASSROOM DIALOGUE IN BASIC SCIENCE IN TARABA STATE, NIGERIA C. Audu	807
TEACHING INNOVATION PROJECT AIMED AT IMPROVING STUDENTS' SELF- EFFICACY, ANXIETY AND PERFORMANCE TOWARDS THE COMPLETION OF THEIR MASTER THESIS S. Collado, C. Fidalgo, R. Rodríguez-Rey	816
IMPACT OF THE INCLUSION OF ONLINE PRACTICAL ACTIVITIES IN THE SUBJECT PSYCHOLOGICAL ASSESSMENT R. Rodríguez-Rey, S. Collado, C. Fidalgo	817
K. Kouriguez-Key, S. Collado, C. Fulligo COOPERATIVE LEARNING BASED ON SIMULATION OF SCIENTIFIC CONGRESSES J. Moreno-Fernandez, J. Ochoa, M. Gómez-Guzmán, J. Diaz-Castro	818

INNOVATION IN TUTORSHIP: COOPERATION BETWEEN EXPERIENCED AND BEGINNERS UNIVERSITY PROFESSORS J. Moreno-Fernandez, J. Ochoa, M. Gómez-Guzmán, J. Diaz-Castro	824
<b>PUBLIC SPEAKING: AN EXPERIENCE AT THE UNIVERSITY OF CADIZ</b> L. Bares Lopez, M. Jimenez Garcia	829
MICRO-CREDENTIALING THROUGH OPEN BADGES IN THE VET CONTEXT L. Sommaruga, N. Catenazzi, K. De Angelis	833
A RESEARCH PROJECT FOR UNDERGRADUATE STUDENTS: INTRODUCTION TO SUSTAINABLE CHEMISTRY B. Socas-Rodríguez, Á. Santana-Mayor, R. Rodríguez-Ramos, M.Á. Rodríguez-Delgado	840
BRINGING SCIENCE TO SECONDARY SCHOOL: A MOTIVATING STRATEGY INVOLVING PHD STUDENTS B. Socas-Rodríguez, R. Rodríguez-Ramos, Á. Santana-Mayor, M.Á. Rodríguez-Delgado	850
<b>EXPERIENCES ON TRANSVERSAL COMPETENCES IN HIGHER EDUCATION: THE</b> <b>CASE OF COMPETENCE DEVELOPMENT PROGRAMS</b> <i>P. Novo Melo, C. Machado</i>	860
OPEN EDUCATIONAL RESOURCES' (OER) AWARENESS IN SECONDARY EDUCATION: EXPERIENCES AND LESSONS LEARNED FROM A COURSE DEDICATED TO OER	861
I. Otero-González, D. Pantazatos, M. Grammatikou, D. Docampo	
CHILDREN'S PARTICIPATION IN THE CREATION OF LIVING SPACE IN THE INSTITUTION OF EARLY AND PRESCHOOL EDUCATION L. Vujičić	869
APPLICATION OF ACTIVE TEACHING METHODOLOGIES IN THE HUMAN NUTRITION AND DIETETICS DEGREE I. Milton-Laskibar, M.P. Portillo Baquedano	879
<b>PROCEDURE TO INTRODUCE THE INTEGRAL CONCEPT IN A PHYSICS COURSE</b> <b>FROM A MEANINGFUL LEARNING PERSPECTIVE</b> J.M. Bergues, D. Acebes de la Arada	880
THE HUNGER GAMES AND THE GIVER: A BRIEF ANALYSIS OF DYSTOPIAN NOVELS THROUGH THE MULTICULTURAL EDUCATION LENS L. Jones	885
FACEBOOK AND BULGARIAN LIBRARIES: THE CHALLENGES OF MODERN INFORMATION ENVIRONMENT P. Mukanova, S. Eftimova, K. Mincheva	890
PERSONALIZED EDUCATION: ORIGINS, CHARACTERISTICS AND TECHNOLOGY OF USE	899
T. Lopatukhina, E. Egorova, N. Bulankina, O. Mishutina A BLENDED LEARNING MODEL IN HIGHER EDUCATION: RESULTS FROM A PILOT STUDY	905
E. Peñalosa THE ROLE, USAGE AND REPRESENTATION OF SOCIAL NETWORKS AMONG ELEMENTARY SCHOOL STUDENTS, FROM 5TH TO 8TH GRADE	911
L. Tepes Golubic, N. Peran, D. Zadro, I. Halilovic APPLICATION OF INNOVATIVE TEACHING TOOLS IN THE TEACHING-LEARNING PROCESS OF OCCUPATIONAL MEDICINE IN TWO DIFFERENT SPANISH UNIVERSITIES: EXPERIENCES AND OUTCOMES B. Abecia, M. Bolea, I. Diana, J.L. Bernal, M.A. Lopez Verdejo, B. Martínez-Jarreta	916
<b>INCREASING ELEMENTARY SCHOOL STUDENT INTENSIVE READING SKILLS BY</b> <b>SPIDERMAN MODEL</b> <i>A. Suriansyah, R. Amelia, N. Ngadimun, R. Purwanti</i>	921
<b>LEARNING ENGLISH USING "DAMPRAK" GAME IN EARLY CHILDHOOD</b> <b>EDUCATION, BANJARMASIN SOUTH KALIMANTAN INDONESIA</b> A. Aslamiah, R. Purwanti, N. Ngadimun, N. Noorhapizah, A. Suriansyah, R. Amelia	928
<b>CASE METHOD IN ACCESSING STUDENTS WITH LIMITED HEALTH</b> <b>OPPORTUNITIES TO ADAPTIVE SPORTS</b> <i>G. Baturkina, T. Budyakova, G. Nizhnik</i>	936
DIGITAL NATIVES OR DIGITAL REFUGEES? PREVENTING CONFLICTING SELF- EFFICACY IN THE DIGITALIZED WORKPLACE	940

S. Lopes de Oliveira, L. Oliveira, J. Fisher Naves

AN AFFECTIVE, INTELLIGENT, TUTORING SYSTEM FOR PASSIVE HOUSE NEUROMARKETING A. Kaklauskas, A. Binkyte-Veliene, I. Vetloviene, D. Skirmantas, A. Kuzminske	946
FACTORS INFLUENCING THE ADOPTION OF E-LEARNING IN EDUCATIONAL AND CORPORATE SECTORS S.S. Jabeen, Z. Sadique	955
PROGRAMME FOR EUROPEAN COOPERATING STATES (PECS): PROJECT SPACE IMAGE PROCESSING (SIP) J. Sužiedelytė Visockienė, E. Tumelienė, I. Daugėla, J. Kučienė	964
A WAY TO UNDERSTAND THE SOLID-STATE CHEMISTRY FOR HIGH LEVEL EDUCATION STUDENTS: THE CASE OF A CERAMIC PIGMENT S. Torresi, A. Bou-Gil, M. D'Anna, P. Escámez-Gutiérrez, N. Peña-Recuenco, S. Chouli, P. Serna- Gallén, H. Beltrán-Mir, E. Cordoncillo	974
<b>ESCAPE ROOM: HOW MOTIVATION IMPROVES THE LEARNING PROCESS</b> M.A. Galindo, C. R. Maldonado, M.E. García-Rubiño, A. Lorente-Macías, A. Orte, R.M. Sánchez- Martín, A. Matilla-Hernández, M.J. Pineda de las Infantas Villatoro, J. Niclós-Gutiérrez, A. Domínguez-Martín	982
ADVANCED MULTIMEDIA IMPLEMENTATION OF CIRCULAR ECONOMY PILLS IN THE CLASSROOM, FOSTERING MULTIDISCIPLINARY, COLLABORATIVE LEARNING AND PROFESSIONALIZATION M.A. Marco-Fondevila, S. Scarpellini, P. Portillo, E.M. Llera, I. Zabalza, L.M. Marín, F. Llena, J. Valero	988
INSPIRATION LEADS TO ASPIRATION: IMPROVING CHEMISTRY LITERACY FOR LEARNERS WITH A LOW SOCIO-ECONOMIC STATUS A. Mallaburn, L. Seton, V. Brennan	997
WORK-ORIENTED PROJECT LEARNING IN THE CONTEXT OF MASTER'S LEVEL SERVICE DESIGN EDUCATION S. Kauppinen, S. Luojus	998
THE ROLE OF GAME DEVELOPERS IN A COLLABORATIVE PEDAGOGICAL GAME DESIGN A. Saggah, A. Atkins, R. Campion	1008
THE RELATIONSHIP BETWEEN LEADERSHIP, MOTIVATION AND JOB ENGAGEMENT I. Prudnikova, V. Prudnikovs	1015
DISABLED UNIVERSITY STUDENTS: AN EXPLORATORY STUDY OF A SUPPORT PROGRAM IN A SPANISH UNIVERSITY Á. Iglesias	1022
LAUNCHING A STEM ONLINE GRADUATE PROGRAM: LESSONS LEARNED ON FOSTERING STUDENT ACTIVE LEARNING AND SUCCESSFUL OUTCOMES D. Kliger	1026
EFFECTIVE DIGITAL TRANSFORMATION IN THE CONTEXT OF HIGHER EDUCATION O. Vindača, V. Ļubkina, I. Žogla, I. Prudņikova	1027
<b>PREBRIEFING AS A LEARNING TOOL IN PHYSIOTHERAPY</b> A. Baño-Alcaraz, R. Martín-San Agustín, A. Escriche-Escuder	1037
<b>CLINICAL SIMULATION IN PHYSIOTHERAPY</b> A. Baño-Alcaraz, R. Martín-San Agustín, A. Escriche-Escuder	1043
<b>EXPERIENCES AND OUTCOMES IN FLIPPED CLASSROOM TEACHING OF A LARGE</b> <b>UNDERGRADUATE PHYSICS-ENGINEERING CLASS</b> <i>C. Rodriguez, A. Kolomenskii, H. Schuessler</i>	1048
<b>EXTERNAL FINANCING FOR RESEARCH IN PUBLIC HIGHER EDUCATION</b> <b>INSTITUTIONS IN MEXICO CITY</b> <i>R.A. Gómez Ortíz, A. Ramos Trejo, M.F. Trejo Carrillo</i>	1055
PSYCHOMOTOR SKILLS OF PRIMARY SCHOOL PUPILS IN THE TECHNOLOGY SUBJECT IN THE SLOVAK REPUBLIC G. Bánesz, E. Felixová, D. Lukáčová	1065
<b>COMPETENCES OF VET TEACHERS IN DUAL EDUCATION</b> D. Lukáčová, D. Zmeková, G. Bánesz	1071
THE IMPACT OF JEWISH-ARAB INTERCULTURAL AND EDUCATIONAL ENCOUNTERS: QUALITATIVE AND QUANTITATIVE PERSPECTIVES B. Mollov, C. Lavie	1078

xiii

PEDAGOGICAL RESEARCH ON THE USE OF MIND MAPS IN TEACHING LITERATURE M. Dushkova, S. Tsankov	1083
THE PORTFOLIO AS A NEW INDICATIVE TOOL FOR STUDENT TEACHERS' EXTRACURRICULAR ACTIVITIES M. Dushkova, V. Radeva, T. Borisova	1091
<b>POPULARIZATION OF MATHEMATICS THROUGH GEOCACHING</b> L. Honzík, J. Frank	1101
USING OF NATURAL SCIENCE KNOWLEDGE IN TEACHING MATHEMATICS AT ELEMENTARY SCHOOL J. Frank, L. Honzík, Š. Pěchoučková, L. Šiková	1110
<b>EFFECT OF A GAMIFIED EDUCATION INTERVENTION WITH KAHOOT ON THE</b> <b>LEVELS OF ABSENTEEISM FROM THE DEGREE IN PHYSIOTHERAPY</b> <i>A. Escriche-Escuder, R. Martín-San Agustín, A. Baño-Alcaraz, J. Casaña</i>	1120
EFFECT OF THE USE OF STANDARISED CLINICAL CASES VERSUS SIMULATED CLINICAL CASES IN THE ASSIMILATION OF SPECIFIC CONCEPTS AND SKILLS IN THE DEGREE IN PHYSIOTHERAPY A. Escriche-Escuder, R. Martín-San Agustín, A. Baño-Alcaraz, M. Sánchez-Barbadora	1124
PHYSIOTHERAPY DEGREE STUDENTS' PERCEPTION OF THE IMPORTANCE OF LEARNING HOW TO READ SCIENTIFIC ARTICLES R. Martín-San Agustín, A. Escriche-Escuder, B. Tronchoni-Crespo, A. Baño-Alcaraz, J. Benítez- Martínez	1129
PHYSIOTHERAPY DEGREE STUDENTS' PERCEPTION OF THE EFFECT OF GAMIFIED LEARNING THROUGH THE KAHOOT TOOL IN UNDERSTANDING, ATTENTION, AND CONTENT INTEREST R. Martín-San Agustín, A. Escriche-Escuder, B. Tronchoni-Crespo, A. Baño-Alcaraz, M. Sánchez- Barbadora	1133
CULTURE OF THE EDUCATIONAL INSTITUTION AND THE PROFESSIONAL DEVELOPMENT OF PRESCHOOL TEACHERS: DYNAMISM AND INTERDEPENDENCE TOWARDS THE IMPROVEMENT OF EDUCATIONAL PRACTICE A. Čamber Tambolaš, L. Vujičić	1138
DIABETES MELLITUS AND NURSES' ROLE IN QATAR: CHALLENGES FOR NURSING EDUCATION Z. Schuessler	1149
<b>TESTING THE RELATIONSHIP BETWEEN TEAM EMOTIONAL INTELLIGENCE AND</b> <b>SATISFACTION IN PROJECT TEAMS</b> <i>S. Ortiz-Bonnin, C. Ramis, M.I. Montañez-Juan., M.A. Manassero-Mas, M.E. García-Buades, F.</i> <i>Rejón-Guardia</i>	1153
PERSONALITY OF STUDENTS, THEIR MOTIVATION AND ACADEMIC ACHIEVEMENT IN LEARNING FOREIGN LANGUAGE R. Karasova, J. Uhlarikova	1160
SELF-EFFICACY, PERCEIVED SUCCESS OF TEACHERS AND PUPILS' SCHOOL CONNECTEDNESS L. Bafiova, J. Uhlarikova	1167
<b>COMPARING LEARNING OBJECTS FOR EFFECTIVE LEARNING IN MATHEMATICS</b> L. Descalço, P. Carvalho	1173
THE PARTNERSHIP WITH PARENTS OF PUPILS IN INCLUSIVE EDUCATION E. Zezulková, K. Janků	1180
DIRECT SUPPORT OF THE TEACHER IN THE CONTEXT OF PRIMARY PEDAGOGICAL INTERVENTION E. Zezulková, K. Janků	1189
PROJECT METHODOLOGY IN INTERCULTURAL FOREIGN LANGUAGE COMMUNICATION TEACHING OF LINGUISTS IN TRANSLATION AND INTERPRETATION STUDIES L. Korneeva, A. Kovaleva	1197
FOREIGN LANGUAGE TEXTBOOK FOR INTERDISCIPLINARY RESEARCH PROJECTS A. Kovaleva, O. Anchugova, D. Zarifullina, D. Kurmanova, M. Tkacheva	1204
LINGUOCULTURAL PERCEPTION DIFFICULTIES IN THE PROCESS OF TEACHING ENGLISH AS A FOREIGN LANGUAGE IN A MULTICULTURAL STUDENT ENVIRONMENT	1211

V. Maevskiy, E. Epifanova

ERASMUS EXPERIENCES IN THE UNIVERSITIES: THE JEAN MONNET MODULE AT PORTUCALENSE UNIVERSITY D. Castilhos	1219
KNOWLEDGE TRANSFER BETWEEN SELECTED STAKEHOLDERS IN THE TRIPLE HELIX CONCEPT M. Rostasova, T. Corejova, M. Kincl	1223
<b>RETRACTION OF ACADEMIC ARTICLES DUE TO PLAGIARISING FROM DOCTORAL</b> <b>DISSERTATIONS: AN ACT OF ACADEMIC MISCONDUCT</b> <i>R. Comas Forgas, C. Touza Gama, M. Morey López, T. Mut Amengual, E. Curiel Marín</i>	1230
DIFFERENCES IN ENTREPRENEURIAL INTENTION BETWEEN STUDENTS FROM PRIVATE AND PUBLIC UNIVERSITIES: THE CASE OF CROATIA T. Lazibat, M. Damić, L. Buntić	1232
AI COACHING: EFFECTIVENESS FACTORS OF THE WORKING ALLIANCE IN THE COACHING PROCESS BETWEEN COACHBOT AND HUMAN COACHEE – AN EXPLORATIVE STUDY V. Mai, A. Richert	1239
PROJECT HO'OKU'I - NA KUMU ALAKA'I: HOW AN ONLINE PROFESSIONAL DEVELOPMENT PROGRAM SUPPORTS SECONDARY FACULTY AND NATIVE HAWAIIAN STUDENTS L. Uyehara, N. Rombaoa Tanaka	1249
ASSESSMENT CENTER IN THE STUDY OF THE LEVEL OF DEVELOPMENT OF SUPRA-PROFESSIONAL COMPETENCIES OF STUDENTS IN THE DIRECTION OF "HR-MANAGEMENT" A. Pesha	1259
WHAT DO STUDENTS EXPECT FROM LEARNING? A RESEARCH ON SKILLS AS A BRIDGE BETWEEN SCHOOL AND UNIVERSITY A. Ceccherelli, D. Capaldi	1267
BLOCKCHAIN TECHNOLOGIES AS A MECHANISM FOR PROTECTING INTELLECTUAL PROPERTY RIGHTS E. V. Kupchina	1277
IMPEDIMENTS TO THE DEVELOPMENT OF IMMERSIVE VIRTUAL REALITY IN EDUCATION J. Extremera, D. Vergara, A.I. Gómez, P. Fernández, E. Ordóñez, M.P. Rubio	1282
THINKING SKILLS FOR A TECHNOLOGICAL AGE: HAS PRIMARY EDUCATION AN IMPACT ON STUDENTS' SKILLS? M.A. Manassero-Mas, A. Vázquez-Alonso	1289
ROLE OF THE PEDAGOGUE AND HIS IMPACT ON COUNSELLING WORK IN THE SCHOOL R. Petani	1299
METHODS OF SCHOOL CHEATING FROM THE STUDENTS' POINT OF VIEW J. Bajtos, L. Hasajova, G. Gabrhelová	1309
CURRENT AND PREVIOUS PERCEPTION OF INSPECTIONS BY TEACHERS J. Bajtos	1316
<b>PSYCHOLOGICAL WELL-BEING, HAPPINESS AND STRESS AMONG FOUNDATION</b> <b>COLLEGE EDUCATORS: A RASCH MEASUREMENT APPROACH</b> <i>A. Mohd. Sukor, Z. Mahmud</i>	1322
MICROPLASTIC ANALYSIS IN MARINE ORGANISMS AS A FINAL DEGREE PROJECT C. Hernández-Sánchez, J. González-Sálamo, C. Ortega-Zamora, J. Hernández-Borges	1329
INQUIRY ABOUT THE PREVIOUS BACKGROUND AND OPINION OF THE STUDENTS IN THE SUBJECT ADVANCED CHEMISTRY (DEGREE IN CHEMICAL ENGINEERING) J. Esteve-Romero, M. Esteve-Amorós, J. Péris-Vicente, J. Albiol-Chiva, S. Carda-Broch, M.J. Ruíz-	1335
Angel <b>STUDENT PERCEPTION ABOUT THE SUBJECT "CHEMISTRY I"</b> M. Esteve-Amorós, J. Esteve-Romero, J. Péris-Vicente, J. Albiol-Chiva, S. Carda-Broch, M.J. Ruíz- Angel	1339
INTERCONNECTION OF SCIENCE, RESEARCH AND INNOVATION WITH HIGHER EDUCATION Z. Dvorak, M. Luskova	1346

ADAPTATION OF COMPUTER-ASSISTED EXPERIMENTATION TO MONOPROTIC ACID-BASE TITRATION	1352
M. Esteve-Amorós, J. Esteve-Romero, J. Péris-Vicente, J. Albiol-Chiva, S. Carda-Broch, M.J. Ruíz- Angel	
<b>PEER TUTORING APPLIED IN BIOSTATISTICS AT THE MASTER DEGREE</b> J. Esteve-Romero, M. Esteve-Amorós, J. Péris-Vicente, J. Albiol-Chiva, S. Carda-Broch, M.J. Ruíz- Angel	1356
<b>PREVENTION TECHNOLOGY FOR INTERNET ADDICTION DISORDER IN</b> <b>ADOLESCENCE</b> D. Ilyasov, D. Pogorelov, N. Nikolov, E. Kovalenko, A. Sevryukova	1360
ACADEMIC SELF-CONCEPT AND SATISFACTION WITH LIFE IN OLDER SCHOOL AGE M. Popelková, E. Jurišová, M. Zaťková	1371
EXPLORING MIXTURES, SOLUTIONS AND WATER DROPS WITH FIVE-YEAR-OLD CHILDREN USING AN EMERGENT APPROACH A. Sottoriva, M. Carli, O. Pantano	1377
PROBLEM-BASED APPROACH TO LEARNING/TEACHING IN ONLINE INTERMEDIATE ACCOUNTING COURSE C. Fajardo	1386
A MATLAB GRAPHICAL USER INTERFACE FOR ELECTRONIC TEST INSTRUMENT CONTROL IN THE ELECTRONICS ENGINEERING UNDERGRADUATE LAB E. Momox, A.C. Vidaña	1387
FAMILY EXPECTATIONS AND VISIONS FOR THEIR CHILDREN'S FUTURE: THE ROLE OF DEVELOPING CULTURAL LITERACY I. Kacane	1394
<b>READINESS OF PRESCHOOL CHILDREN TO SOLVE WORD PROBLEMS</b> <i>T. Kotrsalova, S. Pechouckova</i>	1401
<b>UNDERPRIVILEGED STUDENTS' PERCEPTIONS ON THE IMPACTS OF UNIVERSITY</b> <b>BASED COMMUNITY SERVICE PROJECT: EDUTAINMENT 4 UPSR</b> <i>N. Ismail, K.Y. Soo, H. Ahmad, D. Ratan Singh, W.N.H. Wan Mohd, N. Arbin, S. Elias, I.S. Mohd</i> <i>Ariff Albakri</i>	1408
DIAGNOSIS AND PROMOTION OF DECISION-MAKING COMPETENCIES OF STUDENTS WITH METHODS OF INTERNAL DIFFERENTIATION IN BIOLOGY LESSONS M. Ternieten, D. Elster	1413
THE FLIPPED CLASSROOM AS A MECHANISM FOR THE DEVELOPMENT OF CRITICAL THINKING P. Santillán Aguirre, R. Santos Poveda, E. Jaramillo Moyano, M. Cadena Vaca, V. Cadena Vaca	1423
VROAD VIRTUAL REALITY APPLIED TO ROADWORK TRAINING IN EUROPEAN CONSTRUCTION INDUSTRY L.M. Barrios	1432
APPS AND COLLECTIVE PLAYFUL ACTIVITIES TO FOSTER EXECUTIVE FUNCTIONS IN PRESCHOOLERS FOLLOWING AN INCLUSIVE APPROACH: A CASE STUDY S. Panesi, L. Ferlino, M. Podestà	1441
TEACHER EVALUATIONS ON THE USE OF DIGITAL AUGMENTATIVE AND ALTERNATIVE COMMUNICATION SYSTEMS IN SPECIAL EDUCATION A. Viera Gómez	1451
AN APPROACH FOR FOSTERING TEL QUALITY ASSURANCE PROCESSES IN KAZAKH HIGHER EDUCATION INSTITUTIONS M. Monova-Zheleva, E. Nikolova, Y. Zhelev	1458
A MULTI-CULTURAL EVALUATION OF THE PEDAGOGICAL VARIATION MODEL: A COLLABORATIVE STUDY WITH PRE-SERVICE TEACHER UNDERGRADUATES AT FEDERAL INSTITUTE (IFRS) BRAZIL, KUWAIT UNIVERSITY AND SOUTH URAL STATE UNIVERSITY, RUSSIAN FEDERATION M.S. Rogers, A. Grunewald Nichele	1468
PRESCHOOLERS WITH TYPICAL DEVELOPMENT OR SPECIAL EDUCATION NEEDS IN A LOW SES CONTEXT: THE RELATIONSHIP BETWEEN EARLY ACHIEVEMENT AND THEIR COGNITIVE UNDERPINNINGS A. Bandettini, F. Salterini, S. Panesi, L. Ferlino	1479
<b>E-LEARNING COURSE AS A SUPPORT IN THE TEACHING OF DISCRETE</b> <b>PROBABILITY DISTRIBUTIONS</b> O. García León, M. Pineda Becerril, A. Aguilar Márquez, F. León Rodríguez	1488

FAMILY ENGAGEMENT IN CHILDREN'S CULTURAL EDUCATION: TEACHING DIVERSITY I. Kacane	1494
<b>EDUCATIONAL POTENTIAL OF DIGITAL TECHNOLOGIES</b> J. Hodaňová, H. Hyksová, M. Škultéty	1501
<b>LEARNING MANAGEMENT OF INFINITESIMAL CALCULUS WITH INTELLIBOARD</b> C. Calvo-Jurado	1507
PEER ORIENTATION PROCESS FOR INCOMING STUDENTS C. Calvo-Jurado, P. Roldán-Oliden	1514
THE BLUE GOLD: AN EMPIRICAL RESEARCH TO INTRODUCE THE DISCUSSION OF WATER ISSUE IN RELATION TO PLANTS, ANIMALS AND HUMAN IN PRIMARY SCHOOL I. Bortolami, P. Bisaccia, F. Corrà, M. Bonato, P. Irato, G. Santovito	1518
DESIGN CONSIDERATIONS FOR A CONTEMPORARY "BUSINESS ECONOMICS LABORATORY" AT UNIVERSITIES: RESULTS OF AN INTER-UNIVERSITY BENCHMARKING PROJECT L. Holder, M. Weissl, B.M. Zunk, V. Koch	1528
<b>PERSPECTIVES OF TURKISH STAKEHOLDERS ABOUT RECOMMENDED PRACTICES</b> <b>IN EARLY CHILDHOOD SPECIAL EDUCATION</b> <i>S. Rakap, S. Kalkan</i>	1535
COMPARING NON-OVERLAP METHODS TO CALCULATE TREATMENT EFFECT ESTIMATES IN SINGLE-CASE EXPERIMENTAL RESEARCH S. Rakap, S. Kalkan	1540
LEARNING BY RESEARCHING. SEMINARS AS AN EDUCATIONAL STRATEGY V. Rodríguez-Flores, M. Lopezdeasiain, E. Larive-Lopez	1546
<b>INTRODUCTION OF AUTOMATIC TESTS FOR TEACHING WEB TECHNOLOGIES</b> <i>B. Doersam</i>	1555
<b>EXPERIENCES WITH SOFTWARE ENGINEERING TOPICS IN UNIVERSITY COURSES</b> <i>B. Doersam</i>	1561
WORKPLACE TRAINING IN THE MIDDLE EAST: CHALLENGES AND OPPORTUNITIES D. Youssef	1569
PROPOSAL FOR IMPLEMENTATION OF TELE WORK: THE CASE OF THE MINISTÉRIO PÚBLICO DO ESTADO DO MARANHÃO R. Oliveira Mendes, L. Dias Oliveira, M. Soares Teixeira	1570
A STUDY ON RELATIONSHIPS BETWEEN EMOTIONAL INTELLIGENCE AND CAREER SUCCESS - WORKPLACE SPIRITUALITY AS MODERATOR S.M. Wu	1578
UNIVERSITY'S THIRD MISSION AND THE REGIONAL INNOVATION SYSTEM IN THE SLOVAK REPUBLIC T. Corejova, M. Rostasova, A. Valicova	1589
SITUATED ESCAPE GAMES: FACILITATING KNOWLEDGE AND AWARENESS ABOUT HEALTHY NUTRITION T. Yachin, M. Barak	1595
TRANSFORMATIONS OF COMPUTATIONAL THINKING PRACTICES IN ELEMENTARY SCHOOL ON THE BASE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES G. Shamir, I. Levin	1596
VISUAL LITERACY OF HEALTHCARE STUDENTS A. Kirkova-Bogdanova, D. Taneva, Y. Tsokova	1606
DOES ENTREPRENEURSHIP EDUCATION MATTER? ASSESSING THE IMPACT OF AN ENTREPRENEURSHIP EDUCATION PROGRAMME IN CABO VERDE A. Dinis	1614
<b>DEVELOPING ENTREPRENEURSHIP IN PRE-SERVICE BIOLOGY TEACHERS</b> A. Špernjak	1623
HARDWARE AND SOFTWARE FOR TEACHING DIGITAL-TO- ANALOG CONVERTERS IN ENGINEERING EDUCATION S. Lyubomirov, D. Shehova, P. Yakimov, A. Chekichev	1629
USE OF SOFTWARE ENVIRONMENTS AND OPEN SOURCE PLATFORMS FOR TEACHING MIXED-SIGNAL CIRCUITS	1637

D. Shehova, S. Lyubomirov, K. Asparuhova, A. Chekichev

PBL+, A TAILOR-MADE LEARNING-TEACHING METHODOLOGY FOR STEM, BASED ON A COMBINATION OF PROBLEM BASED LEARNING (PBL) AND OTHER THREE INNOVATIVE METHODOLOGIES	1644
B. Urbano, X. Gomez, M.E. Sanchez-Moran, M.I. San-Martin, R. Mateos, C. Fernandez, E.J. Martinez, O. Martinez-Moran, A. Moran, F. Gonzalez-Andres	
ELECTRONIC LEARNING BY AN E-BOOK IN KINESIOLOGY FOR PHYSIOTHERAPISTS AND FOR MEDICAL DOCTORS – TRAINEES AND SPECIALISTS IN PHYSICAL AND REHABILITATION MEDICINE I. Koleva, R. Yoshinov, B. Yoshinov	1652
SYNTHESIS OF KNOWLEDGE TRACING MODELS USING NATURAL LANGUAGE PROCESSING ON LECTURE CONTENT R. Nicolay, A. Martens	1659
SELF-PERCEIVED ATTITUDES IN VIRTUAL LEARNING ENVIRONMENTS: A MEASUREMENT IN ACCOUNTING (FINANCIAL ECONOMY) M. Hernández-Solís, T.C. Herrador-Alcaide	1667
STEM METHODOLOGY IN STUDYING ARRAY DATA STRUCTURE IN EXTRACURRICULAR CLASSES V. Ancheva, V. Voinohovska	1673
DEVELOPMENT OF INTERACTIVE LEARNING CONTENT FOR HEALTHCARE STUDENTS A. Kirkova-Bogdanova, D. Taneva, M. Becheva	1678
<b>FEELINGS AND ATTITUDES OF TUTORS IN THE ACCOUNTING EDUCATION OF</b> <b>MATURE DISTANCE STUDENTS</b> T.C. Herrador-Alcaide, M. Hernández-Solís, P. Del Campo Moreno, A.I. Segovia San Juan, L. Parte- Esteban, L. Mellado Bermejo	1682
THE DEVELOPMENT OF SOFT SKILLS THROUGH GAME BASED LEARNING AMONG UNIVERSITY STUDENTS P. Martín-Hernández, J.L. Azkue Beteta, A.I. Gil-Lacruz, M. Gil-Lacruz, A. C. Tesán Tesán	1691
DEVELOPMENT OF STUDENT 'S FACTUAL KNOWLEDGE THROUGH NON – LINEAR STRUCTURE OF THE CURRICULUM D. Gunišová, N. Kozárová	1697
<b>A PARTIAL CLIL EXPERIENCE IN ENGINEERING EDUCATION</b> M. Zubitur, M. Sánchez, F.J. Juanes, H. Etxeberria	1705
<b>DESIGNING INTERACTIVE EDUCATIONAL DRAWING-BASED BOARD GAME FOR</b> <b>CHILDREN</b> <i>M. Khalili, F. Shakourirad, N.S. Hosseini</i>	1713
SURVEYS ABOUT LOCAL TRADITIONAL OBJECTS IN NIKKO, THE WORLD HERITAGE SITE -INTERCULTURAL CONTACTS AND UNDERSTANDING OTHER CULTURES- Y. Hiramatsu, Y. Harada, M. Morishita, A. Ito, M. Saraki	1724
WORKING AND FEELING AS A TEAM USING GAMIFICATION AMONGST UNIVERSITY STUDENTS	1729
P. Martín-Hernández, A.I. Gil-Lacruz, M. Gil-Lacruz, A.C. Tesán Tesán, J.L. Azkue Beteta WHY DO ARCHITECTS STILL DRAW? A WALK THROUGH THE SKETCHBOOK AS A	1736
<b>THINKING TOOL</b> B. Butragueno, J.F. Raposo Grau, M.A. Salgado de la Rosa	1750
THE EFFECTIVENESS OF E-LEARNING MODELS FOR STUDENTS WITH DISABILITIES IN TEACHING ENGLISH E. Notina, V. Maevskiy	1746
THE ROLE OF INDIVIDUAL HUMAN POTENTIAL IN THE SPACE OF THE UNIVERSAL ONE V. Kirko, A. Lukyanova, V. Razumovskaya, E. Grishaeva	1755
CREATING A TEACHER COLLABORATIVE PRACTICE IN AN INTERNATIONAL HIGH SCHOOL IN BEIJING: THE ROLE OF THE PRINCIPAL W. Zhang, T. Koshmanova	1760
<b>'BEING A SPACE MINING CREW': HOW PARTICIPANTS JOINTLY DISCOVER THEIR COMPLEMENTARY RESOURCES WHILE ENGAGING INTO A SERIOUS GAME AT AN INTERACTIVE TABLETOP (ITT)</b> B. Arend, S. Heuser, V. Maquil, H. Afkari, P. Sunnen	1769
FLIPPED LEARNING METHODOLOGY IMPROVES TOXICOLOGY STUDENTS'	1780
ACADEMIC PERFORMANCE P. Moyano, J.M. Garcia, J. Garcia, M.V. Naval, M. Lobo, M.J. Anadon, M.T. Frejo, J. Del Pino	

STUDENTS' MOTIVATION INCREASE AS RESULT OF COMPREHENSIVE METHODOLOGY USE IN TOXICOLOGY CLASSES	1781
P. Moyano, J. Garcia, J.M. Garcia, M.V. Naval, M. Lobo, M.J. Anadon, M.T. Frejo, J. Del Pino	
EDUCATIONAL METHODS OF USING STUDENTS' SOCIAL PROFILES IN MUSEUM ACTIVITIES E. Olesina, E. Polyudova	1782
A PROJECT BASED LEARNING APPROACH TO ELECTROMAGNETISM	1786
R. Cossovich	
MATURE STUDENTS: GRADUATION PROSPECTS, DROPOUT RISK AND DRIVERS OF ACADEMIC PERFORMANCE A.S. Lopes, P. Carreira	1793
LOCAL AND REGIONAL DYNAMICS OF COOPERATION TO PROMOTE SUCCESS IN SCHOOL – AN INTEGRATED AND INNOVATIVE PROJECT NETWORK S. Milhano, S. Reis, C. Mangas	1804
FUNCTIONAL BEHAVIOUR ASSESSMENT OF CHILDREN WITH AUTISM SPECTRUM DISORDER BASED ON FAMILY & SPEECH LANGUAGE THERAPIST COLLABORATION S. Alisauskiene, J. Grigenaite	1814
SYNCHRONOUS COMMUNICATION TECHNOLOGIES AND STRATEGIES IN ONLINE EDUCATION FOR THE ENHANCEMENT OF THE LEARNING EXPERIENCE: A SYSTEMATIC LITERATURE REVIEW D. Vlachopoulos, R. Bellinga	1824
LEARNING HOW SCIENCE WORKS THROUGH BLACK BOX GAMES: A TEACHER TRAINING CASE STUDY A. Vázquez-Alonso, M.A. Manassero-Mas	1834
COMPARING ACHIEVEMENT OF LEARNING OUTCOMES AND SUCCESS INDICATORS IN ONLINE COMPUTER LITERACY CLASSES WITH BLENDED OFFERINGS W. Farag, S. Ali, X. Wu	1841
<b>ELECTRONIC-BASED EDUCATION IN THE FIELD OF CARDIOREHABILITATION,</b> <b>FOCUSED ON MEDICAL STAFF AND PATIENTS</b> <i>I. Koleva, B. Yoshinov, R. Yoshinov</i>	1852
CAN THE BENEFITS OF NATURE EXPOSURE ON COGNITIVE PERFORMANCE BE SIMULATED IN VIRTUAL REALITY? A CORRELATIONAL STUDY IN POST- SECONDARY STUDENTS M. Leger, S. Mekary	1860
STRUCTURED DISCRETE FAIR DIVISION ALGORITHM FOR ALLOCATING SUBTASKS WITHIN STUDENT PROJECTS A. Madevska Bogdanova, M. Simjanoska	1865
<b>CULTURAL ACTIVITIES AS A RESPONSE TO MULTICULTURAL EDUCATION</b> <i>C. Ravasco, F. Rodrigues</i>	1873
LEARNING ABOUT NUTRITIONAL LABELING AND PRESENCE OF ALLERGENS IN FOODS. A SERVICE LEARNING EXPERIENCE	1878
M. Cámara, M.C. Matallana, M.L. Pérez-Rodríguez, M.C. Sánchez-Mata, V. Fernández-Ruiz, P. Morales, R.M. Cámara, P. García-Herrera, E. Dorta, J.I. Alonso-Esteban, M. Ciudad, L. Domínguez	
ASSESSING FACTORS THAT INFLUENCE LEARNING PERFORMANCE WITH MOBILE APPS R. Kay	1884
A SYSTEMATIC REVIEW OF THE LITERATURE ON VIDEO FEEDBACK USED IN HIGHER EDUCATION R. Kay, T. Bahula	1890
MEASURING MOTIVATION AND TECHNICAL COMPETENCES ACHIEVEMENT TO COMPARE TWO TEACHING METHODS: A PORTUGUESE BUSINESS SCHOOL CASE A. Amaro, L. Almeida, L. Fernandes	1897
INTEGRATION OF STUDENTS FROM PORTUGUESE SPEAKING AFRICAN COUNTRIES C. Ravasco, F. Rodrigues	1906
ROBOTIC-ASSISTED SURGERY: PERIOPERATIVE NURSES' AND NURSE ANESTHETISTS' EDUCATION AND PRACTICE Z. Schuessler	1911

EXPERIMENTAL PROTOTYPE OF THE PRAGMATICALLY ORIENTED E-ASSESSMENT ALGORITHM FOR AUTOMATIC NATURAL LANGUAGE ANSWER GRADING Dzh. Suleymanov, N. Prokopyev	1917
CO-ORIENTATION©: A COLLABORATIVE METHOD TO GUIDE STUDENTS' DECISION-MAKING TO A RIGHT FIRST JOB N. Chelin, S. Rouvrais	1925
<b>FROM THE COMPETENCE TOWARDS THE VIRTUE IN EDUCATION</b> <i>P. Kondrla, A. Blascikova</i>	1931
EUROPEAN UNIVERSITY NETWORKS: BOTTOM UP OR TOP DOWN APPROACH? THE EIT DIGITAL COMMUNITY OF PRACTICE ON INNOVATION AND ENTREPRENEURSHIP AS A THIRD WAY G. Guri, F. Renouard, M. Marchese	1939
IMPROVEMENT OF THE FINAL TASKS-BASED ACTIVITIES OF THE TEXTBOOKS OF SPANISH AS A FOREIGN LANGUAGE A. Brosa Rodríguez, M.J. Rodríguez Campillo	1949
WHAT IT MEANS TO BE A 21ST CENTURY TEACHER: EXPERIENCES FROM THE BLENDED LEARNING PERSPECTIVE R. Lynch, B. Brereton	1959
<b>DEVELOPMENT OF NUTRITIONAL GUIDELINES MODULE FOR CHILDREN WITH</b> <b>AUTISM SPECTRUM DISORDER (ASD) IN MALAYSIA</b> N.S. Ramli, N.H. Hamzaid, Z. Abdul Manaf, N.I. Hassan, N.A.S. Ismail	1970
IMPACT OF DIGITAL LEARNING ON LEARNING MOTIVATION AMONG MEDICAL STUDENTS IN UNIVERSITI KEBANGSAAN MALAYSIA (UKM) A.H. Ahmad Azman, J.X. Lee, J.Y. Ng, N.A.S. Ismail	1978
THE ROLE OF SELF-EFFICACY, ATTITUDES, SOCIAL NORMS AND INSTITUTIONAL SUPPORT IN THE USE OF MODERN TEACHING APPROACHES AND ICT IN HIGHER EDUCATION	1987
E. Kranjec, K. Breznik, L. Klasinc, J. Kolbl, M. Puhek, N. Špur, S. Frumen STRATEGIES TO INSTIL A CULTURE OF READING	1997
B. Makena, R. Sonn, I. Kariyana	<b>2</b> 004
<b>TRANSVERSAL EXERCISES AMONG SUBJECTS OF FIRST YEAR IN MINING</b> <b>ENGINEERING</b> F.J. Iglesias, M.L. Sánchez, J.R. Villar, E.A. de la Cal, L. Bonavera, G. Fidalgo	2004
APPRENTICESHIP IN GREECE: FOCUSING ON E-LEARNING OF A BLENDED LEARNING APPROACH FOR TRAINING VET TEACHERS AND TRAINERS S. Pitsikalis, I.E. Lasica, I. Roussos	2012
COMPARISON STUDENT LEARNING APPROACH OF FIRST YEAR LIFE SCIENCE STUDENTS	2019
M. Leiva-Brondo, J. Cebolla-Cornejo, R. Peiró, A.M. Pérez-de-Castro	
INSTRUCTORS GENDER AND TEACHING EXPERIENCE DIFFERENCES IN USING SOCIAL MEDIA TECHNOLOGIES TO SUPPORT ENGLISH LANGUAGE TEACHING S. Alqarni, S. Alqarni	2027
IMPROVING STUDENT MOTIVATION THROUGH AN EDUCATIONAL INNOVATION PROJECT AT THE FACULTY OF ECONOMICS AND BUSINESS (UNIVERSITY OF THE BASQUE COUNTRY) A. Lafuente-Ruiz-de-Sabando, O. García-Alonso, G. Estíbalez, M.P. Fernández-Ferrín, J. Forcada, C. González-Morgado, I. Iturricastillo, I. Lezcano, A. Munárriz, M.A. Peña, J. Tejedor	2033
THE USE OF A BUSINESS GAME TO IMPROVE FIRST-YEAR STUDENT MOTIVATION AT THE FACULTY OF ECONOMICS AND BUSINESS (UNIVERSITY OF THE BASQUE COUNTRY) A. Lafuente Ruiz de Sabando, O. Valmaseda-Andia	2037
REGULAR USE ACTIVE RECALL AND ITS EFFECT ON THE LEARNING PROCESS AND ACADEMIC PERFORMANCE D. Krygier	2042
SCIENCE LEARNING AND SCIENCE LITERACY: ENHANCEMENT OF INTERACTIVE LEARNING AND HIGHER-ORDER THINKING PEDAGOGIES N. Mtsi, S.M. Chiphambo	2043
<b>LEARNING CHALLENGES IN BUSINESS SCHOOLS: THE IMPLEMENTATION OF</b> <b>RUBRICS FOR THE DEFENSES OF FINAL MASTER'S THESES</b> <i>H. Torrez Meruvia, M. Vila Bonilla, J. Marqués Pascual, S. Cruz Almanchel</i>	2050

<b>CO-EVALUATION IN THE PERCEPTION OF COMPETENCE ACQUIRED BY</b> <b>BACHELOR OF BUSINESS MANAGEMENT STUDENTS</b> <i>M. Vila Bonilla, H. Torrez Meruvia</i>	2051
<b>GAME-BASED LEARNING OF SCIENTIFIC SKILLS</b> M. Huebra, J. Ibarretxe, A. Okariz, A. Sarasola, J.L. Zubimendi	2052
<b>PERFORMANCE EVALUATION OF AN AUTOMATED TEST GENERATION SYSTEM</b> <b>IN PROGRAMMING TRAINING</b> <i>I. Kostadinova, M. Garvanova, I. Ivanov, K. Rasheva-Yordanova</i>	2058
EXAMPLES OF DEVELOPMENT OF DIGITAL COMPETENCIES ACROSS EDUCATIONAL FIELDS T. Jerabek, P. Vaňková	2068
<b>3D PRINTING TECHNOLOGIES IN EDUCATIONAL EXPERIENCIES: BRINGING ADDITIVE MANUFACTURING &amp; SUSTAINABILITY TO THE CLASSROOM</b> F. Serra-Parareda, Q. Tarrés, M. Delgado-Aguilar, F. Julián, M. Alcalà	2076
TOWARDS THE USE OF CONTAINERIZATION TECHNOLOGY TO EDUCATE THE CYBERSECURITY ENGINEERS OF TOMORROW A. Raza, M. Hasib, S.A. Alvi	2084
A NEW MODEL FOR ASSESSING THE VOICE OF THE STUDENT IN A MOBILE APP DESIGN STAGE S. Potra, A. Pugna	2094
POPULARIZATION OF PHYSICS USING A SCANNING ELECTRON MICROSCOPE D. Bušovský, J. Loskot	2104
EXPLORING ADDED VALUE, A MULTIDIMENSIONAL EXPECTED CUSTOMER VALUE CONSTRUCT, IN THE CREATION OF INNOVATIVE UNIVERSITY APPLICATIONS A. Pugna, S. Potra, W. Ștefănescu	2110
THE DEVELOPMENT OF SOCIO-EMOTIONAL AND TECHNICAL SKILLS FOR UNEMPLOYED YOUTH AND WOMEN. CONTEXT AND METHODOLOGY OF THE FRENCH AWARDED PROJECT: RÉALISE TES RÊVES M.P. Celume, F. Zenasni	2117
DO LAPTOPS AND TABLETS CONTRIBUTE TO IMPROVE ACADEMIC RESULTS? EVIDENCE FROM HIGHER EDUCATION IN BUSINESS ADMINISTRATION A.B. Alonso-Conde, J. Rojo-Suárez, J.Á. Zúñiga-Vicente	2119
USING PEERWISE TO ENHANCE THE LEARNING EFFECTIVENESS IN MASTER'S DEGREE IN COMPUTING ENGINEERING C. Carrión	2130
INQUIRY-BASED LEARNING AND SCIENTIFIC PRACTICES: THE EXPERIENCE OF THE PHYSICS LABORATORY WITH PRE-SERVICE PRIMARY TEACHERS N. Torresan, M. Carli, O. Pantano	2136
TOWARDS THE AUTOMATIC CONSTRUCTION OF PERSONALIZED TEXTBOOKS FROM DIGITAL OPEN ACCESS CONTENT. AN EXAMPLE FOR A HEAT TRANSFER COURSE USING WIKIPEDIA MATERIALS R. Fernández-Flores, B. Hernández-Morales	2146
INFLUENCE OF COMPUTER AND INTERNET TECHNOLOGIES ON PROFESSIONAL AND SOFT SKILLS DEVELOPMENT OF THE MODERN YOUTH S. Popova	2153
ONLINE COURSE IN BUSINESS STATISTICS WITH R USING THE CANVAS E- LEARNING PLATFORM AS A COMPLEMENT TO THE TRADITIONAL CLASS R. Morales Arsenal, J.M. Pinar Pérez	2158
MEMORY GRAPH OF INTERNAL FORCES. CREATING A NEW MOODLE QUESTION TYPE J.I. Hernando, A. Vázquez, M. Balbás, A. Aznar	2163
THE USE OF ICT TOOLS AND STORYTELLING IN BILINGUAL SETTINGS M. Pérez	2169
HYBRID VOICE TRAINING - INTEGRATING VIRTUAL ROOMS INTO A VOICE TRAINING SEMINAR K. Hohlbaum, E. Borowski, I. Isenhardt	2177
MUSEUMS, DIGITAL TRANSFORMATION AND MOOCS. AN ITALIAN CASE STUDY S. Thomaidou	2182
THE ROLE OF FIELD TRIPS F. Rodrigues, C. Ravasco	2192

<b>INNOVATIVE TECHNOLOGIES FOR THE STUDY OF BANKING ACTIVITY</b> M. Lychagin, A. Perfilev, L. Perfileva	2198
<b>INNOVATIVE TECHNOLOGIES FOR THE STUDY OF FINANCIAL MANAGEMENT</b> <i>M. Lychagin, A. Perfilev, L. Perfileva</i>	2209
LANGUAGE/CULTURE: TWO INSEPARABLE FACES OF A SECOND LANGUAGE TEACHING F. Rodrigues, C. Ravasco	2219
IMPLEMENTATION OF PICTURE BOOKS THROUGH ICT TOOLS: STORYBOARD IN BILINGUAL SETTINGS M. Pérez	2227
PERSONALITY TRAITS AND SUBJECTIVE THEORIES OF FUTURE EARLY CHILDHOOD EDUCATORS AS DETERMINANTS OF THEIR PROFESSIONAL IDENTITY	2234
S. Tatalović Vorkapić, L. Ljevar, M. Batistič Zorec THE USE AND DEVELOPMENT OF VIDEO GAMES IN THE CLASSROOM: YOU SHOULD CONSIDER IT P.N. Rito	2244
<b>RELATIONS BETWEEN SRL AND TEACHERS' EMOTIONS IN TECHNOLOGY</b> <b>INTEGRATION</b> <i>X. Huang, L. Huang, S.P. Lajoie</i>	2249
AUTOMATIC LABELLING OF TOPICS IN UNIVERSITY SUBJECTS TO DETECT WHICH TOPICS ARE MORE DIFFICULT TO LEARN J. Martinez-Romo, J. Gomez-Martin, L. Plaza, L. Araujo, F. Lopez-Ostenero	2257
DEVELOPMENT OF TEACHER EDUCATION IN THE CONTEXT OF A STUDENT- CENTERED APPROACH J. Dzerviniks, V. Dzervinika	2263
A CONCEPTUAL EDUCATIONAL MODEL FOR ENHANCING INFORMATION LITERACY IN AN UNIVERSITY INFORMATION ENVIRONMENT: PROJECT FRAMEWORK S. Denchev, T. Trencheva, E. Zdravkova	2272
SUPPORTING STRUCTURAL TEMPLATES FOR MULTIPLE LEARNING SYSTEMS WITH STANDARDIZED QUALIFICATIONS M. Winterhagen, M.D. Hoang, H. Lersch, F. Fischman, M. Then, B. Wallenborn, D. Heutelbeck, M. Fuchs, M. Hemmje	2280
PROFESSIONAL DEVELOPMENT OF A NOVICE TEACHER IN DISTANT EDUCATIONAL ENVIRONMENT VIA A PERSONALLY-ORIENTED FURTHER PROFESSIONAL TRAINING PROGRAM I. Rodionova, O. Titova, N. Kalinin, E. Konisterova, I. Golovina	2290
THE IMPACT OF EXPERIENTIAL LEARNING ACTIVITIES IN A MANAGERIAL ANALYTICS COURSE AS PART OF AN MBA PROGRAM D. Morin	2294
MENTORING AS A LEARNING AND DEVELOPMENT TOOL: ITS IMPACT ON UNDERGRADUATE STUDENTS IN RETAIL MANAGEMENT S. Estrela, M. Felício, D. Magueta, C. Veloso	2302
UNDERSTANDING MEDICAL STUDENTS' CLINICAL REASONING TENDENCIES AND PATTERNS A. Ruiz Segura, T. Li, S.P. Lajoie	2309
'MOTIVATION AND ENGAGEMENT' AS ONE OF THE DESIGN PRINCIPLES OF A FLIPPED CLASSROOM APPROACH M. Loizou	2318
USING OPEN-SOURCE NUMERICAL COMPUTATION SOFTWARE IN EDUCATION - BASIC PERFORMANCE COMPARISON AND LAB EXAMPLES M. Mikac, M. Horvatić	2319
NETWORKING CASE STUDY IN STEM EDUCATION - TRANSPORT LAYER PROTOCOL (TCP AND UDP) LABS M. Mikac	2328
APPLICATION OF THE REFUTATION TEXT TO ACHIEVE CONCEPTUAL CHANGE IN THE CONSTRUCTION OF FREE BODY DIAGRAMS IN STATICALLY DETERMINED BEAMS J. Flores, M. Alcivar	2338

STUDENTS' INTERCULTURAL COMPETENCE CHANGE IN THE MIXED CLASS OF A CHINESE UNIVERSITY L. Liu	2344
A NEW TYPE OF QUESTIONS FOR TEACHING AND ASSESSING CRITICAL THINKING IN MATHEMATICS S. Klymchuk, C. Sangwin	2348
NATURAL LANGUAGE PROCESSING FOR DATA MINING IN COMPUTER SCIENCE EDUCATION F. López-Ostenero, L. Plaza, J. Martinez-Romo, L. Araujo	2356
CREATIVE DISSEMINATION OF OPTOMETRY FOR PRIMARY EDUCATION STUDENTS	2362
J.J. Esteve-Taboada, M.A. Díez-Ajenjo, M.C. García-Domene, M.J. Luque-Cobija, R. Vila-Andrés, L. Torres-Villanueva, P. García-Balaguer, J. Malo, P. Capilla, V. Sanchis, D. de Fez, A. Pons	
<b>THE VOICES OF THE CHILDREN: WHAT DO CHILDREN HAVE TO SAY ABOUT THE KINDERGARTEN?</b> <i>D. Velan, S. Tatalović Vorkapić</i>	2367
OPTOMETRIC GYMKHANA FOR THE ACQUISITION OF CLINICAL PSYCHOPHYSICS CONCEPTS	2377
A. Díez-Ajenjo, J.J. Esteve-Taboada, M.C. García-Domene, M.J. Luque-Cobija, J. Malo, P. Capilla, V. Sanchis, D. de Fez, A. Pons	
LANGUAGE PREPARATION OF CHILDREN IN CZECH KINDERGARTENS THROUGH IMMERSION M. Fasnerová	2386
A PROBLEM AND PROJECT-BASED LEARNING FOR DEPLOYMENT REAL MONITORING AND CONTROL SYSTEMS WITH APPLICATIONS FOR THE INDUSTRY 4.0	2391
M.C. Rodriguez-Sanchez, J. Vaquero-Lopez, R. Orellana, S. Borromeo-López THE EMPOWERMENT OF THE STUDENT USING COLLABORATIVE PROJECTS FOR	2401
ENGINEERING BASED ON OPEN SOURCE HARDWARE AND COMMERCIAL DEVELOPMENT ENVIRONMENTS C. Rodriguez-Sanchez, I. Yahyaoui, N. Malpica	2401
<b>INTELLIGENT TOOL FOR DEVELOPING STUDENT'S SOCIAL SKILLS</b> <i>R. Kupriyanov, A. Uvarov, M. Makarova, P. Unruh, G. Vodopian, I. Levin</i>	2408
RESEARCH OF CONSCIOUS AND UNCONSCIOUS PREFERENCES OF POTENTIAL APPLICANTS FOR STUDY AT SELECTED TRANSPORT FACULTY IN SLOVAKIA R. Madleňák, J. Kurotová, R. Chinoracký	2414
SECTORAL QUALIFICATIONS FRAMEWORK FOR AIR TRANSPORT INDUSTRY S.E. Zaharia, S. Toma, R.E. Boc	2422
RESEARCH OF THE PERCEPTION OF PICTURES REPRESENTING STUDY PROGRAMS OF THE SELECTED TRANSPORT FACULTY IN SLOVAKIA FROM THE PERSPECTIVE OF GENDER OF ITS POTENTIAL STUDENTS <i>R. Madleňák, R. Chinoracký, J. Kurotová</i>	2432
CONTENT CURATION AS A TOOL FOR TEACHING AND LEARNING IN HIGH EDUCATION AND CORPORATE SETTINGS G. Faure	2438
EDUCATION FOR SUSTAINABLE DEVELOPMENT IN HIGH EDUCATION INSTITUTIONS R. Jukić, S. Kakuk	2439
VALUES AS ELEMENT OF INSTITUTIONAL IDENTITY OF THE UNIVERSITIES IN MEXICO M. Briceño Caballero, R. Comas Forgas	2446
DESIGN AND ACCEPTANCE OF CHATBOTS FOR INFORMATION AUTOMATION IN UNIVERSITY CLASSROOMS F. Rejón-Guardia, G.A. Vich-I-Martorell	2452
DEVELOPMENT OF INQUIRY SKILLS TO ANALYSE AND DETERMINE RELATIONSHIPS BETWEEN VARIABLES IN MATHEMATICS TEACHING USING GEOGEBRA J. Sekerák, S. Lukáč, J. Doboš	2463
HOW TO DESIGN A FLIPPED CLASSROOM THAT ENGAGES STUDENTS? A NEW MODEL AND SCALE E.W.K. Yeung, S.W.S. Wan	2472

STUDENT PERCEPTION OF THE EDUCATIONAL RELATIONSHIP BETWEEN A TEACHER AND A STUDENT IN THE TEACHING PROCESS R. Jukić, Z. Menalo, N. Menalo	2479
HOW TO IMPROVE LEARNING ABOUT SUSTAINABILITY AND ENERGY EFFICIENCY ON BUILDING ROOFS Á. Mas, C. Lerma, V. Blasco, E. Gil, J. Vercher, J. Borràs	2485
IMPROVING VIETNAMESE STUDENTS' PRONUNCIATION THROUGH OFFICE 365: A PILOT STUDY A. Lengálová	2491
<b>ARE UNIVERSITY STUDENTS OPTIMISTIC, REALISTIC OR PESSIMISTIC ABOUT THE PERCEPTION OF THEIR GRADES?</b> <i>A.J. Yuste-Delgado, J.C. Cuevas-Martínez, A. Triviño-Cabrera</i>	2499
UNIVERSITY STUDENTS' ATTITUDE TO ORAL PRESENTATIONS A. Lengálová	2506
CONSTRUCTIVE AND STRUCTURAL ANALYSIS OF THE BUILDING CONSTRUCTION PROCESS USING COMPUTER TOOLS FOR ITS UNDERSTANDING IN THREE AND FOUR DIMENSIONS E. Gil, Á. Mas, C. Lerma, V. Blasco, J. Vercher, J. Borràs	2514
<b>EVALUATION OF CONSECUTION OF TRANSVERSAL COMPETENCIES IN HIGHER</b> <b>EDUCATION: STUDENT PERCEPTIONS</b> J.C. Cuevas-Martínez, A.J. Yuste-Delgado, A. Triviño-Cabrera	2521
<b>RECOGNIZING FUNCTIONS OF STEREOTYPING IN POPULAR CULTURE</b> <i>M. Dubovitskaya, S. Kamalova</i>	2527
THE IMPORTANCE OF TEACHING METALITERACY FOR SPECIFIC AND GENERAL PURPOSES M. Dubovitskaya, S. Kamalova	2534
THE USE OF SOCIAL NETWORKS AND ONLINE SOURCES TO LEARN ABOUT ARCHITECTURAL TECHNOLOGY IN SPANISH SPEAKING COUNTRIES M. Monzón-Chavarrías, A. Espinosa-Fernández, B. López-Mesa	2540
PRODUCTION AND APPLICATION OF AN INSTRUCTIONAL LABORATORY VIDEO OF QUECHERS METHODOLOGY TO FACILITATE A FLIPPED PRELABORATORY TEACHING M.J. Lerma-García, M. Vergara-Barberán, E.J. Carrasco-Correa, F.A. Esteve-Turrillas, S. Armenta, M.L. Cervera, E.F. Simó-Alfonso, J.M. Herrero-Martínez	2545
HOW TO ENGAGE STUDENTS IN ONLINE TEACHING MATERIAL? THE MAKING OF AN E-LEARNING PROGRAMME FOR UNIVERSITY RESIDENT ASSISTANTS E.W.K. Yeung, S.W.S. Wan	2553
<b>IDENTIFICATION AND USE OF STUDENT LEARNING STYLES FOR DEVELOPMENT</b> <b>OF PERSONALIZED VLE</b> <i>I. Piščikienė, B. Šustickienė, J. Mamčenko</i>	2557
MAKING IT FIT: EXAMINING THE ASSESSMENT OF CONTEXTUAL KNOWLEDGE AND UNDERSTANDING IN THE POSITIVIST ASSESSMENT MODALITY OF MEDICAL EDUCATION E.J. Hothersall, V. Rodrigues, M. Gordon, J.C. McLachlan, S. McAleer	2566
VISUAL COMPETENCIES TO IMPROVE THE INTERPRETATION OF VISUAL REPRESENTATIONS J. Flores, A. Solorzano, J. Holguin	2575
SMART GOVERNANCE AND A MULTICOMPONENT INFORMATIZATION MODEL FOR THE SERVICE AND THE MAINTENANCE OF THE HIGHER EDUCATION SYSTEM D. Pavlova, K. Boyanov	2581
<b>THE ROLE OF ACADEMIC LIBRARIES IN DISTANCE LEARNING</b> S. Eftimova, K. Mincheva, P. Mukanova	2586
THE ROLE OF THE DIGITAL TRANSFORMATION FOR THE IMPROVEMENT OF THE UNIVERSITY EDUCATION AND THE IMPORTANCE OF THE IT LEADERSHIP FOR THE SUCCESSFUL RE-ENGINEERING OF THE LEARNING PROCESS D. Pavlova, M. Matrachiyski, P. Gindev	2596
MEANS TO OVERCOME CHALLENGES FOR PRIMARY SCHOOL TEACHERS IN ENSURING INCLUSIVE EDUCATION FOR CHILDREN WITH AUTISM SPECTRUM DISORDER	2601

R. Raudeliūnaitė, E. Steponėnienė

THE LEVEL OF BIM AWARENESS OF STUDENTS IN FACULTY OF CIVIL ENGINEERING Y. Nechyporchuk, R. Bašková	2610
SOFTWARE SUPPORT OF BIM PLATFORM IN EDUCATIONAL PROCESS R. Bašková, Y. Nechyporchuk	2617
<b>ENABLING EMPLOYABILITY FOR HE STUDENTS THROUGH EFFECTIVE</b> <b>PEDAGOGY: PEDALL – A TEACHING SOLUTION</b> J. Adamson, D. Sloan	2621
<b>DEVELOPMENT OF ICT TOOLS FOR THE PROMOTION OF CITIZEN SCIENCE IN</b> <b>SCHOOLS (CS4ESD PROJECT)</b> <i>G. Rodríguez-Loinaz, M. Onaindia, I. Ametzaga-Arregi, I. Palacios-Agundez</i>	2628
FROM PENCIL AND PAPER TO ICT IN MATHEMATICS TEACHING. AN OVERVIEW OF THE ROLE OF ICT IN MATHEMATICS TEACHING IN ALBANIA D. Starja, N. Nikolova	2635
<b>STICKY NOTES AS A DESIGN MATERIAL FOR INDUSTRIAL DESIGN SKETCHING</b> <i>F. Gaetani, F. Brevi</i>	2645
<b>THE ROLE OF ICT IN IMPROVING PROBLEM-SOLVING IN TEACHING</b> <b>MATHEMATICS</b> D. Starja, B. Shity, N. Nikolova	2651
TEACHING SUPPORT PROGRAM THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) TOOLS AT THE UNIVERSITY OF LA LAGUNA: AN OVERVIEW L. Díaz, I. Ruigómez, C. Expósito, A. Expósito	2660
OVERVIEW OF EDUCATIONAL INNOVATION THROUGH MASSIVE OPEN ONLINE COURSES AND SUPPORT OF INFORMATION AND COMMUNICATION TECHNOLOGY AT THE UNIVERSITY OF LA LAGUNA C. Expósito, A. Expósito, L. Díaz, I. Ruigómez	2665
DID YOU SAY MATHS? NOT EVEN SCARED! ASSESSMENT OF THE FIRST EXERCISE PERIOD OF THE MATH PLAN OF THE ACADEMY OF MARTINIQUE M. Garçon	2669
BENEFICIARIES' QUALITY OF LIFE OF AN UNCONDITIONAL TRANSFERS EDUCATION PROGRAM IN MEXICO CITY K. Raccanello	2676
MAPPING DIGITAL TECHNOLOGIES TO PEDAGOGIES INSPIRED BY BLOOM'S TAXONOMY T. Dube, S.R. Williams	2686
INTERACTIVE APPLICATION "RUSSIAN PREPOSITIONS "B" AND "HA"" AS A MEANS OF ELIMINATING ERRORS IN THE USE OF PREPOSITIONS "IN" / "ON" (ON THE EXAMPLE OF WORKING WITH KOREAN STUDENTS) I. Kalinina, V. Abyshkina, Y. Tugova, S. Pudovkina, E. Pinevich	2690
<b>PRACTICES OF LEARNING A FOREIGN LANGUAGE FOR COMMUNICATION</b> <b>PURPOSES AT UNIVERSITY LEVEL: THE CASE OF FRENCH LANGUAGE</b> <i>M.C. Pop</i>	2697
A VIRTUAL REALITY APPLICATION IN NUCLEAR PHYSICS A. Budano, G. De Pietro, A. Martini	2705
<b>PECULIARITIES OF DEVELOPING E-LEARNING SYSTEMS IN MILITARISED</b> <b>EDUCATION INSTITUTION</b> <i>M. Spridzans, J. Dzerviniks</i>	2710
<b>EVALUATION OF THE STUDENTS' ACADEMIC PERFORMANCE AFTER</b> <b>COORDINATION ACTIONS BETWEEN CORE SUBJECTS OF THE NURSING DEGREE.</b> <b>A PILOT STUDY</b> <i>N. Padrós-Flores, M.V. Gómez Vicente, J.V. García Velasco, G. Esquiva Sobrino, E. Ausó Monreal</i>	2716
MUSIC THAT CONNECTS S. Kalná, B. Hašková	2721
MOBILE LEARNING TEACHER COMPETENCIES FRAMEWORK S. Nikou	2726
THEORETICAL AND PRACTICAL ASPECTS OF EDUCATORS DIGITAL COMPETENCE DEVELOPMENT IN MILITARIZED EDUCATION INSTITUTION M. Spridzans, J. Dzerviniks	2732
<b>TRANING TEACHERS ON INTERACTIONAL COMPETENCE IN AN ONLINE</b> <b>ENVIRONMENT: A METHODOLOGY</b> <i>A. Santamaria Urbieta, M. Querol-Julian</i>	2739

WORKER EDUCATION FOR SAFETY IN EXCAVATION AND TRENCHING OPERATIONS S. Priyadarshini, E. Cochran Hameen, S. Singh	2745
<b>21ST CENTURY SKILLS AND DIGITAL SKILLS, ARE ONE AND THE SAME THING?</b> <i>H. Belchior-Rocha, R. Mauritti, J. Paiva Monteiro, L. Carneiro</i>	2752
ADVANTAGES OF JUST IN TIME TEACHING METHODOLOGY FOR LABORATORY ACTIVITIES IN CHEMICAL ENGINEERING DEGREE A.M. Borreguero, J. Llanos, C.M. Fernández-Marchante, E. Lacasa, A.R. De la Osa, M.L. Sanchez- Silva, A. de Lucas-Consuegra, J.M. García-Vargas, T. Garcia	2759
<b>BIBLIOGRAPHIC WORKS FOCUSED ON THE MANAGEMENT OF SOLID WASTES</b> <b>INCLUDING NOVEL SCIENTIFIC EVIDENCES</b> <i>E. Lacasa, J.M. García-Vargas, C.M. Fernández-Marchante, A.R. de la Osa, A.M. Borreguero, J.</i> <i>Llanos, M.L. Sanchez-Silva, A. de Lucas-Consuegra</i>	2765
FAMILY AND EDUCATION IN CONTEMPORARY SOCIETY C.C. Pascariu	2771
ARE VIRTUAL AND PHYSICAL COMMUNITIES DIFFERENT ON THEIR ACADEMIC USE? M. Novo, J. Sanmarco, A. Selaya, D. Seijo	2776
<b>RELATIONSHIP BETWEEN CLASS PARTICIPATION AND WELL-BEING IN</b> <b>UNIVERSITY STUDENTS AND THE EFFECT OF COVID-19</b> <i>M. Novo, Y. Gancedo, M.J. Vázquez, V. Marcos, F. Fariña</i>	2783
THE REQUIREMENTS FOR A GRADUATE OF THE OCCUPATIONAL SAFETY AND HEALTH DEPARTMENT I. Tureková, I. Marková, J. Bilčíková	2792
PREVENTION AGAINST HEALTH AND ERGONOMIC RISKS BY WORK WITH COMPUTERS I. Tureková, M. Šebo, N. Turčeková	2803
<b>DIGITAL IMAGE PROCESSING COURSE EXAMPLE: OBJECTIVE IMAGE QUALITY</b> <b>MEASURE APPLICATION</b> <i>E. Dumic, T. Horvat, D. Srpak, A. Bjelopera</i>	2813
STUDENTS PERCEPTION OF EDUCATIONAL ACTIVITIES USING THE ONLINE TOOL "MENTIMETER: INTERACTIVE PRESENTATION SOFTWARE" - E-LEARNING PLATFORMS D.F. Ciocodeica, N.V. Dumitrache, G. Orzan	2820
<b>ENHANCEMENT OF MATHEMATICAL PROBLEM SOLVING BY DISCUSSING AND</b> <b>COLLABORATING ASYNCHRONOUSLY</b> <i>A. Barana, C. Fissore, M. Marchisio, F. Roman</i>	2827
USE OF ALTERNATIVE WORKING METHODS IN TRAINING OF STUDENTS AT FLSCH, ULSIT: A BASIS FOR THE TRANSFORMATION OF STUDENTS FROM PASSIVE LISTENERS TO ACTIVE PARTICIPANTS IN THE LEARNING PROCESS K. Mincheva, S. Eftimova	2837
EXPERIMENTAL APPROACH FOR WORKING WITH STUDENTS IN THE ACADEMIC DISCIPLINE OF "ACCESS TO INFORMATION FOR PEOPLE WITH SPECIAL NEEDS": PERFORMANCE AND PARTICIPATION IN STUDENT'S EXPERIENCES S. Eftimova	2845
SCIENTIFIC, EDUCATIONAL AND CULTURAL SOCIAL DIALOGUE BETWEEN TEACHERS AND STUDENTS IN THE UNIVERSITY ENVIRONMENT K. Mincheva, P. Mukanova, S. Eftimova	2855
INTEGRATED DASHBOARDS WITH SOCIAL MEDIA ANALYSIS CAPABILITIES FOR MONITORING QUALITY IN HIGHER EDUCATION INSTITUTIONS A. Sorour, A. Atkins, C. Stanier, F. Alharbi, R. Campion	2862
<b>3D VIDEO AS A PRACTICE-LEARNING MODULE IN SURGICAL EDUCATION</b> I. Rajković, D. Radonić, K. Grsic, J. Žiljak Gršić	2871
INITIAL ASSESSMENT OF THE TRAINING OF MANAGERIAL COMPETENCES IN POSTGRADUATE STUDENTS IN ADMINISTRATION AT THE INSTITUTO POLITÉCNICO NACIONAL E.O. Cardoso Espinosa, J.A. Cortés Ruiz, M.J. Blas Rivera	2877
THE FORMATION OF RESEARCH COMPETENCES IN POSTGRADUATE STUDENTS IN ADMINISTRATION AT THE INSTITUTO POLITÉCNICO NACIONAL	2882

E.O. Cardoso Espinosa, J.A. Cortés Ruiz, S.V. Cortés Ruiz

A MODEL FOR ESTABLISHING THE BASIC PRINCIPLES OF CREATING A QUALITY MANAGEMENT SYSTEM IN LAW ENFORCEMENT EDUCATION INSTITUTIONS I. Zalitis, J. Davidova, R. Glaudins	2886
<b>VULNERABILITIES OF DIGITAL SECURITY IN UNIVERSITY STUDENTS</b> C. Torres-Gastelú, G. Kiss, M. Cuevas-González	2895
<b>21ST CENTURY BOOKWORMS: AN ACTION RESEARCH EXPERIMENT IN A</b> <b>PORTUGUESE PROFESSIONAL SCHOOL</b> <i>T. Guedes da Fonseca, M.L. Branco, C. Reis</i>	2901
<b>LEARNING IN GLOBAL VIRTUAL TEAMS ACROSS 15 UNIVERSITIES</b> A. Gordon	2906
THE EUROPEAN HEALTH LITERACY SURVEY: RESULTS ON OUTPATIENT CARE FOR THE ELDERLY IN NORTHERN PORTUGAL I. Vaz, L. Oliveira	2914
UTILIZING KHAN ACADEMY TO IMPROVE READING COMPREHENSION IN SOLVING MATHEMATICAL WORD PROBLEMS FOR GRADE 7 STUDENTS P.M. Cerrado, D.D. Errabo	2925
CULTURAL EDUCATION IN THE SYSTEM OF LATVIAN GENERAL SECONDARY EDUCATION: YOUNG PEOPLE AND TEACHERS' ASSESSMENT OF THE CONTENT AND METHODS OF CULTURAL EDUCATION A. Romanovska	2930
CULTURAL EDUCATION WITHIN THE SYSTEM OF GENERAL SECONDARY EDUCATION AS A TOOL FOR SHAPING REGIONAL, NATIONAL, AND EUROPEAN IDENTITY: THE FIELDWORK RESULTS IN LATVIA A. Romanovska	2936
DATA WAREHOUSE AND ADVANCED TOPICS IN DATABASES COURSE CURRICULUM DESIGN AND EXPERIENCES D. Jaksic	2942
RESEARCH OF CONTEMPORARY EDUCATIONAL PROGRAMS OF CULTURAL INSTITUTIONS IN BULGARIA: NEW RESEARCH PROJECT S. Spasova, S. Dimitrova	2950
EDUCATIONAL INITIATIVES IN THE BULGARIAN MUSEUMS – SOME GOOD PRACTICES S. Spasova	2955
INTERNET ADDICTION AND PERSONALITY AMONG COLLEGE STUDENTS OF GENERATION Y AND Z	2959
S. Dobešová Cakirpaloglu, J. Kvintová, S. Lemrová, R. Hájková	
DISCOVERING THE NERVOUS SYSTEM. AN INNOVATIVE TEACHING APPROACH FOR PRIMARY SCHOOL G. Fabris, P. Bisaccia, F. Corrà, M. Bonato, P. Irato, G. Santovito	2969
<b>AN ANALYSIS OF THE NEW CHALLENGES FACING CYBER SECURITY EXPERTISE</b> W. Dimitrov, B. Jekov, E. Kovatcheva, L. Petkova	2978
USING "FLIPPED CLASSROOM" STRATEGIES TO TEACH UNDERGRADUATE COURSES OF QUANTUM CHEMISTRY. APPLICATION TO A MODIFIED HÜCKEL METHOD INCLUDING A PARTIAL OVERLAP A.M. Graña, J.M. Hermida-Ramón, M. Mandado, R.A. Mosquera, A. Peña-Gallego	2987
E-RUBRICS IN HIGHER EDUCATION: SELF-ASSESSMENT THROUGH CORUBRICS TO ENHANCE LEARNING IN AN ONLINE COURSE M. Querol-Julián	2993
<b>TEACHING RUSSIAN SPEECH ETIQUETTE FORMULAE TO CHINESE STUDENTS</b> (BASED ON ADDRESS AND GREETING IN BUSINESS COMMUNICATION) N. Novospasskaya, X. Ziyi, N. Perfilieva, O. Lazareva	2997
ENHANCING STUDENTS' KNOWLEDGE AND SKILLS IN PROGRAMMING VIA A SYSTEM OF TASKS G. Atanasova, P. Hristova	3003
<b>TEACHER'S PERCEPTION OF THE EDUCATIONAL RELATIONSHIP ON THE</b> <b>RELATION TEACHER-PUPIL IN A SCHOOL</b> S. Kakuk, Z. Menalo, N. Menalo	3011
A VISUAL THINKING, EVIDENCE-BASED, KINETIC LABORATORY EXPERIMENT: DETERMINING THE RATE LAW FOR THE BLEACHING OF CRYSTAL VIOLET DYE BY HYDROXIDE IONS	3017
S. Losada-Barreiro, C. Bravo-Díaz, A. Peña-Gallego, R.A. Mosquera, A.M. Graña	

<b>SUPPORTING TEACHERS IN CHOOSING MATHEMATICS LEARNING VIDEOS</b> <i>I. Ratnayake, R. Bruder, M. F. Mammana, E. Taranto</i>	3022
<b>TECHNOLOGY FOR MASTERING RUSSIAN VOCABULARY BY CHINESE STUDENTS</b> <b>IN THE FIELD OF INTERNATIONAL TRADE</b> <i>O. Lazareva, Y. Yuhan, N. Perfilieva, N. Novospasskaya</i>	3032
INTERNSHIPS: EVALUATION OF THE COMPETENCES ACQUIRED BY THE STUDENTS OF THE DEGREE IN LABOUR RELATIONS AND HUMAN RESOURCES AND THEIR ADAPTATION TO THE LABOUR MARKET A. Hernández-Trasobares, P. Latorre-Martínez, J.L. Murillo-Luna, P. Ramos-Villagrasa, E. Santor- Salcedo, O. Urbina-Pérez, M. Vilariño-Vázquez	3037
THE IMPACT OF AUDIOVISUAL MEDIA ON CHILDREN WITH AUTISM SPECTRUM DISORDERS E. Brlek, M. Milković, J. Škoda	3045
<b>A HIGH-EFFICIENT LOW BUDGETARY APPROACH TO CYBER-SECURITY EXERCISES</b> W. Dimitrov, B. Jekov, E. Kovatcheva, T. Ostrovska	3051
SHARING STUDENT MARKETING COMPETENCES THROUGH GAMIFICATION AND ITS USE AS A DECISION MAKING TOOL FOR BUSINESS PLANNING I. Puebla, R. Ayestarán	3060
ON THE IMPROVEMENT OF A PROGRAMMING GYMKHANA FOR PYTHON SELF- LEARNING	3068
B. Remeseiro, G. Cebrián-Márquez, A.J. Díaz-Honrubia, N. Rico, J.R. Villar, E.A. de la Cal, P. Suárez- Otero	
<b>FINEXT 2020: DESIGNING INNOVATIVE ACTIONS BASED ON PAST EXPERIENCES</b> <b>AND PROJECTS</b> <i>G. Cebrián-Márquez, E.A. de la Cal, A.J. Díaz-Honrubia, R. Mencía, B. Remeseiro, N. Rico, P. Suárez-Otero, J.R. Villar, R. Zurita</i>	3077
THE IMPACT OF VIRTUAL REALITY SIMULATORS IN MANUFACTURING INDUSTRY	3084
N.A. Tocu, A. Gellert, I.R. Stefan, T.M. Nitescu, G.A. Luca GAMIFICATION AND TEACHING INNOVATION TECHNIQUES APPLIED TO LAST YEAR STUDENTS IN THE DEGREE IN INTERNATIONAL RELATIONS: THE USE OF BRAINSTORMING PROMPT AND SPEED-DATING M. Medina	3094
SYSTEMATIC METHODOLOGY FOR THE DESIGN OF GAMIFICATION ACTIVITIES AND APPLICATION TO ENGINEERING DEGREES AS ACTIVE LEARNING TOOL D. Ranz, B. Peña, M. Alegre	3099
STUDYING BASIC CONCEPTS AS THE FRAMEWORK OF SECOND LANGUAGE ACQUISITION FOR BILINGUAL STUDENTS I. Balandina, A. Sviridova, Y. Nikitina, L. Yuzdova, T. Moskvitina	3110
JEOPARDIZING CHILDREN'S FUTURE? GERMAN KINDERGARTEN TEACHERS' BELIEFS ON LITERACY EDUCATION R. Tkotzyk	3116
LEARNING INDUSTRIAL SYMBIOSIS IN EDUCATIONAL EXPERIMENTAL FARMS, A WAY FOR MOVING TOWARDS A CIRCULAR ECONOMY G. Cervantes	3126
THE USE OF MICRO-VIDEOS AS A TOOL FOR DISSEMINATING RESEARCH RESULTS: AN APPLICATION IN HUMAN RESOURCES MANAGEMENT FIELD J. De Frutos-Belizón, S. Fernández-Perez de la Lastra, N. García-Carbonell, F. Guerrero-Alba, F. Martín-Alcázar, J.L. Perea-Vicente, M. Ruíz-Martínez, G. Sánchez-Gardey	3132
APPLICATION OF A CASE STUDY METHODOLOGY. STUDY DESIGN AND IMPLEMENTATION FOR A MULTIDISCIPLINARY GROUP D. Ranz, L. Remón, R. Sanz-Segura, J. Ares	3138
<b>@CHECK – A MODERN CLASS ATTENDANCE CHECKING TOOL</b> K. Jassem, J. Paliwoda, B. Wierzbiński	3144
COLLABORATIVE WIKI DIDACTICS FOR BLENDED LEARNING: DEFINITION AND THE CASE OF NEW EXPERIMENTAL COURSE FOR LINGUISTS AND TRANSLATORS I. Vasilyeva	3153
<b>EXPERIENCES FROM FORMATIVE LEARNING ASSESSMENT SUPPORTED BY</b> <b>DIGITAL TOOLS</b> K. Åberg, M. Johansson, M. Wetterstrand, K. Ådahl, M. Faraon, A. Mello, K. Rönkkö	3161

USING WEBINARS WITHIN AN E-LEARNING PROGRAMME TO TEACH MEDICAL STUDENTS ACROSS CLINICAL PLACEMENTS: EXPERIENCES AT MANCHESTER MEDICAL SCHOOL N. Patel, K. Wilson, R. Parikh	3172
APPROACHING THE FINAL YEAR OF BUSINESS ADMINISTRATION AND MANAGEMENT STUDENTS TO THE BUSINESS REALITY J. De Frutos-Belizón, S. Fernández-Pérez de la Lastra, N. García-Carbonell, F. Guerrero-Alba, F. Martín-Alcázar, J.L. Perea-Vicente, M. Ruíz-Martínez, G. Sánchez-Gardey	3173
CONTINUOUS, PARTICIPATORY AND PROGRESSIVE EVALUATION IN MEDICAL TEACHING: EXPERIENCE WITH THE UNIVERSITY OF VALENCIA'S VIRTUAL CLASSROOM QUESTIONNAIRE T. Civera, M.D. Barrachina, S. Calatayud, S. Martínez-Hervás, A. Álvarez, D. Ortiz-Masià	3179
<b>APPLICATION OF CHATBOTS IN HIGHER EDUCATION ENVIRONMENT</b> <i>R. Picek</i>	3184
COMPARATIVE ANALYSIS OF STUDENTS' ACCEPTANCE OF LEARNING ERP SOLUTIONS S. Sternad Zabukovšek, R. Picek	3195
THE EFFECT OF MOBILE PHONE BAN IN SCHOOLS ON THE EVALUATION OF CLASSROOM CLIMATE S. Dobešová Cakirpaloglu, T. Čech, M. Maléřová, H. Adámková	3204
<b>DEVELOPING A VIRTUAL PROFESSIONAL LEARNING COMMUNITY FOR ONLINE</b> <b>FACULTY</b> <i>A. Belcher, J. Robinson, K. Olson-Stewart, A. Rief</i>	3213
REDESIGNING THE PINHOLE CAMERA: AN EXERCISE ABOUT HOW TO DEVELOP AN "ECOBJET" FOR CREATING "BIOIMAGES" T. Pinho, T. Assis	3225
THE INTEGRATIVE MODEL FOR THE FORMATION OF THE LINGUISTIC AND CULTURAL COMPETENCE OF FOREIGN STUDENTS OF NATURAL SCIENCES AND TECHNICAL SPECIALTIES I. Kalinina, Y. Tugova, V. Abyshkina, L. Alekseeva, S. Pudovkina	3235
INNOVATING LED-LIGHTING FIXTURE DESIGN THROUGH A LEARNING LIGHTING BY MAKING APPROACH D. Casciani	3241
CLIL (CONTENT AND LANGUAGE INTEGRATED LEARNING): CASE OF LEGAL STUDIES A. Schneiderova	3251
<b>TARGET GROUP ORIENTED TEACHING OF LEGAL TERMINOLOGY</b> A. Schneiderova	3259
DEVELOPING THE LABORATORY MODELS FOR WIRELESS ENERGY TRANSMISSION D. Srpak, I. Šumiga, J. Srpak, E. Dumic	3270
ROBOTIC TOYS AND KITS IN PRIMARY SCHOOL EDUCATION H. Hyksová	3275
<b>TPACK INSTRUCTIONAL DESIGN MODEL IN VIRTUAL REALITY FOR DEEPER</b> <b>LEARNING IN SCIENCE AND HIGHER EDUCATION: FROM "APATHY" TO</b> <b>"EMPATHY"</b> <i>M. Fragkaki, S. Mystakidis, I. Hatzilygeroudis, K. Kovas, Z. Palkova, Z. Salah, G. Hamed, W.M.</i> <i>Khalilia, A. Ewais</i>	3286
MODEL OF BLENDED COLLABORATIVE WIKI DIDACTICS: THE CASE OF WIKI LMS COURSE IN APPLIED LINGUISTICS AT MASTER'S LEVEL. FROM STUDENT- CENTERED TO STUDENTS' CO-PARTNERS? I. Vasilyeva	3293
SERVICE-LEARNING AS A METHODOLOGY TO ACHIEVE SUSTAINABLE DEVELOPMENT GOALS: EXPERIENCE WITH THE CLINICAL NEUROLOGY SUBJECT IN THE DEGREE OF SPEECH THERAPY T. Civera, M.D. Barrachina, S. Martínez-Hervás, S. Calatayud, A. Álvarez, D. Ortiz-Masià	3303
BYOD (BRING YOUR OWN DEVICE) - STUDENT FACILITIES IN TEACHING AT PRIMARY SCHOOLS H. Hyksová	3308
VIRTUAL LIBRARY – E-CONTENT MANAGEMENT SOLUTION FOR PUBLIC INSTITUTIONS A.M. Udroiu, M. Dumitrache, I. Sandu	3314

A FOSSIL IN MY SCHOOL: A 3D PILOT EXPERIENCE IN PRIMARY EDUCATION C. Castillo Ruiz, P. Cruzado-Caballero, M. Afonso-González	3320
MANDARIN PROSODY BOUNDARY PREDICTION FOR IMPROVING MANDARIN LEARNING OF NON-NATIVE SPEAKERS H. Yang, Y. Yan, J. Jiang	3328
E-LEARNING AND TEACHING STRATEGIES OF UNIVERSITY TEACHERS. A CASE STUDY IN THE TEACHING OF SPANISH AS A SECOND LANGUAGE IN SLOVAKIA, POLAND AND THE USA E. Reichwalderová, C. Dimeo	3335
SYSTEMATIC DESIGN OF ACID-BASE TITRATIONS FOR UNDERGRADUATE STUDENTS: APPLICATION TO THE RESOLUTION OF A MIXTURE OF TWO AMINO ACIDS 1. de la Calle, I. Lavilla, F.J. Pena, V. Romero, C. Bendicho	3341
SMART FARMING IN ALPINE REGIONS C. Bernsteiner, T. Dilger, C. Ploder	3347
<b>EVALUATION OF INDICATORS OF ACADEMIC PERFORMANCE AND LABOR</b> <b>INSERTION OF GRADUATES FOR DEGREE IN PHARMACY: MAKING PROGRESS</b> <b>TOWARDS A QUALITY FUTURE</b> <i>M. Romero Perez, R. Navarrete Casas, J.M. Paredes Martínez, B. Clares Naveros, M.J. Muñoz Alférez,</i> <i>M.A. Huerta Martínez, M. Sánchez Polo, A.I. Del Moral García, O. Cruz-López</i>	3356
DESIGNING AND DEVELOPING A RUBRIC FOR TECHNOLOGY ENHANCED LEARNING IN HIGHER EDUCATION D. D'Cruz	3363
THE CONTEXT OF MATHEMATICAL TASKS AS AN ASSUMPTION OF THEIR SUCCESSFUL SOLUTION R. Dofková, E. Tauferová	3374
<b>TUTORGRADOS 2.0, AN INNOVATIVE PROJECT ORIENTED TO STUDENTS WITH</b> <b>EDUCATIONAL NEEDS</b> <i>R. Navarrete Casas, E.M. Talavera Rodríguez, M. Romero Perez, J.M. Paredes Martínez, R.J. Giménez</i> <i>Martínez, M.J. Ruedas Rama, A. Conejo García, J.M. González Pérez, E. García Fernández, J.A.</i> <i>González Vera, C. Monteagudo Sánchez, P. Bouzas, M. Sánchez Polo, M.C. González García, F.J.</i> <i>Vasco Martín, E. González Muñoz, C.F. García Jiménez, E. Rebollo García, S. Páez Yépez, M.A.</i> <i>Huerta Martínez, M.J. Muñoz Alférez</i>	3379
THE INTEGRATION OF THE GENDER PERSPECTIVE IN THE TEACHING OF HUMAN ANATOMY E. Ausó Monreal, V. Gómez Vicente	3386
DEVELOPING COMMUNICATION SKILLS THROUGH AUGMENTED AND VIRTUAL REALITY APPS ON SMART DEVICES D. Tran, M. Pytlik, K. Kostolányová	3387
DEVELOPMENT LEVEL DETERMINATION OF AXIOLOGICAL ATTITUDE TO EDUCATION OF FIRST AND SECOND YEAR STUDENTS AT SOUTH URAL STATE UNIVERSITY	3395
E. Kiriakova, I. Levina, E. Ponomareva, S. Sanochkina SOFTWARE POSSIBILITIES OF CREATING MODELS FOR 3D PRINTING IN THE LEARNING PROCESS AT SECONDARY SCHOOLS R. Loskot, J. Loskot	3400
VISUAL TEACHING OF COMMAND-LINE PROGRAMMING K. Jassem, D. Grajewska	3408
<b>PEDAGOGICAL INNOVATION THROUGH ACTIVE LEARNING PRACTICES USING DIGITAL TOOLS - A CASE STUDY IN TOURISM DEGREES</b> <i>C. Rafael, P. Cardoso</i>	3418
APPLICATION OF PROJECT-BASED EDUCATION IN PEDAGOGICAL PROCESS AT SECONDARY TECHNICAL SCHOOLS R. Loskot, J. Loskot, J. Vopršal	3426
<b>CO-CREATION IN THE DESIGN AND DEVELOPMENT OF EDUCATIONAL TOURISM:</b> <b>THE CLOUDLEDGE SYSTEM</b> <i>D. Pappa, C. Manolitsis, C. Makropoulos, V. Pitsilis</i>	3433
<b>TESTING OF AN INTERVENTION TO PROMOTE STUDENTS' INTENTION</b> <b>REGARDING STEM CELL DONATION</b> J. Holzer, D. Elster	3440
<b>EDUCATIONAL PROJECTS EVALUATION</b> P. Fanta, L. Mynaříková, L. Dobrucká	3449

<b>CURRICULUM DEVELOPMENT FRAMEWORK: A TOOL FOR INNOVATIVE</b> <b>PROGRAMME DEVELOPMENT</b> <i>P. Stynes, P. Pathak</i>	3455
<b>TEACHERS AND LEADERS COLLABORATING ON A STRATEGIC RESEARCH</b> <b>APPROACH TO THE USE OF EDUCATION TECHNOLOGY IN THEIR SCHOOL</b> <i>B. Mannova, C. Preston, S. Younie</i>	3466
THE TRAINING OF EDUCATIONAL ASSISTANCE SPECIALISTS IN THE CONTEXT OF COPING WITH OCCUPATIONAL STRESS D. Alifanoviene, O. Sapelyte	3472
"DRAWING WITH CODE": THE EXPERIENCE OF TEACHING CREATIVE CODING AS A SKILL FOR COMMUNICATION DESIGNERS A. Benedetti, T. Elli, M. Mauri	3478
<b>THE PROFESSIONAL IMAGE OF SOCIAL PEDAGOGUES: HOW TO IMPROVE</b> <b>TRAINING PROGRAMS?</b> <i>O. Sapelyte, D. Alifanoviene</i>	3489
THE SI! PROGRAM FOR PROMOTING HEART-HEALTHY HABITS IN CHILDREN AGED 3 TO 5 YEARS: PEDAGOGICAL STRATEGIES V. Carral Bielsa, C. Rodríguez, X. Orrit, D. Haro, G. Santos-Beneit, P. Bodega, I. Carvajal, A. Álvarez- Benavides, J.L. Peñalvo, J.M. Fernández-Alvira, R. Fernández-Jiménez, B. Ibáñez, V. Fuster	3490
HOW DO UNIVERSITY STUDENTS CYBERBULLY TEACHERS ON INSTAGRAM? P. Ambrožová, M. Kaliba	3500
MATERIALIZED FORM OF THE ASSESSMENT OF CONFIDENCE IN THE PERFORMANCE OF MATHEMATICAL KANGAROO TASKS FOR STUDENTS AGED 8- 12: GENDER DIFFERENCES S. Churbanova, M. Martynovsky	3509
PEDAGOGICAL TECHNOLOGIES IN TEACHING RUSSIAN TO A CROATIAN- SPEAKING AUDIENCE N.N. Koneva, A. Zalović	3518
<b>TRUST AS THE DETERMINANT THAT AFFECTS SEXTING</b> V. Poláčková, J. Hanuliaková, K. Hollá	3525
THE HISTORY OF HUMAN CAPITAL MEASUREMENT AS MEANS OF INCREASING STUDENTS' APPRECIATION OF HUMAN CAPITAL IN SOFTWARE PROJECTS – A FIRST LITERATURE MAPPING T. Dilger, C. Ploder, R. Bernsteiner, P. Tomasini	3532
ONLINE ADDICTION AMONG UNDERGRADUATE STUDENTS OF EDUCATION P. Ambrožová, M. Kaliba	3539
<b>TEACHING INNOVATION EXPERIENCE AT THE UNIVERSITY: THE IMPLICATION OF THE STUDENT IN THE EVALUATION FROM DIFFERENT PERSPECTIVES</b> E. Gonzalez Araujo, R. Vélez de Miguel	3546
REDUCING WASTE IN THE FACULTY OF ENGINEERING OF VITORIA-GASTEIZ (UPV/EHU) TO CREATE A MORE SUSTAINABLE CAMPUS N. Rojo, A. Saralegi, O. Aldecoa, J. Álvarez, Z. Gómez-de-Balugera	3555
PROFESSIONAL LEARNING THROUGH COLLABORATIVE ONLINE INTERNATIONAL LEARNING S. Swartz, B. Barbosa, I. Crawford, S. Luck	3564
APOLLONIUS' PROBLEMS IN SECONDARY EDUCATION USING ICT D. Nocar, R. Dofková	3572
THE FLIPPED CLASSROOM MODEL IN ENGINEERING THERMODYNAMICS: COMPARISON OF EXPERIENCES IN DIFFERENT BACHELOR DEGREES B. Peña, M. Bailera, I. Zabalza, B. Zalba	3581
<b>BIM TECHNOLOGY IN ARCHITECTURAL PROJECTS</b> M. Valiente López, N. Leon Martinez, M.C. Sanz Contreras	3591
BACHELOR'S THESIS FOR A SUSTAINABLE FUTURE: REDUCTION OF WATER, ELECTRICITY AND GAS CONSUMPTION IN THE FACULTY OF ENGINEERING VITORIA-GASTEIZ (UPV/EHU) I. Tazo, M. Jiménez-de-Aberasturi, A. Saralegi, J. Álvarez, N. Rojo	3599
A NEW METHODOLOGY TO INCREASE THE EFFECTIVENESS OF USING CONCEPT MAPS MADE WITH CMAPTOOLS TO HELP THE STUDENTS ACHIEVE MEANINGFUL LEARNING. EXEMPLIFICATION WITH A CONCEPT MAP ON ATOMIC MODELS M.I. Suero López, A.L. Pérez Rodríguez, P.J. Pardo Fernández, C. Cuenca Lorenzo	3605

INTERACTIVE PROMOTION OF STEM UNIVERSITY DEGREES AMONG HIGH SCHOOL STUDENTS A.B. Socorro, I. Picallo, P. Lopez Iturri, S. Diaz, F. Falcone	3612
RUBRIC-BASED ASSESSMENT PROCEDURE FOR MONITORING AND LEARNING PURPOSES IN ENGINEERING THERMODYNAMICS B. Peña, M.P. Lisbona	3618
DO GLOBAL VIRTUAL TEAMS PROJECTS BENEFIT STUDENTS? THE ANSWER IS YES! S. Swartz	3626
THE EFFECT OF UNIVERSITY STUDENTS' PERSONALITY STRUCTURE ON PERCEIVED ACADEMIC STRESS L. Křeménková, I. Plevová, M. Pugnerová, E. Sedláková	3634
PERCEIVED ACADEMIC STRESS IN THE UNIVERSITY ENVIRONMENT I. Plevová, L. Křeménková, M. Pugnerová, A. Chytilová	3643
THE RELATION OF SELF-ESTEEM ON RISK BEHAVIOUR AMONG EMERGING ADOLESCENTS S. Dobešová Cakirpaloglu, T. Čech, V. Štenclová	3651
GENDER RATIO IN ACADEMIA AND RESEARCH IN BULGARIA R. Doneva, S. Gaftandzhieva, K. Boykova	3658
THE CONTRIBUTION OF ASSESSMENT IN A WORK SITUATION TO THE VALIDATION OF THE EDUCATIONAL PATHWAY C. Meyer, G. Catuli, A. Henni	3668
ASSESSMENT OF SOCIAL-PSYCHOLOGICAL INDICATORS BY SCHOOL STUDENTS WITH DIFFERENT GENDER IDENTITIES E. Breus, G. Kozhukhar	3669
COMBINING DISTRIBUTED CLOUD ARCHITECTURE AND MOBILE TECHNOLOGIES AND APPLICATIONS FOR MORE EFFICIENT MANAGEMENT AND CONTROL OF THE EDUCATIONAL AND RESEARCH ACTIVITIES A. Nachev, D. Pavlova	3676
<b>USING SOCRATIVE TO ENHANCE ACTIVE LEARNING AND ASSESSMENT IN</b> <b>ANALYTICAL CHEMISTRY: A CRITICAL SURVEY</b> M.J. Lerma-García, M. Vergara-Barberán, E.J. Carrasco-Correa, F.A. Esteve-Turrillas, S. Armenta, M.L. Cervera, E.F. Simó-Alfonso, J.M. Herrero-Martínez	3681
OPPORTUNITIES FOR EFFECTIVE DIGITALIZATION OF THE ADMINISTRATIVE SERVICES IN A UNIVERSITY ENVIRONMENT AND IMPROVEMENT OF THE MANAGEMENT ECOSYSTEM THROUGH PROCESSES REENGINEERING A. Nachev, P. Gindev, D. Pavlova	3691
EDUCATIONAL MULTIMODAL DATA MINING AND FUSION THROUGH KNOWLEDGE GRAPHS FOR TOPIC-RELATION EXTRACTION IN STUDY RECOMMENDATIONS S. Tomar, H. Abu Rasheed, M. Fathi	3696
<b>PROSPECTS OF THE COOPERATION IN FRAMEWORK OF THE FRENCH-RUSSIAN</b> <b>UNIVERSITY IN THE CONTEXT OF THE CRISIS OF MODERN HUMANITIES</b> <i>M. Moseykina, E. Linkova, A. Golovkin, V. Morzheedov</i>	3706
<b>TEACHING AND COACHING MILLENNIALS WITH APPS</b> A. Henni, S. Mercier	3710
<b>INNOVATIVE LEARNING MODELS TO MASTER THE DIGITAL TRANSFORMATION</b> <b>IN THE AUDIT PROFESSION</b> <i>M. Canipa-Valdez, F. Grimberg</i>	3717
CAREER DEVELOPMENT PREFERENCES OF UNIVERSITY STUDENTS E. Nacházelová, A. Reissová	3722
TRANSMEDIA STORYTELLING RESEARCH PARADIGMS AND PRACTICES IN LATIN AMERICA AND SPAIN: AN INTERVIEW WITH ACADEMIC DIRECTORS AND EXPERTS	3730
G. Gomero Correa, D. Barredo Ibañez, J. Hernández Ruiz HIGHER EDUCATION INSTITUTIONS AS CORPORATE SOCIAL RESPONSIBILITY DRIVERS: TEACHING AND LEARNING TO TRANSFORM THE WORLD S. Gomes, M. Nogueira, C. Neves	3735
<b>MODEL FOR QUALITY EVALUATION IN SECONDARY EDUCATION</b> M. Docheva, S. Gaftandzhieva, R. Doneva, G. Totkov	3745

THE PERCEPTION OF SCHOOL CLIMATE BY ELEMENTARY SCHOOL HEADMASTERS T. Čech, S. Dobešová Cakirpaloglu, V. Štenclová	3756
THE BASIC PRINCIPLES OF DESIGNING A QUALITY MANAGEMENT SYSTEM IN EDUCATION INSTITUTIONS OF PROFESSIONAL FIELD OF POLICE AND BORDER GUARDS I. Zalitis, S. Ignatjeva, J. Davidova, I. Kokina	3765
<b>IMPROVING FLIPPED LEARNING THROUGH GAMIFICATION</b> <i>M. Gimenez, M.V. Sandin-Vazquez</i>	3774
ONLINE DISCLOSURE OF HIGHER EDUCATION INSTITUTIONS' SOCIAL RESPONSIBILITY M. Nogueira, S. Gomes, C. Neves	3785
<b>THE DEVELOPMENT OF COGNITIVE EMPATHY AND COLLABORATIVE</b> <b>BEHAVIOUR THROUGH TRAINING IN DRAMA PEDAGOGY</b> <i>M.P. Celume, F. Zenasni</i>	3791
<b>CREATIVE TECHNIQUES APPLIED TO ENGINEERING SUBJECTS</b> F. Seculi, F. Julián, X. Espinach, M. Alcalà	3792
CHALLENGES OF CREATING A MODEL FOR IMPROVING THE COMPETENCES OF VOCATIONAL TEACHERS: A CROATIAN PERSPECTIVE V. Kirinić, V. Anđelić, Z. Bačelić	3799
METHODOLOGY FOR DEVELOPING LEARNING MATERIALS FOR A WEB-BASED ADAPTIVE LANGUAGE LEARNING SYSTEM V. Slavuj	3810
UNDERSTANDING STUDENTS' NEW WAYS OF COMMUNICATING M. Myers	3820
ELABORATION OF A MULTIMEDIA BOOK ON THE IMPORTANCE OF STATISTICS AND PRESENTATION OF THE INFORMATION FOR THE STATISTICAL SUBJECTS TAUGHT AT THE FESC M. Pineda Becerril, O. García León, A. Aguilar Márquez, F. León Rodríguez	3825
STUDENTS' FEEDBACK ON THE USE OF EDUCATIONAL VIDEOS TO SUPPORT THE STUDY OF THERMODYNAMICS I. Zabalza, M. Aznar, J. Uche, B. Zalba, B. Peña, J.M. Marín, E.M. Llera, S. Usón	3832
IMPROVEMENT OF THE LABORATORY SKILLS ON FIRST-YEAR ENGINEERING STUDENTS AT THE UNIVERSITY OF THE BALEARIC ISLANDS (SPAIN) BY CHANGING SOME TEACHING STRATEGIES OF THE LABORATORY LESSONS R. Santamarta, J. Torrens-Serra, M.A. Jiménez, M. Conde	3841
DEVELOPMENT AND USAGE OF OPEN EDUCATIONAL RESOURCES AMONG TEACHERS S. Rako, S. Kucina Softic	3849
FORUM USAGE IN MASSIVE OPEN ONLINE COURSES ON THE EXAMPLE OF A PROGRAMMING COURSE "ABOUT PROGRAMMING" R. Suviste, H.L. Reponen, E. Tõnisson, M. Lepp, P. Luik	3855
<b>GENDER VIOLENCE IN SOCIAL NETWORKS</b> <i>R. Caramutti, C. Villaseca</i>	3865
THE FIFTH ROLE OF CHILDREN TAKING PART IN A CHILD CENTERED DESIGN PROCESS K. Stoeckelmayr, M. Tesar	3876
FACTORS THAT LEAD TO STUDENTS' BURNOUT- DIFFERENCE IN BURNOUT LEVELS AMONG MALE AND FEMALE AVIATION STUDENTS AND OTHER STUDENTS FROM UNIVERSITIES ACROSS THE U.A.E R.A. Bernabeo, S. Dev, K. Webster	3884
USABILITY EVALUATION FOR ELICITATION OF REQUIREMENTS – AN OPPORTUNITY FOR KINDERGARTEN CHILDREN TO DEVELOP COMPETENCES IN COMPUTER SCIENCE <i>M. Tesar, K. Stoeckelmayr</i>	3893
SOCIODEMOGRAPHIC PROFILE OF CONCLUDING STUDENTS OF HIGHER EDUCATION IN BRAZIL IN 2017 A. Bezerra, M.C. Aguirre, W. Silva, G. Carvalho, M.X. Aguirre, W. Costa, M. Santi, B. Silva, V. Lima, E. Costa	3900
INFORMATIONAL ASPECTS OF DIGITAL LITERACY J. Škoda, L. Luić, E. Brlek	3910

COMPLEX COMMUNICATION NEEDS AND MINORITY DISEASES NETWORK: AN EXAMPLE OF COLLABORATION BETWEEN PROFESSIONALS M. Calleja, E. Postigo	3917
COMPARISON OF HIGHER EDUCATION IN QUANTUM COMPUTING ACROSS EUROPE WITH SPECIAL EMPHASIS ON THE CZECH REPUBLIC J. Glivická	3922
MATHEMATICS TEACHING IN CENTRAL EUROPEAN REGION AND ITS INFLUENCERS M. Kmetova, T. Kmet	3927
THE USE OF SOCIAL NETWORKS AS A PLATFORM FOR THE FLIPPED CLASSROOM IN UNIVERSITY EDUCATION: A CASE STUDY E. Isidori, M. De Martino, F. Taddei, I. Sandor	3933
PHARMACY STUDENT'S ENGAGEMENT, PERFORMANCE AND PERCEPTIONS IN A FLIPPED TEACHING PILOT ON INTRODUCTION TO THE GALENIC PHARMACY SUBJECT	3941
A. Nardi Ricart, M. Oliva Herrera, R. Aparicio Pelegrín, J. Suñer Carbó, A. Viscasillas Clerch, L. Halbaut Bellowa	
IDENTIFYING HIGH SCHOOL STUDENTS' CONCEPTIONS OF ACCELERATION IN RECTILINEAR MOTION USING COMPUTER-ASSISTED SCIENTIFIC INVESTIGATION L. Trudel, A. Métioui	3947
DESIGN AND IMPLEMENTATION OF AN EXPERIENTIAL APPROACH TO TRAINING SCIENCE TEACHERS IN FRENCH-SPEAKING MINORITY COMMUNITIES: RESULTS OF THE THIRD PHASE OF A THREE-PHASE DESIGN RESEARCH PROJECT L. Trudel, A. Métioui	3957
<b>DEFINITION OF PROJECT-BASED LEARNING MODELS IN THE COMPUTER ENGINEERING DEGREE</b> J. Esparza-Peidro, E. Golf-Laville, J. Izquierdo-Domenech, J.V. Tomás-Miquel, R. Sanchis	3966
TOWARDS INTER-SUBJECT PROJECT-BASED LEARNING IN PROGRAMMING-	3973
<b>RELATED COURSES AT COMPUTER SCIENCE STUDIES</b> J. Linares-Pellicer, J. Orta-López, J. Salavert-Torres, M.J. Segura-Flor, J.A. Silvestre-Cerdà, R. Sanchis	5975
MODEL DESIGN AND CALCULATION WITH POLYMERIC AND COMPOSITE MATERIALS THROUGH PROJECT-BASED LEARNING R. Balart, N. Montanes, L. Quiles-Carrillo, S. Jorda, H. Sanchis, R. Sanchis	3979
A METHODOLOGICAL APPROACH FOR ALPINE VILLAGES VALORISATION: METADESIGN BOARDS AND SYNOPTICAL TABLE F. Maroldi, N. Colnaghi, D. Covi	3987
THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) APPLIED TO HIGHER EDUCATION. A PROJECT-BASED LEARNING PROPOSAL INTEGRATED WITH THE SDGS IN BACHELOR DEGREES AT THE CAMPUS ALCOY (UPV) M. Pérez-Sánchez, M. Díaz-Madroñero, J. Mula, R. Sanchis	3997
<b>APPLICATION OF A PBL TO SUBJECTS OF ENGINEERING IN DEGREE AND MASTER</b> <i>M. Fuentes Conde, M. Vivar García</i>	4006
THE SCIENCE OF LIGHT AND COLOUR TAUGHT BY EXAMINING REALISTIC ARTWORKS: ENRICHING STEM EDUCATION THROUGH ART T. Antimirova	4013
<b>EMPOWERING DIGITAL AND MEDIA LITERACY OF PRIMARY SCHOOL TEACHERS</b> <b>IN LATVIA</b> L. Valdmane, S. Zariņa, J. Badjanova, D. Iliško, M. Petrova	4022
OPEN ACCESS AS AN EDUCATIONAL FRAMEWORK, CHALLENGE AND APPROACH / TRENDS IN TEACHING SMALL LANGUAGES K. Čerbová, O. Čerba, B. Špádová	4030
"AGILEDU", AGILE METHODOLOGY APPLIED TO VOCATIONAL EDUCATION, COMPUTER SCIENCE, INFORMATION AND COMMUNICATION TECHNOLOGIES A. Muñoz Fuertes, D. Chinarro, M.L. Sierra Huedo	4036
SLOVAK TEACHERS AND THEIR TEACHING COMPATRIOTS. SIMILARITIES AND DIFFERENCES S. Karikova, A. Douskova, M. Valent, D. Smalley	4046
<b>KEY HR COMPONENTS TO IMPROVE IT UNIT OPERATIONS</b> N. Brown, K. Anderson, T. Clark, H. Aubrey, T. Jordan, D. Hill-Eley, H. Swanson, E. Cameron	4052

PRESCHOOL TEACHERS' PERCEPTIONS OF EXISTING EDUCATIONAL CONDITIONS AND OPPORTUNITIES FOR PARTICIPATION IN PROFESSIONAL DEVELOPMENT PROGRAMS R. Čepić, P. Pejić Papak, L. Marijan	4059
CONSIDERING THE EDUCATIONAL NEEDS, CONDITIONS, AND OPPORTUNITIES IN THE CONTEXT OF TEACHERS' PROFESSIONAL DEVELOPMENT R. Čepić	4068
<b>EFFECT OF A NOVEL PBL-TRADITIONAL LEARNING STRATEGY ON STUDENTS'</b> <b>KNOWLEDGE ACQUISITION IN PATHOPHYSIOLOGY. A PRE-TEST AND POST-TEST</b> <b>STUDY</b> <i>V.S. Fernandes, M. Hernández-Martín, C. Contreras, M. Muñoz-Picos, C. Rodríguez-Prados, A. Agis,</i> <i>A. Sánchez, B. Climent, P. Recio, R. Raposo, S. Benedito, A. García-Sacristán, L. Rivera, D. Prieto, M.</i> <i>Hernández, M.E. López-Oliva</i>	4075
READING LITERACY AND THE CLASSROOM CLIMATE H. Blažková, M. Fasnerová	4084
<b>TEACHING MATHEMATICS IN THE 1ST AND 2ND CYCLE OF BASIC EDUCATION</b> <b>WITH THE INTERACTIVE MULTIMEDIA BOARD</b> <i>A.P. Aires, J. Escola, N. Lopes</i>	4089
SOCIAL NETWORKS AND IN-SERVICE TRAINING OF ITALIAN TEACHERS: A CASE STUDY	4099
E. Isidori, N.V. Poplavskaya, M. De Martino, I. Novikova <b>PHOTOGRAPHY AND DIGITAL ICT: A BLENDED LEARNING MODEL AIMED AT</b> <b>DESIGN COURSES</b> <i>A.L. Oliveira do Amaral, B. Santos Gonçalves, L.M. Moraes</i>	4109
<b>COURSEWARE USABILITY FOR DEAF STUDENTS: A TEST USING EYE TRACKING</b> L.M. Moraes, A. Gobbi, B. Santos Gonçalves, A.L. Oliveira do Amaral, E. Merino, G. Merino	4120
THE EFFECT OF VERTICAL GREENERY SYSTEMS AND GREEN ROOFS TECHNOLOGY ON COMMERCIAL AND ACADEMIC BUILDINGS M. Manouchehri, M. Valiente López, J. Santiago López	4133
OPEN EDUCATIONAL RESOURCES FOR THE STRENGTHENING OF DIGITAL COMPETENCES IN HIGHER EDUCATION J. Delgado, R. Samaniego, J. Salinas, M. Acosta, A. Avila	4143
<b>INFOGRAPHICS AS A PEDAGOGICAL INSTRUMENT FOR DEALING WITH</b> <b>CHILDREN WITH HEARING LOSS</b> J.C. Delgado, M. Iñiguez, C. Garcia, W. Cuenca, G. Ordoñez, G. Rodas	4149
SYNCHRONOUS ONLINE TEACHING AND LEARNING: OPPORTUNITIES AND CHALLENGES – AN EXPERIENCE FROM A GENETICS LABORATORY CLASS K.M. Yam	4156
<b>COMMUNITY DIGITAL LITERACY PROJECT: A SPACE TO STRENGTHEN</b> <b>COMMUNITY INCLUSION</b> J. Valarezo, J.C. Delgado, M. Acosta, A. Avila, K. Guaicha	4164
INTERRELATION BETWEEN ACADEMIC PERFORMANCE OF STUDENTS AND THEIR PERSONAL LEARNING ENVIRONMENT IN A SOCIAL NETWORK A. Feshchenko, V. Kashpur, V. Goiko, T. Kabanova, A. Litvinova	4170
PROMISING STRATEGIES FOR POPULARIZING SCIENTIFIC PSYCHOLOGICAL AND PEDAGOGICAL KNOWLEDGE AMONG TEACHERS D. Ilyasov, N. Yarychev, A. Khokhlov, K. Burov	4177
GAMEMAKER AS AN INSTRUMENT TO CREATE EDUCATIONAL RESOURCES BASED ON GAME ELEMENTS M. Acosta, R. Cabrera, J. Montaguano, W. Leon, J. Morocho, A. Toala	4185
THE VIRTUAL LEARNING ENVIRONMENT AS AN EDUCATIONAL RESOURCE FOR TEACHING BIOLOGY IN SECONDARY EDUCATION J. Valarezo, R. Paucar, O. Santos, K. Guaicha, C. Loaiza, D. Delgado	4193
PROMOTING TEACHING PROBLEM SOLVING SKILLS IN CHEMICAL REACTORS DESIGN V. Sebastian, L. Garcia	4198
<b>USE OF DIGITAL PICTOGRAMS AS A TEACHING STRATEGY TO STRENGTHEN THE</b> <b>READING PROCESS OF STUDENTS IN BASIC GENERAL EDUCATION</b> <i>K. Guaicha, J.C. Delgado, A. Coello, A. Rivera, A. Yaure, H. Quevedo</i>	4199
PROJECT-BASED LEARNING IN THE CARLOS CISNEROS HIGHER TECHNOLOGICAL INSTITUTE C. Orozco, L. Rentería, F. Jara	4205

ICT ADVANCED SKILLS DEVELOPMENT – LINK BETWEEN EDUCATION AND RESEARCH A.M. Udroiu, I. Sandu, M. Dumitrache	4214
INFLUENCE OF INTERACTIVE DESIGN SOLUTIONS ON URBAN SPACE DEVELOPMENT V. Zvirble, J. Daveiko, R. Valujaviciene	4219
INSTITUTION-WIDE CURRICULUM RENEWAL: ENHANCING ACADEMIC PROGRAMMES THROUGH COLLABORATIVE SENSE-MAKING AT A RESEARCH- INTENSIVE UNIVERSITY IN SOUTH AFRICA A. Miiller, A. Van Der Merwe, M. Bester, A. Schoonwinkel	4227
GREEN ENTREPRENEURSHIP ABOVE BORDERS - CHANGE OF THE MODEL OF OPINION OF ENTREPRENEURSHIP AND INNOVATION IN TEACHING THROUGH MIXED TRAINING N. Tihomirova, D. Atanasova	4239
KEY COMPETENCIES, STRATEGIES AND CHALLENGES IN AN INTERDISCIPLINARY HIGH SCHOOL PROJECT K. Dyulgerova, D. Atanasova	4247
<b>PRACTICES OF TRAINING FUNDRAISING ON CROWDFUNDING PLATFORMS IN</b> <b>RUSSIA</b> S. Fedyunina, N. Zazaeva	4258
<b>OPEN DATA COURSE PROJECTS IN BUSINESS INTELLIGENCE</b> L. Aunimo, R. Kauppinen, H. Kekkonen	4263
A NOVEL MODULAR AND ADAPTIVE MULTIMODAL CHILD-HUMANOID ROBOT INTERACTION SYSTEM. TECHNICAL IMPLEMENTATION AND EDUCATIONAL BENEFITS C. Buiu	4270
PRACTICAL USE OF OFF-THE-SHELF VIRTUAL REALITY FOR DISTANCE EDUCATION - A LOOK AT THE FEASIBILITY OF NON-EXPERT USE D. Sjölie, T. Eriksson, M. Samuelsson-Gamboa, J. Wideström	4277
THE VALUE OF SCIENCE IN SECONDARY SCHOOL: THE KEY TO UNLOCKING ASPIRATIONS AND ACHIEVEMENT? A. Mallaburn, D.W. Putwain	4286
WHY MARKETING STUDENTS SHOULD STUDY MULTIMEDIA SKILLS? R. Bilkova	4287
STUDENTS' PERCEPTION OF GROWTH AND SCALABILITY OF STARTUP IDEAS S. Mubaraz, J. Luomakoski, R. Khan, J. Heikkilä	4294
<b>TEACHERS CONCERNS ABOUT INTEGRATED EDUCATION. A COMPARATIVE</b> <b>ANALYSIS</b> <i>K.M. Barth, M.C. Florescu, L.N. Bochiş, C.A. Popa</i>	4302
AGILE PROJECT BUDGETING - TEACHING THE COMBINATION OF AGILE PROJECT MANAGEMENT AND BEYOND BUDGETING BASICS C. Ploder, T. Dilger, P. Schöttle	4307
HOW MUCH AND FOR HOW LONG MIGHT UNIVERSITY STUDENTS USE INSTANT MESSAGING AS LEARNING TOOLS? P. Aparicio-Martinez, M.G. Guzmán-Díaz, A.J. Perea-Moreno, G. Pedrós-Perez, M. Vaquero-Abellán,	4312
M.P. Martinez-Jiménez FACING REAL PROBLEMS FROM A MULTIDISCIPLINARY APPROACH: A PILOT	4320
<b>STUDY</b> M.G. Guzmán-Díaz, A.J. Perea-Moreno, M.P. Martinez-Jimenez, G. Pedrós-Perez, P. Aparicio- Martinez	
THE STRATEGIES OF STUDENT ACTIVITIES IN PERFORMING INFORMATICS- BASED SPOC	4325
M. Mrázek, M. Chráska BE AN ASTROPHYSICIST FOR ONE DAY, AMONG GALAXIES AND BLACK HOLES	4333
A. Postiglione, I. De Angelis, F. Chiricotto, F. La Franca CASE-STUDY AS AN ELEMENT OF PROBLEM-SITUATIONAL TRAINING FOR STUDENTS OF HUMANITARIAN, MANAGERIAL AND LEGAL AREAS OF EDUCATION S. Fedyunina, A. Fediunin	4334
COLLABORATION STRATEGIES BETWEEN HIGHER EDUCATION INSTITUTIONS AND THE MEXICAN AEROSPACE INDUSTRY A.A. Gonzalez Lozano, R.A. Gómez Ortíz	4339

PROCESS SAFETY EDUCATION: SELECTING THE CONCEPTS FOR A PROCESS SAFETY PROGRAM (ARTICLE 1/2) G. Boogaerts, L. Toeter	4348
THE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT, SCHOOL RIGHTS AND DUTIES PERCEPTION ON QUALITY OF STUDENT-TEACHER INTERACTION D. Luketić, S. Peranić	4360
<b>DEVELOPMENT OF SOCIAL RESPONSIBILITY THROUGH GLUTEN FREE COOKING</b> <b>WORKSHOP: MULTIDISCIPLINARY STUDENTS EXPERIENCE</b> <i>H. Carr-Ugarte, M. Vazquez, G. Perez, M. López-Pérez, S. Piñeiro-Fernández, A. Lasa, M.A.</i> <i>Bustamante, O. Martínez, J. Miranda, I. Larretxi, E. Simón, I. Txurruka, V. Navarro</i>	4373
<b>LEARNERS' USE OF TIME IN MOOCS ABOUT PROGRAMMING</b> M. Rõõm, P. Luik, M. Lepp	4380
<b>DEVELOPMENT OF ALEXA SKILLS AS FINAL PROJECT IN ENGINEERING DEGREES</b> <i>M.A. Vicente, C. Fernández</i>	4388
INNOVATE THROUGH CULTURAL ENHANCEMENT AND TECHNOLOGICAL UPGRADE: AN EDUCATIONAL EXPERIENCE OF LED LAMP DESIGN D. Casciani, M. Celi	4393
INCREASE THE AWARENESS OF ALS PATIENTS THROUGH A VIRTUAL REALITY APPLICATION F.M. Ugliotti	4403
<b>COMPETENCES ACHIEVEMENT IN FACE-TO-FACE AND ONLINE LEARNING</b> R. Ferreras-Garcia, J. Sales-Zaguirre, C. Ribas-Marí, E. Serradell-López	4409
INCLUSION OF SOFT SKILLS IN MANAGEMENT INFORMATION SYSTEMS EDUCATION R. Skyrius, J. Lankutis	4414
<b>EXPLORING THE EFFECT OF GOAL ORIENTATION THEORY ON IDENTIFICATION</b> <b>PREFERENCES WHEN USING AN ARS</b> <i>E. Zilberberg, C. Davino</i>	4423
RELATIONSHIP BETWEEN CHARACTERISTICS SOCIO-PSYCHOLOGICAL PERSONAL ATTITUDES AND THE PERSONAL ORIENTATIONS OF VIETNAMESE STUDENTS STUDYING IN THE RUSSIAN FEDERATION V.Q. Ho, S.I. Kudinov, I. Kudinova	4433
<b>INTRODUCING INFORMATION VISUALIZATION TO DESIGN STUDENTS</b> <i>M. Mauri</i>	4442
ONLINE INTERACTION AND MOTIVATION IN ADDITIONAL LANGUAGE TEACHING: WHO DOES IT BEST? C. Prado, T. Barros	4449
<b>PROBLEM-BASED LEARNING: AN EFFECTIVE TEACHING STRATEGY TO IMPROVE</b> <b>LEARNING OUTCOMES IN COMMERCIAL LAW</b> <i>M. Serrano Segarra</i>	4456
INCLUSIVE EDUCATION IN SLOVAKIA FROM THE PERSPECTIVE OF EDUCATION 2030 AGENDA S. Barnová, S. Krásna, G. Gabrhelová, S. Čepelová	4463
INTERCULTURAL ASPECTS IN THE TRAINING OF INTERPRETERS FOR PUBLIC SERVICES E. Reichwalderová, J. Belková	4469
AN APPROACH TO THE DEVELOPMENT OF CRITICAL THINKING DISCUSSING POLITICAL POSTERS J. Demčišák	4476
WOMEN ENGINEERS ASSOCIATION FOR TRANSFORMING THE FUTURE: OBJECTIVES, MOTIVATIONS AND ACTIONS M.A. Vicente, C. Fernández, C. Senabre	4486
DRAW-A-PROGRAMMER TEST AND FIRST RESULTS IN SLOVAKIA Z. Kubincová, M. Homola, M.H.M. Chen, T.H. Lu	4494
GENIUSUP! CHEMISTRY (SPECIAL EDITION)! AN EDUCATIONAL EXPERIENCE THROUGH SERIOUS GAMES FOR CHEMISTRY LEARNING IN A LUDIC WAY F.J. Perales, S. Ramis, C. Manresa-Yee	4502
<b>EDUCATIONAL INNOVATION PROJECT: CRITICAL ARCHITECTURE</b> L. García-Soriano, M. Diodato, V. Cristini, Y. Hernández Navarro, C. Mileto, F. Vegas López- Manzanares	4508

<b>STUDENT INTERACTION WITH THE INTERPLAY TOOL</b> J.G. Rios, V.E. García-Félix, I. Marton Lluch	4513
FASHION-TECH EDUCATION UNRAVELED. AN EXPLORATION ON THE STATE OF THE ART OF FASHION-TECH DIDACTICS C. Colombi, L. Tenuta, A. Vellesalu	4521
COLLABORATIVE DESIGN OF A TEACHING OBSERVATION GRID TO FACILITATE THE ACCEPTANCE OF TEACHING OBSERVATION PRACTICES L. Caporarello, F. Cirulli, M. Milani	4531
HOUSE-NEPAL: DESIGN OF A PROTOCOL FOR THE EXECUTION OF WORKSHOPS LINKED TO THE EMPOWERMENT OF THE POPULATION OF DHULIKHEL F. Vegas López-Manzanares, C. Mileto, L. García-Soriano, A. Casañs Tejedor	4537
LESSONS LEARNT FROM M-LEARNING OF SPINE USING VR, AR, PORTABLE 3D HOLOGRAM AND INTERACTIVE E-LEARNING GAMES FOR MOBILE LEARNING IN PHYSIOTHERAPY EDUCATION: INSIGHTS FROM USERS AND PROFESSIONALS Y.M. Law, S.S.M. Ng, W. Wong, P.S. Wong	4544
<b>DIGITAL TRANSFORMATION AND SPECIALIZED TRAINING IN SUSTAINABILITY</b> M.A. Fernández-Izquierdo, M.J. Muñoz-Torres, J.M. Rivera-Lirio, I. Ferrero-Ferrero, E. Escrig-Olmedo	4550
COLLABORATIVE PROJECT TO IMPROVE THE THERMAL COMFORT AND THE ENERGY CONSUMPTION AT THE FACULTY OF ENGINEERING VITORIA-GASTEIZ (UNIVERSITY OF THE BASQUE COUNTRY) E. Apiñaniz, A. Mesanza, I. Calvo, C. Escudero, J.M. Gil-García, A.J. Garcia Adeva, M. Gastón	4554
USING E-LEARNING IN TEACHING THE ENGLISH SUPRASEGMENTAL FEATURES	4560
H. Vancova	45(1
AN IMMERSIVE VIRTUAL REALITY SERIOUS GAME TO LEARN ABOUT YOUR UNIVERSITY F.J. Perales, S. Ramis	4561
PRONUNCIATION OF WEAK FORMS BY THE NON-NATIVE LEARNERS OF ENGLISH H. Vancova	4566
LEARNING BY RESEARCHING OURSELVES: IMPLEMENTATION OF AUTOETHNOGRAPHY IN THE FIELD OF TEACHER DEVELOPMENT D. Luketić	4571
A PROPOSAL FOR THE DEVELOPMENT OF INTERNATIONAL SKILLS IN COMPUTER SCIENCE AND ENGINEERING STUDENTS O. Peñalba, A. Fernández-Bravo, I. García-Juliá	4581
JOURNALISM EDUCATION IN THE POST-TRUTH ERA: A MULTIDISCIPLINARY MODEL	4582
S. Santos, R. Basílio Simões, I. Amaral	
BEST PRACTICES IN NETWORKING OF PHD PROGRAMS IN GERMAN STUDIES J. Demčišák	4586
GAMIFICATION AND SELF-ASSESSMENT TO PROMOTE STUDENT MOTIVATION IN AN UNDERGRADUATE PROGRAMMING COURSE: A CASE STUDY C. Manresa-Yee, M.F. Roig-Maimó, F.J. Perales, M. Mascaró, J. Montes de Oca, J.M. Buades, S. Ramis	4591
<b>STUDENT LOYALTY AS A KEY TO BUILDING STRONG BRANDS IN MEXICAN</b> <b>PUBLIC UNIVERSITIES</b> J. Casanoves-Boix, M. Pérez-Sánchez, C. Chang Albitres	4598
EXPERIENCE GRAVITY USING MARBLES AND A RUBBER SHEET: TRICKS AND GUIDELINES A. Postiglione, I. De Angelis	4605
PARTICIPATIVE SCIENCE COMMUNICATION AND THE PRACTICAL USE CASE OF THE YES! PROJECT S.B. Linek, W. Scholz	4612
INTELLIGENT SOFTWARE AGENTS IN HELP OF LEARNING SUPPORT FOR AUTISTIC STUDENTS A. Petrov, A. Epitropova, S. Stoyanov	4622
<b>PARTICIPATORY RADIO: MAPPING THE BENEFITS FOR INFORMAL LEARNING</b> <i>R. Basílio Simões, S. Santos, I. Amaral</i>	4629
WORLDWIDE APPROACHES OF SOFT SKILLS TRAINING AS A STRATEGY FACTOR OF ROI GROWTH M. Staboulis, I. Lazaridou	4633

INNOVATION IN TEACHING FOR TRAINING IN CLINICAL REASONING FOR STUDENTS OF SPEECH THERAPY DEGREE M. Calleja, M.L. Luque, J.M. Rodríguez, J. Ferrer, J. León-Carrión	4640
IMPROVING ENERGY-EFFICIENCY SKILLS IN THE CONSTRUCTION SECTOR THROUGH TECHNOLOGY-ENHANCED LEARNING: THE CASE OF BIMPLEMENT PROJECT M.J. Esparza-Arbona, M. Navarro-Escudero, B. Serrano-Lanzarote, J. Cromwijk, P. Op' T Veld	4646
BRINGING LEARNING AND ENTERTAINMENT ACROSS CHALLENGES: AN APPLICATION OF GAME	4654
A. Coelho, J. Costa, F. Costa, F. Machado, O. Martins	
HUMAN LIBRARIES: THE POWER OF USING STORIES IN EDUCATION I. Boboňová, I.L. Kurtek, A. Škodová, Ľ. Galuščáková, Ľ. Rybanský	4660
CLINICAL SIMULATION AS A METHOD OF LEARNING IN THE SUBJECT OF KINESITERAPIA IN THE PHYSIOTHERAPY DEGREE OF THE UNIVERSITAT DE LES ILLES BALEARS M.T. Arbós-Berenguer, E. Bosch-Donate, M.A. Capó-Juan, K. Sansebastián-Fernández, B. Oliver- Jaume, A. Sabater-Garriz	4667
FEEDBACK OF FIRST YEAR STUDENTS' TUTORING PROGRAM P. Catarino, A.P. Aires	4673
MODELLING WITH AN ADVANCED COMPUTING ENVIRONMENT IN A STEM PROBLEM-SOLVING ACTIVITY BY UNIVERSITY STUDENTS C. Fissore, F. Floris, M. Marchisio	4681
<b>DEVELOPMENT OF AN AUGMENTED REALITY MOBILE APP FOR ENHANCING</b> <b>ENGLISH READING SKILLS</b> <i>A. Carrera Rivera, S. Vasconez Miranda, J. Samaniego Villarroel, A. Mayorga Alban</i>	4691
A. Currera Ribera, S. Vasconez Infranta, J. Samaniego Vitarroei, A. Mayorga Alban AFFECTIVE COMPUTING FOR AN EDUCATIONAL PURPOSE: A CASE OF USE S. Ramis, C. Manresa-Yee, F.J. Perales	4697
VISUAL COMMUNICATION - IN THE PROCESS OF DEVELOPING DIGITAL COMPETENCE K. Lapšāns, A. Samuseviča	4703
CHEMICAL EXPERIMENT FOCUSED ON MONITORING ENERGY CHANGES IN ICE MELTING WITH THE IMPLEMENTATION OF THE SCHOOL MEASURING SYSTEM Z. Jenisová, M. Feszterová, B. Tokárová	4710
THE ROLE OF TAM BELIEFS, PERCEIVED ENJOYMENT AND COPRESENCE ON STUDENTS' SATISFACTION WITH COLLABORATIVE LEARNING AND POSITIVE WORD OF MOUTH E. Bigne, C. Ruiz, A. Badenes, R. Currás	4720
SCIENCE AND FACEBOOK: IS SCIENTIFIC DISSEMINATION VIA FACEBOOK VIABLE?	4721
J. Samaniego Villarroel, A. Carrera Rivera, D. Valencia Ruiz, A. Guillén Cortéz, Y. Vargas Jama	170 (
<b>EVALUATOR OF OBJECTIVE TESTS THROUGH A CHATBOT</b> M.D. Sáez Fernández, M.P. Escobar Esteban, G. Candela Romero, M. Marco-Such	4726
<b>USING QR CODES IN THE TELECOMMUNICATION LABORATORY</b> D. Stoyanova, N. Vakrilov, S. Stoyanova-Petrova, N. Kafadarova, N. Mileva	4730
<b>3D VIRTUAL WORLDS TO DESIGN SOCIAL STORIES: AN INTEGRATED APPROACH</b> <b>IN INTERVENTIONS WITH CHILDREN WITH ASD</b> <i>L. Fedeli, V. Pennazio</i>	4735
QUALITY IN HIGHER EDUCATION: THE MAINTENANCE PHASE OF THE INTERNAL QUALITY ASSURANCE SYSTEM IN ONE PORTUGUESE UNIVERSITY N. Jesus-Silva, A. Machado	4742
STAIRWAY TO HEAVEN: INSTRUCTIONAL DESIGN ALIGNMENT IN A SERIOUS GAME FOR EXPERIENTIAL RELIGIOUS EDUCATION IN VIRTUAL REALITY S. Mystakidis, M. Fragkaki, I. Hatzilygeroudis	4743
<b>TEACHER EVALUATION AND SELF-EVALUATION MODELS: A PILOT STUDY</b> I. Boboňová, S. Čeretková, Ľ. Rybanský, Ľ. Galuščáková	4751
<b>INTERNAL EVALUATION OF ERASMUS+ PROJECTS: THE CASE OF ELSE PROJECT</b> J.M. Piñero-López, N. Gómez-Aguilar, C. Contero Urgal, M.D. Capelo-Bernal	4758
IS IT IMPORTANT TO BE DIGITALLY AND SOCIALLY SKILLED AT UNIVERSITY? A COMPARATIVE STUDY ON COMPUTER SCIENCE AND BUSINESS STUDENTS <i>B. Touaiti</i>	4775

WHICH EDUCATIONAL DESIGN TO PROMOTE THE INCLUSION OF CHILDREN WITH DISABILITIES IN 0-6 YEAR EDUCATIONAL SERVICES? THE RESULTS OF AN EXPLORATORY RESEARCH V. Pennazio	4776
IMPROVING THE SOCIAL INCLUSION OF CHILDREN WITH VERBAL COMMUNICATION BY USING A TESI TOOL: PILOT RESULTS D. Stoyanova, N. Kafadarova, S. Stoyanova-Petrova, N. Mileva	4786
<b>EDUCATIONAL DIMENSION OF SUCCESSFUL AGEING</b> <i>M. Muller de Morais, P. Jedlickova, M. Ivancikova</i>	4791
IMPLEMENTING ECOSYSTEM APPROACH TO EXECUTIVE MBA: THE CASE OF MOSCOW STATE UNIVERSITY O. Molchanova, I. Burak	4799
A CASE OF SUSTAINABILITY FOR ENTREPRENEURSHIP EDUCATION IN THE GLOBALIZED WORLD L. Trifan, M.I. Dascălu, C. Mustață, I. Stănică	4803
<b>PROJECT-BASED LEARNING IN THE SUBJECT OF ENERGY AND SUSTAINABLE</b> <b>DEVELOPMENT</b> <i>I. Marton Lluch, J.F. Villanueva, S. Gallardo, S. Carlos, A.I. Sánchez</i>	4811
THE USE OF SELF-ASSESSMENT IN FIRST YEAR STUDENTS OF THE DEGREE OF FOOD SCIENCE AND TECHNOLOGY M. Ortega-Heras, I. Gómez, M.D. Rivero-Pérez, M. Cavia-Saiz, M.L. González-Sanjosé, P. Muñiz	4820
TOOLS FOR PREVENTING ACADEMIC DISHONESTY: THE ROLE OF E-LEARNING TUTORIAL FOR ACADEMIC INTEGRITY S. Pekovic, J. Janinovic, D. Vuckovic, R. Djokovic	4825
AN ANALYSIS OF B2 TESTS IN ENGLISH IN THE SLOVAK EDUCATIONAL CONTEXT J. Bérešová	4833
ONLINE QUIZZING AS A VEHICLE OF LEARNING IN INTRODUCTORY MACROECONOMICS I. Tsener	4839
STEREOTYPE AWARENESS OF UNDERGRADUATE STUDENTS: RESULTS OF A CASE STUDY X. Liashuk	4843
MOBILE APPLICATION TO TRACK STUDENT EXPERIMENTAL LEARNING AND TO IMPROVE THE STUDENTS' ATTENTION I. Gómez, M. Ortega-Heras, M. Cavia-Saiz, M.D. Rivero-Pérez, P. Muñiz, M.L. González-Sanjosé	4852
<b>STATLEARN®: AN E-LEARNING RESOURCES FOR IMPROVING STUDENTS'</b> <b>UNDERSTANDING OF HYPOTHESIS TESTING</b> <i>N.A. Che Musa, Z. Mahmud, N. Baharun, A.H. Adenan</i>	4857
PECULIARITIES AND CHALLENGES OF THE APPLICATION OF THE FRAMEWORK OF REFERENCE FOR INTERCULTURAL COMMUNICATIVE COMPETENCE BY PRE- SERVICE TEACHERS OF ENGLISH AS A FOREIGN LANGUAGE X. Liashuk	4865
<b>STEREOTYPES, VIDEOGAMES AND AWARE PLAYERS IN HIGHER EDUCATION</b> <i>M. Ranieri, C. Gaggioli</i>	4873
LEARNING TO TAKE THE NEXT STEP: KNOWLEDGE ACQUISITION OF ORTHOGRAPHIC PATTERNS IN SERIOUS GAMES WITH IMMEDIATE FEEDBACK K. Berkling, H. Kermes	4883
<b>NOVEL RESOURCES FOR TEACHING CLINICAL VETERINARY PARASITOLOGY:</b> <b>FRAMEWORK AND PILOT EXPERIENCE</b> <i>A. Peña-Fernández, L. Acosta, D. Ollero, A. Montoya, A. Magnet, G. Miró</i>	4892
CURRENT PROBLEMS OF INTERNATIONAL COOPERATION IN HIGHER PROFESSIONAL EDUCATION I. Baranova, M. Dotsenko, IU. Kakhovskaia	4900
HOW A NEW LEARNING MODULE SUPPORTS A COMPREHENSIVE LEARNING WITH RESPECT TO FILM PRODUCTION AND COMPETENCIES OF THE FUTURE I. Schuenemann, J. Kirch, S. Siehl	4906
<b>USE OF A PBL-APPROACH TO DEVELOP AND TO ASSESS GENERIC COMPETENCES</b> <b>IN A MASTER'S DEGREE IN MECHANICAL ENGINEERING</b> J. Carballeira, M. Tur, A.J. Besa, J. Albelda, J.E. Tarancón, J. Martínez-Casas, F.D. Denia, J.J. Ródenas	4913
A TEACHING METHOD OF DEAF-MUTE BASED ON ARTIFICIAL INTELLIGENCE W. Wang, H. Yang	4917

<b>DEVELOPING A SMARTPHONE APP FOR LEARNING PARASITOLOGY</b> A. Peña-Fernández, S. Fenoy, J. Simons, C. Del Aguila, J. Shell, M.D. Evans, L. Acosta	4924
BUILDING A COMPLEMENTARY TEACHING MATERIAL FOR VIRTUAL LEARNING OF INTRODUCTORY CONCEPTS IN MANDATORY COURSES IN A CHEMICAL SCIENCE AND TECHNOLOGY MASTER'S DEGREE E. Palacio, B. Isern, M. Miró, J.G. March, J.M. Estela, L. Ferrer	4930
A LEARNING ACTIVITY DESIGNED FOR A LARGE GROUP OF STUDENTS IN A MECHANICAL ENGINEERING SUBJECT USING PEER-ASSESSMENT TO ENCOURAGE DEEPER LEARNING J.L. Suñer, J. Carballeira	4931
<b>USE OF A DIGITAL GAME IN THE CLASSROOM TO TEACH MATHEMATICS. A CASE</b> <b>STUDY</b> <i>P. Gonçalves, P. Catarino, A. Soares</i>	4936
THE ABILITY OF SOLVING NON-STANDARD TASKS AND PROBLEMS AMONG THE CZECH MATHEMATICS TEACHING STUDENTS M. Škultéty, J. Hodaňová	4945
<b>THE USE OF FACEBOOK AS AN ASSET IN HIGHER EDUCATIONAL SYSTEM</b> <i>R. Serôdio, A. Virtudes, I. Inácio, V. Cavaleiro</i>	4951
PEDAGOGICAL-DIDACTIC AND HYGIENIC FACTORS INFLUENCING THE REALIZATION OF THE EDUCATIONAL PROCESS J. Depešová, I. Tureková, V. Tomková	4960
ANALYSIS OF STRATEGIES FOR TEACHING METHODS OF ADJUSTING CURVES AND INTERPOLATIONS E. Cruz, A. Soares, P. Catarino	4967
ICT RESOURCES IN EDUCATION AND THEIR IMPACT ON CLASSROOM CLIMATE J. Depešová, M. Šebo, P. Migo	4975
IMPORTANCE OF INTERNSHIPS IN BUSINESS HIGHER EDUCATION: AN ORDERED PROBIT MODEL APPROACH D. Magueta, C. Veloso, S. Estrela, M. Felício	4983
EDUCATIONAL ACTIVITY PROPOSAL FOR THE DEVELOPMENT OF EMPATHY IN BEGINNER STUDENTS OF COMPUTER SCIENCE A. Aguelo, C. Sanz, T. Coma, S. Baldassarri, P. Álvarez	4989
<b>TEACHING AND LEARNING CREATIVITY: AUGMENTED REALITY STORYTELLING</b> <b>IN THE MULTIDISCIPLINARY CLASSROOM</b> <i>E. Polyak, T. Berreth, P. Fitzgerald</i>	4996
METHODOLOGY: A WAY TO DIFFERENTIATE SIGNIFICANT FROM INTUITIVE RESPONSES A. Coelho, J. Costa, F. Pedro, L. Francisco, J. Simões, O. Martins	5003
DIDACTICS AND RESEARCH IN DESIGN DURING EMERGENCIES: HOW THE EMERGENCY STATE HAS MODIFIED – AND WILL MODIFY – THE TOOLS FOR TEACHING AND RESEARCH IN DESIGN <i>R. Angari, G. Pontillo</i>	5009
MY CLASSROOM IS A PALEONTOLOGICAL SITE: A TEACHING-LEARNING RESOURCE OF VIRTUAL REALITY C. Castillo Ruiz, A. Mesa Jaubert, A.M. Navas Simon, I. Sánchez Berriel, M. Afonso-González	5018
<b>THE ROLE OF DISTANCE EDUCATION IN PROMOTING THE</b> <b>INTERNATIONALIZATION OF HIGHER EDUCATION</b> <i>K. Graziela Weber Machado, F. Sereno Soso, A. Justin Cerveira Kampff</i>	5019
<b>TEACH-OUTS: A FRAMEWORK FOR PUBLIC ENGAGEMENT IN ONLINE LEARNING</b> B. Morse, M. Maher	5027
RETHINKING TEACHING: 3 WAYS TO IMPROVE FACULTY CULTURE + STUDENT LEARNING K. Adjout, T. Marsh, N. Caruso	5036
METHODOLOGY DEVELOPMENT IN ADULT LEARNING RESEARCH. COMBINING PHYSIOLOGICAL REACTIONS AND LEARNING EXPERIENCES IN SIMULATION- BASED LEARNING ENVIRONMENTS	5037
M. Silvennoinen, M. Vesisenaho, M. Manu, T. Kullberg, A. Malinen, T. Parviainen	F0.47
SCHOLAR DESERTION, A STUDENTS AND PARENTS' PERSPECTIVE ANALYSIS USING VISUAL LEARNING ANALYTICS J. Figueroa, L. Sánchez-Guerrero, G. González-Beltrán, S. González-Brambila	5047

SHOWING AND ANALYZING THE TIME NEEDED FOR ENGINEERING STUDENTS IN ORDER TO FINISH DIFFERENT COURSES' GROUPS OF A STUDY PROGRAM IN AN INSTITUTE FOR HIGHER EDUCATION J. Figueroa, L. Sánchez-Guerrero, B. González-Beltrán, S. González-Brambila	5055
ENHANCING STUDENTS LEARNING BY A DATA SCIENCE COURSE COMPONENT E. Braynova	5062
INTERDISCIPLINARY PROJECT IN HIGHER EDUCATION: WHY NOT? A CASE STUDY OF A MARKETING DEGREE I. Machado, C. Neves, A. Vieira, T. Aragonez, M. Ferreira, P. Santos, S. Caniço	5065
THE COMMUNICATION OF EMOTIONS AND CONVERSATIONAL SENSITIVITY OF THE MOTHERS OF CHILDREN WITH COCHLEAR IMPLANT R. Concha, C. Serrano, N. Silvestre	5073
<b>DEVELOPING A COOPERATIVE PLATFORM FOR RESEARCHING THE USE OF</b> <b>VIDEO-BASED LEARNING UNITS IN UNIVERSITY-BASED TEACHER EDUCATION</b> <i>T. Gattinger, P. Sacher, D. Weiß, D. Schiffner</i>	5080
<b>UNIVERSITY NETWORKING COOPERATION IN RELATION TO ONLINE TEACHING</b> <i>I. Balandina, L. Yuzdova, T. Moskvitina, K. Zvyagin, E. Vertyakova</i>	5090
<b>RESULTS OF DIFFERENT METHODOLOGIES IN THE TEACHING OF</b> <b>OCCUPATIONAL RISK PREVENTION FOR ADULTS IN VOCATIONAL TRAINING</b> <i>P. de Dato, Y. Hernández Navarro</i>	5096
CHALLENGE DRIVEN EDUCATION IN USING EMERGING TECHNOLOGY TO NARROW THE GAP BETWEEN THE AGEING POPULATION AND HEALTH CAREGIVERS	5104
A. Kelati, H. Maziku, J. Plosila, N. Mvungi, H. Tenhunen	
SOCIAL MAKERSPACE: CONSTRUCTIONIST APPROACH TO EDUCATION A.C. Vidaña, E. Momox	5114
PROMOTING THE PHOTOVOLTAIC DEVELOPMENT IN THE UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU) BY THE APPLICATION OF REAL PROBLEMS AND SELF-LEARNING PROBLEMS SOLVING I. Martinez-de-Alegria, A. Campos, R.M. Lago, E. Villamor	5121
<b>PROBLEMS BY LEVEL OF DIFFICULTY AND THEIR USE IN MATHEMATICS TESTS</b> J. Laitochová, M. Uhlířová, K. Pastor	5127
<b>TRANSFERABLE SKILLS FOR PHD GRADUATES</b> G. Barandika, I. Astorkiza, O. González, E. Portillo, E. Simon	5134
<b>TEAM SUPERVISION OF THE DOCTORAL THESIS IN THE FIELD OF SCIENCES AT</b> <b>THE UNIVERSITY OF THE BASQUE COUNTRY</b> <i>G. Barandika</i>	5142
<b>ESPAI OBERT. MULTIDISCIPLINARY COOPERATIVE LEARNING EXPERIENCE</b> Y. Hernández Navarro, P. de Dato, M.C. Esteve Sendra, M.F. Puerta Gómez	5149
GRAPHICAL LITERACY OF STUDENTS AT THE END OF THE 1ST SEMESTER OF MEDICINE STUDY (DETAILED ANALYSIS OF PROBLEM SOLVING TASK FROM TEST FOCUSED ON DETECTION PHYSICS LITERACY OF STUDENTS) Z. Balázsiová	5157
IMPROVING MEMORY AND LEARNING SKILLS IN STUDENTS M.P. García Pardo	5161
LIFELONG PROFESSIONAL LEARNING – A REQUIRED INSTRUMENT FOR BUILDING A MODERN SUCCESSFUL CAREER R. Vasileva, N. Kostova	5162
<b>EXPLORING INNOVATIVE WAYS TO COUNTERACT SOCIAL INEQUALITIES</b> A.A. Collado, S. Fachelli, N. Vergés Bosch, P. López-Roldán, L. Freude	5172
INTEGRATING SERVICE-LEARNING IN LANDSCAPE DESIGN EDUCATION: EXPLORING HANDS-ON PROBLEM SOLVING SKILLS, CONFIDENCE BUILDING, AND ETHICAL AND ENVIRONMENTAL RESPONSIBILITY AND PROFESSIONALISM J. Sherk, D. Bretzman, L. Ivy	5173
DIFFERENT VOICES, A SIMILAR EXPERIENCE? TALES OF INTERNATIONAL SUPERVISION LINKING ACADEMIA AND NON GOVERNMENTAL ORGANIZATIONS (NGOS) B. Lopes, S. Diogo	5174

INTEGRATING CAMPUS PARTNERS TOWARDS EQUITABLE OPEN EDUCATIONAL RESOURCES ADOPTION: A CASE STUDY OF A CALIFORNIA STATE UNIVERSITY AFFORDABLE LEARNING SOLUTIONS PROGRAM AT HUMBOLDT STATE UNIVERSITY K. Morgan, K. Stelter, M. Barker	5181
<b>TECHNOLOGY ENHANCED ASSESSMENT AS A TOOL OF SELECTION OF</b> <b>INTERNATIONAL STUDENTS IN HIGHER EDUCATION INSTITUTIONS</b> <i>C. Ugalde, C. Palacios, A. Zaporozhchenko</i>	5188
QUALITATIVE EVALUATION OF PERSPECTIVES ON EFFECTIVENESS OF USE OF DIGITAL AND SOCIAL MEDIA IN EDUCATION K. Alhumaid, K. Ayoubi	5196
<b>BE SAFE AND ESCAPE THE LAB: A LEARNING EXPERIENCE FOCUSED ON</b> <b>LABORATORY SAFETY RULES AND HAZARDOUS WASTE MANAGEMENT</b> N. Rojo, J. Gutierrez, A. Santaolalla, E. Sáez de Cámara, D. Encinas, Z. Gómez-de-Balugera	5197
GENDER-DIFFERENCES IN UNIVERSITY STUDENTS' SELF-REGULATION AND PROCRASTINATION: THE ROLE OF PHYSICAL ACTIVITY AND ITS CHARACTERISTICS R. Valenzuela, N. Codina, J.V. Pestana	5206
FROM UNIVERSITY TO HIGHSCHOOL: SOCIOLOGY AND PHARMACY STUDENTS ACQUIRE CONTENTS AND COMPETENCES GIVING A WORKSHOP ON DRUGS IN HIGHSCHOOLS L. Freude, A.A. Collado, N. Vergés Bosch, C. Camps Calvet	5212
TO WHICH EXTENT CAN WE USE AUGMENTED REALITY IN MATH LEARNING? A SURVEY ON THE POTENTIALS AND LIMITATIONS OF UTILIZING AR IN HIGH- SCHOOL MATH LECTURES IN IRAN H. Fathi, H. Abu Rasheed, M. Fathi, M. Lohrey	5213
BEST PRACTICES IN PROBLEM-ORIENTED SOFT CLIL APPROACH FOR LOTE PROJECT ERASMUS+ 2018-1-SK01-KA201-046316 M. Hornacek Banasova	5223
<b>PSYCHOLOGICAL SAFETY OF STUDENTS IN SOCIAL NETWORKS: THE SEARCH</b> <b>FOR DANGEROUS CONTENT AND IDENTIFYING ITS CONSUMERS</b> A. Feshchenko, V. Matsuta, J. Mundrievskaya, A. Peshkovskaya, V. Goiko	5228
FIRST-YEAR UNIVERSITY STUDENTS LEARNING BACKGROUND: AN INTERREGIONAL STUDY OF THE IMPORTANCE AND RELEVANCE OF ACADEMIC CHOICES M. Des, A.S. Ribeiro, M. DeCastro, M.C. Sousa, A.J.C. Crespo, J.M. Domínguez, J.M. Dias, M. Gómez-Gesteira	5239
AXIOLOGICAL COMPONENT OF THE BEHAVIOR MODEL OF MODERN STUDENTS IN HIGHER EDUCATION T. Rezer	5244
INTELLIGENT LEARNING MANAGEMENT SYSTEMS FOR AUTOMATED CURRICULUM PERSONALIZATION: INITIAL NEGATIVE STUDENTS' PERCEPTIONS (PILOT STUDY) J.V. Pinar, M.P. Lisbona, G. Liste	5249
INFORMATION AND COMMUNICATION TECHNOLOGIES ENABLE THE INTRODUCTION OF NEW FORMS OF INDEPENDENT WORK WHILE STUDYING FOREIGN LANGUAGES O. Mozgovaya, A. Egorova, T. Egorova	5255
VIRTUAL INFORMATION EDUCATIONAL ENVIRONMENT FOR INTERNATIONAL STUDENTS AS A RESOURCE FACILITATING THEIR ACADEMIC ADAPTATION A. Egorova	5260
<b>EXPOSURE TO VOCABULARY TRANSLATION: ITS IMPLICATIONS ON</b> <b>VOCABULARY ACQUISITION</b> <i>C. Palacios, C. Pérez-Guillot</i>	5264
DEVELOPMENT OF SOCIAL AND VALUE ORIENTATIONS OF HIGHER SCHOOL STUDENTS T. Rezer	5271
EFFECTIVE STRATEGIES TO TEACH ONLINE APPLIED LINGUISTICS COURSES ON CLIL USING OPEN EDUCATIONAL RESOURCES IN HIGHER EDUCATION: A CASE STUDY G. Carloni	5275
<b>30,000 DEGREES OF COLLEGE MINDEDNESS: FAMILY MESSAGES ABOUT COLLEGE</b> <i>N. Ditunnariello</i>	5281

<b>TECH UPSKILLING IN CHINA AMIDST THE OUTBREAK OF COVID-19</b> D. Krygier, L. Knowles	5282
<b>DESIGN EDUCATION SCENARIOS FOR TERRITORIAL IDENTITIES DEVELOPMENT</b> J. Alarcón Castro, A. Llorens Vargas, J. Brañes Alarcón	5283
THE USE OF CORPORA IN ENGLISH LANGUAGE TEACHING J. Bérešová	5288
DATA AND NETWORKS APPLIED TO FASHION: A NEW SYSTEMIC APPROACH FOR FACING INDUSTRY'S COMPLEXITY A. Vandi	5293
ENTREPRENEURSHIP AND DESIGN RELATED EDUCATION: NAVIGATING AN UNCERTAIN SCENARIO J. Alarcón Castro, A. Llorens Vargas, J. Brañes Alarcón	5301
<b>PROTOTYPING AS A LEARNING TOOL IN ARCHITECTURAL DESIGN</b> F. Soriano-Peláez, S. Colmenares-Vilata, E. Gil-Lopesino, E. Castillo-Vinuesa, M. De Barba	5308
FROM INSTRUCTIONAL SYSTEMS TO INTERACTIONAL ENVIRONMENTS: AN INTRA/INTER CATHEDRA SEMINARY FOR THE TEACHING OF MATHEMATICAL ANALYSIS I IN ENGINEERING CAREERS M. Dádamo, S. Hernandez	5319
DIGITAL COMPETENCES OF UNIVERSITY EDUCATORS IN MODERN WORLD P. Pekker	5327
E-TUTORING AS AN OPPORTUNITY FOR TEACHERS' FURTHER EDUCATION S. Barnová, S. Krásna, G. Gabrhelová, S. Čepelová	5333
A NOVEL ICT TOOL TO PREVENT BULLYING IN SCHOOLS C. González, J.M. Alberola, V. Sánchez-Anguix, G. Monfort, S. Molines, M.D. Soto, S. Díaz	5338
EFFECTS OF PEER-TO-PEER LEARNING ON INDIVIDUAL CLASSROOM PERFORMANCE AND EVALUATION UNDER TEAM SETTINGS A. Caprile, A. Farías	5345
<b>USE OF WEB APPLICATIONS TO MANAGE AND PLAN A PHD THESIS</b> <i>T. Boronat, V. Fombuena, J. Ivorra-Martinez, S. Rojas-Lema, R. Balart</i>	5350
I WROTE IT! - SELF- PLAGIARISM IN THE ACADEMIA N. Bessa Vilela, J. Caramelo Gomes	5355
<b>PEER-TO-PEER LEARNING AS A GENERATOR OF NEW PROACTIVE PRACTICES FOR</b> <b>STUDENTS ENGAGEMENT</b> <i>P. Bolzan, A. Ascani, D. Minighin, M. Ventrella</i>	5361
THE USE OF FACEBOOK IN THE TEACHING / LEARNING PROCESS AND ITS INFLUENCE ON ACADEMIC PERFORMANCE V. Pereira, E. Oliveira	5369
ACTIONS FOR THE CONTEXTUALIZATION AND DEVELOPMENT OF PROFESSIONAL COMPETENCES M.C. Mayorga-Toledano, A. Fernández-Morales, R. Moreno-Ruiz	5379
GEOBOARD AS A NON-TRADITIONAL LEARNING ENVIRONMENT FOR BUILDING GEOMETRIC CONCEPTS IN ELEMENTARY SCHOOL M. Uhlířová, J. Laitochová	5386
<b>STUDY OF EXPECTATIONS, LEARNING ABILITY AND SATISFACTION THROUGH</b> <b>THE ERASMUS + PROGRAM</b> <i>V. Mangas Sanjuan, I. Usach, M. Garcia-Cremades</i>	5394
<b>INCREASING EMPLOYABILITY IN AIR TRANSPORT THROUGH NEW</b> <b>INTERDISCIPLINARY QUALIFICATIONS</b> <i>S.E. Zaharia, A.P. Pavel, C.V. Pietreanu</i>	5398
MULTIDISCIPLINARY COLLABORATIVE PROJECTS FOR A MORE COORDINATED ACTUARIAL EDUCATION A. Fernández-Morales, E. Trigo-Martínez, O. Gómez Pérez-Cacho	5409
EDUCATIONAL EXPERIENCE BASED ON INVERSE ENGINEERING TO EXPLAIN THE EMBRITTLEMENT OF MATERIALS. METHOD BASED ON REAL CASE STUDIES E. Rayon, L. Quiles-Carrillo, S. Torres-Giner, D. Lascano, T. Boronat	5415
<b>DEVELOPMENT OF AN OPEN SOURCE PLATFORMS FOR IMPROVING THE</b> <b>LEARNING PROCESS IN PHARMACY</b> V. Mangas Sanjuan, M. Garcia-Cremades, I. Usach, A. Nacher, V. Merino-Sanjuan, M. Merino- Sanjuan, R. Talens	5422
<b>IS THIS BLENDED-LEARNING, OR ANOTHER THING?</b> H. Belchior-Rocha, R. Mauritti, J. Paiva Monteiro, L. Carneiro	5428

EXPERIENCES GAINED FROM TEACHING SPATIAL GEOMETRY WITH 3D COMPUTER MODELING P. Surynkova	5435
LEARNING AUTONOMY AND ADVANCING OF ENGLISH LISTENING SKILLS WITH BBC VIDEO CLIPS M. Zakharova	5444
<b>LEARNING FACTORS IN THE ACADEMIC GOALS OF STUDENTS OF TWO</b> <b>SECONDARY SCHOOLS IN TABASCO, MEXICO</b> S.G. Gomez Jimenez, A.C. Lizardo Perez, R. Rodriguez Bastarmerito, M.C. Villanueva Guevara, C.J.	5450
Morton Montemayor, J.A. Gomez Jimenez <b>TEACHING WITH GEOGEBRA VERSUS TRADITIONAL METHOD</b> L. Kontrová, D. Šusteková	5459
A METHODOLOGY FOR SOFT-SKILLS IMPROVEMENT VIA GAME DEVELOPMENT INTENSIVE PROJECT K. Podlaski, P. Milczarski, A. Hłobaż, J.C. Monteiro, D. O'Reilly, J. Hautamaki, H. Bollaert, P. Possemiers, N. Neves	5467
VIRTUAL LEARNING ENVIRONMENT: AN OPTIMAL TOOL FOR LANGUAGE TEACHER TRAINING INTERNSHIP. THE VIR-TEACH PROJECT AS A CASE STUDY F. Catarino, P. Ferreira, C. López-Nozal, M.A. Barros-Del Rio	5475
FORMATION OF META-COGNITIVE LEARNING STRATEGIES THROUGH MIND MAPPING L. Kontrová	5476
USING MIND-MAP TECHNOLOGY FOR ESP TRAINING: CASE STUDY OF ECOLOGY STUDENTS K. Ulanova, N. Valeeva, M. Rudneva, YU. Zakirova, E. Pavlova	5482
CHALLENGES OF ACQUIRING PROFESSION FOR NON-NATIVE MEDICAL STUDENTS T. Dilaverova, L. Akhvlediani, N. Mazmishvili	5487
<b>OVERVIEW ON VISUALLY IMPAIRED GAMERS AND GAME ACCESSIBILITY</b> A. Prazaru, O. Balan, A. Moldoveanu, F. Moldoveanu, A. Morar, S. Ivascu	5491
SOCIAL AND CULTURAL INTEGRATION OF IMMIGRANTS-EXPERIENCES IN ROMANIA D. Mara	5502
<b>THE DESIGN PRINCIPLES OF A GAME FOR TREATING FEAR OF PUBLIC SPEAKING</b> <i>A. Moldoveanu, C. Langrand, O. Balan, A. Morar, I. Mocanu, F. Moldoveanu</i>	5506
MINDFULNESS IN THE CLASSROOM: A TOOL TO INCREASE SELF-AWARENESS AND STUDENT PERFORMANCE M. Rodríguez-García, M. Guijarro-García, A. Carrilero-Castillo	5512
<b>ORAL COMMUNICATION AND TEAMWORK SKILLS FOR ENGINEERING</b> <b>STUDENTS. APPLICATION TO SUBJECTS OF THERMAL SYSTEMS</b> <i>S. Usón, I. Zabalza, B. Peña, J. Uche, E.M. Llera, B. Zalba, L.M. Romeo, M. Miana, I. Álvarez</i>	5518
SCHOOL-BASED DISCRIMINATION - BULLYING, IN THE EYES OF ALL I. Vilela, N. Bessa Vilela	5524
DIGITALIZATION OF ENGLISH LANGUAGE TRAINING AT TERTIARY LEVEL M. Zakharova	5525
ANALYSIS OF CO-EVALUATION OF ORAL PRESENTATIONS IN A MASTER SUBJECT ON THERMAL ENGINEERING S. Usón, J. Uche, I. Zabalza	5529
ANALYZING STUDENT BEHAVIOR IN MOOCS USING BIG DATA AND LEARNING ANALYTICS FOR TEXT ANALYSIS M. de Oliveira Santos, A. Messias da Costa Souza, C. Fernando de Araújo Junior, A. Domingues Freitas	5536
<b>STAKEHOLDERS' INVOLVEMENT IN PARTICIPATORY DESIGN APPROACHES OF</b> <b>LEARNING ENVIRONMENTS: A SYSTEMATIC REVIEW OF THE LITERATURE</b> <i>D. Pnevmatikos, P. Christodoulou, N. Fachantidis</i>	5543
<b>THE DEVELOPMENT OF STUDENTS' SELF-REGULATION METHODS OF</b> <b>EMOTIONAL STATES</b> <i>V. Kazarenkov, G. Kameneva, T. Kazarenkova, M. Rushina, T. Bui Thi Le</i>	5553
AN OPEN SOURCE TRAINING MANAGEMENT SYSTEM TO SUPPORT THE PERSONAL PHYSICAL AND MENTAL TRAINING A. Stamatakis, A.M. Trampas, V. Kontoulis, A.K. Barianos, A. Papadakis, N. Vidakis	5558

BUILDING ROBOTS AND LINGUISTIC CONFIDENCE: INTEGRATING INFORMATIONAL TEXTS AND MULTIMODAL LITERACY TOOLS IN AN AFTERSCHOOL FIRST LEGO LEAGUE ROBOTICS PROGRAM R. Salas	5567
GAMIFIED FLIPPED CLASSROOM AND ITS EVALUATION: BENEFITS OF THE ESCAPE ROOM METHOD M. Orero-Blat, V. Simón-Moya, J. Sendra	5568
<b>EVALUATION OF THE UJAT ARCHITECTURE DESIGN WORKSHOP THROUGH</b> <b>LEARNING STYLE APPROACH</b> <i>A.C. Lizardo Perez, S.G. Gomez Jimenez, F. J. Martínez Romero, F. Rodriguez Cordova, C.J. Morton</i> <i>Montemayor</i>	5576
THE TEACHER EDUCATOR AS ROLE MODEL FOR THE USE OF TECHNOLOGY FOR TEACHING AND LEARNING IN PRE-SERVICE EDUCATION: WHAT DO THEY DO AND WHAT DO THEY NEED TO LEARN? D. Uerz, M. Kral	5581
<b>2030 AGENDA IN AVIATION EDUCATION</b> <i>A.P. Pavel, S.E. Zaharia, C.V. Pietreanu</i>	5582
<b>GENDER RELATED EFFECTIVENESS OF IN-VITRO TRAINING IN CARDIAC PACING</b> <b>- RESULTS OF A CONTROLLED TRIAL</b> <i>T. Haber, C. Brenner, J. Melichercik, E.M. Bitzer, B. Ismer</i>	5592
<b>ENTREPRENEURSHIP AS A CAREER OPPORTUNITY FOR STUDENT RECRUITMENT.</b> <b>ARE THE DIFFERENT FORMS OF PARTICIPATION SUFFICIENTLY KNOWN?</b> <i>A.B. Alonso-Conde, J. Rojo-Suárez, S. Rentas</i>	5600
<b>"DIABETES E-CARE" - MOBILE APPLICATION PROTOTYPE FOR SELF-CARE</b> N. Tachikawa, I. Kowalski, G. Guerra	5607
<b>LEARNING A PERSON-CENTERED APPROACH FOR PROJECT MANAGEMENT IN</b> <b>COMPUTER SCIENCE AND ENGINEERING</b> <i>O. Peñalba, J.M. Mohedano</i>	5612
<b>DESIGN OF DIDACTIC ACTIVITIES BASED ON CRITICAL THINKING</b> <i>E. Prieto Larios, L. Enriquez Vazquez, G. De la Cruz Martínez</i>	5617
THE INTEGRATION OF ALTERNATIVE INVESTMENTS IN A SPECIAL PURPOSE VEHICLE CAPABLE TO SUPPLY THE EMERGENCY FUNDING IN EXTREME RISK EVENTS- THE CASE OF COVID -19 IN EMERGING MARKETS M. Boscoianu, C. Ceocea	5623
BUILDING THE NEW MILLENNIUM SKILLS FOR PROJECT MANAGEMENT IN HIGHER EDUCATION: HOW VIRTUAL WORLDS CAN HELP TEACHERS AND STUDENTS? M. Gadille, V. Caraguel	5628
A NEW APPROACH TO DIGITALISATION IN EDUCATION FOR THE DEVELOPMENT OF YOUNG TALENTS P. Petrova, V. Jotsov, G. Dimitrov	5637
<b>PECULIARITIES OF RETRAINING THE ELDERLY IN THE FRAMEWORK OF</b> <b>PROFESSIONAL RESOCIALISATION: REGIONAL ASPECT</b> <i>G. Bannykh, S. Kostina, T. Kasyanova, L. Voronina</i>	5644
COMMUNICATION DESIGN AS A CREATIVE TOOL. HOW GRAPHIC SOFTWARE COULD SUPPORT THE CREATIVE FASHION PROCESS V. Linfante	5652
<b>EXPERIMENTAL ONTOLOGY-BASED EDUCATIONAL RECOMMENDER SYSTEM TO</b> <b>SUPPORT KNOWLEDGE ACQUISITION</b> <i>L. Trifan, M.I. Dascălu, A. Malatov, I. Stănică, C. Mustață</i>	5659
<b>AN ONLINE TOOL FOR STUDENT DIGITAL COMPETENCES SELF-ASSESSMENT</b> <i>A.M. Sugliano, G. Carmeci</i>	5668
LEARNING ANALYTICS APPROACHES FOR BETTER EXPERIENCES IN E-LEARNING IN HIGHER EDUCATION K. Al-Dosakee, N. Cavus	5679
ADAPTATION DURING EDUCATIONAL MIGRATION AMONG CHINESE, AFRICAN AND LATIN AMERICAN STUDENTS IN RUSSIA T. Chkhikvadze, L.N. Griffith, B.J.M. Vianney	5687
CONFLICT MANAGEMENT METHODS FOR TEACHERS: THE CASE OF DEMOCRATIC DIALOGUE IN THE FLEMISH EDUCATIONAL LANDSCAPE M.S. Göregen, V. Van Raemdonck	5692

FEELING PRESENT: WHAT ELEMENTS DETERMINE THE FEELING OF PRESENCE IN A VIRTUAL ENVIRONMENT A.M. Sugliano, A. Saracchi	5703
USE OF VISUALIZATION TOOLS WHEN STUDYING SOME RUSSIAN VERBS OF POSITION IN SPACE BY FOREIGN STUDENTS O. Koutsoni, A. Keyko, N. Kurmaeva	5714
FORMATION OF COMPETENCIES FOR DIGITAL ECONOMY AT SCHOOL: EXPERIENCE OF RUSSIA G. Bannykh, S. Kostina, O. Novikova	5718
<b>EVALUATION OF OPEN-SOURCE SOFTWARE FOR DEVELOPING COMPETENCIES IN</b> <b>MATHEMATICS AND ENVIRONMENTAL EXPLORATION SUBJECT</b> <i>I.M. Radu</i>	5726
<b>THE RURAL TEACHER AS A PROSUMER: THE POSSIBILITIES OF MOBILE DEVICES</b> <i>J. Zambrano, V. Díaz, D. Montes</i>	5734
<b>EVALUATION OF DISTANCE LEARNING COURSES IN ECONOMICS IN THE</b> <b>CONTEXT OF CURRENT TRENDS</b> <i>M. Gonzalez Diaz, E. Zimbelmann, T. Rachfall</i>	5740
CONCEPT OF DEVELOPMENT OF SELECTED AREAS OF DIGITAL COMPETENCES IN SELECTED EDUCATIONAL FIELDS P. Vaňková, T. Jeřábek	5748
TRAINING THE TRAINERS CURRICULUM ON CO-CREATION OF VIRTUAL REALITY REUSABLE E-RESOURCES	5752
S.T. Konstantinidis, H. Wharrad, M.M. Nikolaidou, P. Antoniou, K. Neokleous, E. Schiza, M. Matsangidou, F. Frangoudis, M. Hatziaros, M. Avraamides, P.D. Bamidis, C.S. Pattichis	
PRODUCT SERVICE SYSTEM DESIGN TOUR: CO-CREATE A PILOT FIELD EDUCATION ACTIVITY IN DESIGN A. Taverna	5762
<b>STEM EDUCATION IN LITHUANIA: THEORETICAL INSIGHTS AND PRACTICAL</b> <b>IMPLEMENTATION</b> N. Cibulskaitė, A. Augustinovič	5769
<b>REDEFINING THE PERCEPTION OF MODULE EVALUATION QUESTIONNAIRES</b> (MEQS) IN ACADEMIA M. Tareen, J.R. de Oliveira Leo, D.M. Russell, O.I. Tokode	5780
THE PROGRAM OF EXTRACURRICULAR ACTIVITIES IN CHEMISTRY: "CHEMISTRY FOR CURIOUS SCHOOLCHILDREN" D. Isaev, A. Sobolev, M. Pak	5787
THE EXPERIENCE OF THE PUBLIC SPEAKING COMPONENT IMPLEMENTATION INTO THE CURRICULA OF THE FUTURE SPECIALISTS IN INTERNATIONAL LAW AND JOURNALISM BY THE EXAMPLE OF MONTHLY CONFERENCE LET'S TALK K. Tkachenok, K. Stepanyan	5798
<b>PROJECT-BASED LEARNING IN THE TEACHING OF SPATIAL REPRESENTATIONS</b> L.E. González Arevalo, E. Prieto Larios, G. De la Cruz Martínez	5804
INVESTIGATING HAPPINESS THROUGH COOPERATION: AN EVIDENCE OF NEW EXPERIENCES IN EDUCATION L.M. Cerdá Suárez	5811
THE IMPACT OF INTERNAL AUDITS ON AN INTERNAL QUALITY MANAGEMENT SYSTEM IN HIGHER EDUCATION IN PORTUGAL N. Jesus-Silva	5819
AUGMENTED REALITY IN HUMANITIES: TEACHING BOOK HISTORY IN THE DIGITAL AGE P. Mukanova	5820
SUPPORT TOOLS FOR VISUAL CREATION DURING ACADEMIC STUDIES A. Miluniec, I. Miciuła	5825
SLOVAK AS A FOREIGN LANGUAGE - TEACHING LANGUAGE THROUGH STORIES AND FAIRY TALES Z. Kovacova Svecova, D. Smalley	5832
SUCCESSFUL IMPLEMENTATION OF THE TRIPLE HELIX MODEL IN SPAIN E.C. Dittmar, D. López Jiménez	5837
RELATIONSHIP BETWEEN INTERNET ADDICTION, LIFE SATISFACTION AND ANXIETY IN PRE-SERVICE TEACHERS OF GENERATION Z J. Kvintová, S. Dobešová Cakirpaloglu, R. Hájková	5843

THE IMPACT OF DIGITAL COMMUNICATION ON PARENTS' ATTITUDES TOWARDS SCHOOL D. Švelec-Juričić, L. Luić	5850
AUGMENTED REALITY IN MATHEMATICS IN HIGH SCHOOL EDUCATION THROUGH SCIENTIFIC PRODUCTION E. García Albaladejo, A. Gilabert Cerdá, A. Lledó Carreres, G. Lorenzo Lledó, E. Pérez Vázquez, A. Lorenzo Lledó	5857
BUILDING MODELING WITH ARTIFICIAL INTELLIGENCE AND SPEECH RECOGNITION FOR LEARNING PURPOSE F. Alotto, I. Scidà, A. Osello	5866
SOCIO-EMOTIONAL WELL-BEING OF PUPILS IN THE COMPREHENSIVE SCHOOL SETTING S. Ušča, A. Vanaga, D. Iliško, J. Badjanova, S. Zariņa	5876
QUALITY CRITERIA FOR SERIOUS GAMES SHOWN ON MATHEMATICAL EDUCATION GAMES M. Schaub, K. Straßburg, R. Bruder, P. Caserman, S. Göbel, K. Hoffmann, P. Müller, E. Staub	5882
TEACHING-LEARNING PROCESS UNDER A MULTIDIRECTIONAL EFFICIENCY AND CANONICAL CORRELATION ANALYSIS K. Murillo, E. Rocha	5889
ENTREPRENEURSHIP-BASED LEARNING: A NEW APPROACH TO ENTREPRENEURSHIP AS A LEARNING METHOD F. Cardoso Almeida, J. Pinheiro de Queiroz Neto	5899
ACQUISITION OF EFFECTIVE COMMUNICATION AND LANGUAGE SKILLS THROUGH PUBLIC SPEAKING: A CASE STUDY OF THE INTERNATIONAL JOURNALISM FACULTY K. Stepanyan, D. Milyukhina	5905
DIGITAL COMPETENCES AS CORE COMPETENCES FOR LIFELONG LEARNING J. Lasić Lazić, M. Milković, I.R. Žigo	5911
THE CASE FOR UPLIFT MODELLING IN HIGHER EDUCATION H. Abera, J. Loeckx	5916
GRAPHIC DIARY MOOC: DEVELOPING A SLOW AND LEARNING BY DOING APPROACH TO DRAWING THROUGH GRAPHIC DIARIES P. Ferreira, F. Catarino	5923
DEVELOPMENT OF MOTOR SKILLS BY CHILD DIAGNOSED WITH CEREBRAL PALSY FROM THE PERSPECTIVE OF HELPING PROFESSIONS P. Pecharová	5924
<b>VR-BASED KNOWLEDGE PRESERVATION IN CHEMICAL PROCESS INDUSTRY</b> N. Mencke, M. Vondran, N. Vorhauer, E. Nicolas, E. Tsotsas	5928
SHARPENING LEARNING OUTCOMES IN MATHEMATICS WITH PEER ASSESSMENT AND HIGH-STAKE DELIVERABLES B. Magnusson	5936
DEVELOPMENT OF THE THEORETICAL MODEL OF CONTINUOUS METHODOLOGICAL TRAINING OF CHEMISTRY TEACHERS A. Sobolev, D. Isaev	5941
ADAPTIVE GAMIFICATION MODELS IN HIGHER EDUCATION: IS THERE A PLACE FOR SELF-REGULATED LEARNING? <i>M. Raleiras, J. Viana, F. Costa</i>	5949
PRELIMINARY USE OF KAHOOT AS AN INTERACTIVE TOOL FOR SELF- ASSESSMENT OF THEORETICAL CONCEPTS RELATED TO ANIMAL BREEDING B. Gutiérrez-Gil, A. Suárez-Vega, J.J. Arranz	5956
SCHOOLCHILDREN'S ORAL HEALTH OVERVIEW IN THE CITY OF MADRID L. Baquero, M. Piñeiro, M.J. Berasategui, M. Miegimolle, L. Velayos, M. Espí, A. Adanero	5957
21ST CENTURY EDUCATION TRENDS M. Cárachová	5965
KNOWLEDGE LEVEL OF UNIVERSITY STUDENTS ON LIFE AND HEALTH PROTECTION F. Lenko, R. Lenková, A. Veľas, Z. Zvaková	5966
<b>PROJECT GGULIVRR: GENERIC GAME FOR UBIQUITOUS LEARNING IN</b> <b>INTERACTIVE VIRTUAL AND REAL REALITIES</b> <i>H. Akerlund, G. Audemard, H. Bollaert, V. Hayenne-Cuvillon, A. Hlobaz, M. Kozlenko, P. Milczarski,</i>	5973
J.C. Monteiro, J. Morais, D. O'Reilly, P. Possemiers, Z. Stawska	

CHANGEMAKERS FOR THE FUTURE: SOCIAL INNOVATION COMPETENCES FOR A DIGITALIZED WORLD IN LATIN AMERICAN COUNTRIES A. Souza, M. Madaleno, M. Ferreira Dias, M. Amorim	5980
THE USE OF BOARD GAMES AND THEIR DEVELOPMENT PRINCIPLES: A CASE REVIEW P.N. Rito	5990
A GLANCE AT UNIVERSITY TRAINING PROGRAMMES FOR THE EMPLOYMENT OF YOUNG PEOPLE WITH INTELLECTUAL DISABILITIES S. Morales, J.L. Gomez	5995
<b>KNOWLEDGE STRUCTURING IN COMPUTER SCIENCE SUBJECTS</b> <i>P. Vaňková, T. Jeřábek, E. Battistová</i>	6003
GAME BASED LEARNING ON TRANSVERSAL SKILLS DEVELOPMENT: AN APPLIED STATE OF THE ART	6010
J. Reuter, M. Ferreira Dias, M. Madaleno, A. Amorim, A. Vitória OPPORTUNITIES OF E-LEARNING PLATFORMS IN HIGHER EDUCATION D. López Jiménez, E.C. Dittmar	6020
CORPORATE EDUCATION - ONE OF THE OPTIONS TO SUPPORT THE COMPANY'S COMPETITIVENESS M. Cárachová	6021
EUROPE IN MY PROFESSION AS ARCHITECT AND PLANNER: OPPORTUNITIES, IMPACTS AND CHALLENGES M. Tasheva-Petrova, V. Zlatinova-Pavlova	6028
ARCHITECTURE AND PLANNING GRADUATES IN EUROPE: FROM STUDENTS TO PRACTITIONERS IN THE CONTEXT OF INTERNATIONALIZATION AND NATIONAL REGULATIONS M. Tasheva-Petrova, V. Zlatinova-Pavlova	6038
LEARNING BY HUMANS, NOT BY ROBOTS: ARTIFICIAL INTELLIGENCE, PERSONALIZED LEARNING AND PUBLIC INTEREST G. Gantzias	6039
<b>LEARNING FLOW CONTROL STRUCTURES IN PROGRAMMING LANGUAGE USING</b> <b>EDUCATIONAL ROBOTICS</b> <i>S. Varandas, A. Soares, P. Catarino</i>	6040
PLAY: HUMAN ACTIVITY AND THE EDUCATIONAL TOOL OF THE SCHOOL	6050
<b>CONTEXT</b> <i>M. Santi, M.C. Aguirre, M.X. Aguirre, G. Carvalho, W. Silva, A. Bezerra, W. Costa, E. Costa, B. Silva, V. Lima</i>	
PACKAGING DESIGN: ORIGAMI BASED LEARNING A. Llorens Vargas, J. Alarcon Castro	6057
STUDY OF THE IMPACT OF DIGITAL LITERACY IN PRIMARY EDUCATION CONTEXTS: DIAGNOSIS AND EVALUATION A. Llorens Vargas, J. Alarcon Castro	6063
THE PERSISTENT LACK OF ACCESS TO TECHNOLOGICAL RESOURCES AND EDUCATION IN UNDERSERVED AFRICAN AMERICAN COMMUNITIES T. Clark, K. Anderson, N. Brown, H. Aubrey, T. Jordan, D. Hill-Eley, H. Swanson, E. Cameron	6071
INTERDISCIPLINARY MODELING TO INTRODUCE SYSTEMS DYNAMIC IN DISCRETE TIME STEPS AT THE FIRST LEVEL IN ENGINEERING EDUCATION E.A. Gago, P.A. Szekieta, N. de Brito	6079
MACHINE IDENTIFICATION OF COLLABORATION DIALOGUE ACTS IN TYPED- CHAT COLLABORATIVE PROBLEM-SOLVING M. Glass, J.H. Kim, J. Parham, J. Banks	6089
FREE AND OPEN SOURCE SOFTWARE AND DATA FOR GOOD AND BAD TIMES H. Grežo, R. Mišovičová, Z. Pucherová, F. Petrovič	6090
CHARACTERIZATION OF PROJECTS BASED ON THE FREE AND OPEN SOURCE SOFTWARE MODEL, BY AUTONOMIC ORGANIZATIONS OF PRIMARY AND SECONDARY PUBLIC EDUCATION IN SPAIN E. Astete-Martínez	6095
TAKING IRAT OUTSIDE THE CLASSROOM: USING AN INTERACTIVE BOOK TO MODIFY TEAM-BASED LEARNING IN A FIRST-YEAR PROGRAMMING COURSE C. Kesterson, J. Lai, M. Selim	6102

TEA CHINIC INFORMATION LITERACY CIVILLE BY BROFFEEDORE FROM MEVICO	(100
<b>TEACHING INFORMATION LITERACY SKILLS BY PROFESSORS FROM MEXICO</b> <b>AND CHILE</b> <i>G. De la Cruz Martínez, E. Prieto Larios, R. Castañeda Martínez, J. Ramírez Ortega, F. Gamboa</i>	6109
Rodriguez ACTIVE STRATEGY FOR TEACHING MIGRATION IN THE HIGH SCHOOL IN	6115
<b>MEXICO</b> <i>M.A. Padilla Cano, G. Escobedo Izquierdo, E. Prieto Larios, G. De la Cruz Martínez</i>	
MOTIVATE INTERIOR DESIGN STUDENTS TO CREATE INNOVATIVE TRADITIONAL EMIRATI DESIGN ELEMENTS (AJMAN UNIVERSITY) G. Elsayed Ali Elsamanoudy	6121
DEVELOPING SKILLS IN TEACHING UNIVERSITY MATHEMATICS IN ENGINEERING CAREERS E.A. Gago, A.E. Mascheroni, P.A. Szekieta	6129
PLAN CUGO FILL MALEONINI I AN OLIMINA PLANTING A SOFT SKILLS SEED IN A FIRST-YEAR INTRODUCTORY PROGRAMMING CLASS USING TEAM-BASED LEARNING J. Lai, C. Kesterson, M. Selim	6138
A COMPARATIVE ANALYSIS OF THE NEW COMPREHENSIVE ALLIANCES FUNDED UNDER THE EUROPEAN UNIVERSITIES INITIATIVE J. Sarupiciute, G. Druteikiene	6146
IMPLEMENTING UNIVERSITY'S SOCIAL MISSION THROUGH THE ANNIVERSARY PR CAMPAIGN J. Sarupiciute, G. Druteikiene	6153
<i>J. Surupictule, G. Druleiklene</i> <b>PROGRAMMING ASPECTS FOR NEXUS INTERIOR DESIGN LEARNING PROCESS</b> <i>N. Sami Abdelaziz</i>	6158
THE TROUBLE WITH ONLINE LEARNING? AN ILL OR CURE FOR EMPLOYERS FACED WITH A GLOBAL PANDEMIC S. McCotter	6166
ENGLISH MEDIUM INSTRUCTION AND THE POTENTIAL OF TRANSLANGUAGING PRACTICES IN HIGHER EDUCATION A. Dillon, G. Chell	6173
<b>WEB-BASED ROBOTICS REMOTE LAB</b> A. Ikhlef, B. Boukhezzar, N. Mansouri	6174
NEW TRENDS IN TRAINING AND EDUCATION OF SECURITY GUARDS IN SELECTED REGIONS Z. Zvaková, V. Šoltés, M. Boroš	6179
PROMOTING OF THE GEOSPATIAL METHODS: INTRODUCTION INTO INTERNATIONAL EDUCATIONAL COURSES ON ENVIRONMENTAL MANAGEMENT IN THE MIDDLE-EAST A. Mansourian, P. Pilesjo, M. Runnstrom, R. Groth, A. Gonçalves, A.P. Falcão, M. Kavouras, E. Tomai, E. Parseliunas, J. Sužiedelytė Visockienė, D. Popovas, R. Obuchovski, D. Slikas, J. Kozlovska, A. Buga, M. Prudham, J.F. Hangouët, A. Toomanian, N. Barati, H. Torabzadehkhorasani, M. Al-Shalabi, K. Khanbari, M. Almaliki, J. Othman	6186
<b>PRIORITIZATION OF USER EXPERIENCE ASPECTS FOR LEARNING ENVIRONMENTS</b> <i>M. Klingbeil, J. Renz, D. Bruechner</i>	6196
EDUCATION FOCUSED ON "CHEMICAL COMPOSITION OF WASTE AND ITS PROPER SORTING" E-LEARNING FOR PRIMARY SCHOOL PUPILS M. Feszterová, Z. Jenisová, M. Mišiaková	6206
FINNISH EDUCATION SYSTEM BASED IN LEARNING BY DOING AND ENTREPRENEURIAL SKILLS. COMPARISON WITH THE SPANISH CULTURE AND EDUCATION C. Ruiz-Viñals, E. Feliu	6214
<b>THE USE OF CONTEXTUAL LEARNING TO TEACH BIOCHEMISTRY IN THE DEGREE</b> <b>IN PHYSICAL ACTIVITY AND SPORT SCIENCES</b> <i>M. Cuadros, P. Sanchez, M.I. Rodríguez-Lara, V. Sanchez-Martín, L.J. Martínez Gonzalez, M.A.</i> <i>García-Chaves, M.J. Alvarez-Cubero</i>	6218
<b>A NEW WAY OF LEARNING BIOCHEMISTRY: CASE STUDY</b> P. Sanchez, M. Cuadros, V. Sánchez Martín, LJ. Martínez-González, MA. García-Chaves, MJ. Álvarez- Cubero, MI. Rodríguez-Lara	6223
I CAN'T GET NO SATISFACTION: THOUGHTS AND FEELINGS ABOUT ELEMENTARY SCHOOL D. Dias, R. Barroso	6227

WHAT STUDENTS WANT: PREFERENCES ABOUT SCHOOL AND EXTRACURRICULAR ACTIVITIES IN PRIMARY SCHOOL R. Barroso, D. Dias	6233
SCHOOL READINESS: ROLE OF SCHOOLS REVISITED BY PARENTS, TEACHERS AND PRINCIPALS D. Dias, R. Barroso	6241
THE JANUS FACES OF SUCCESS: SOCIAL AND PERSONAL TRAITS AS PREDICTORS OF STUDENTS' PERFORMANCE IN ELEMENTARY SCHOOL R. Barroso, D. Dias	6248
ESL ACQUISITION METHODS IN ADULT EDUCATION E. Antonova	6254
INTERNET RESOURCES IN TEACHING ESL AND CULTURE: OPPORTUNITIES AND CHALLENGES E. Antonova	6259
IMPACT OF TEAM WORK ASSIGNMENTS IN TEACHING BASIC IT COURSES A.B. Andreica	6266
<b>EVALUATING DIGITAL TEACHING MATERIAL</b> C. Bierschwale	6278
MOTIVATION AND LEARNING STRATEGIES FOR HIGHER EDUCATION - "PARLIAMENTARY DEBATE METHOD" C. Alexandrache	6279
SEXTING ETIOLOGY AND POSSIBILITIES FOR INTERVENTION THROUGH INSTRUMENTAL ENRICHMENT P. Jedlickova, K. Hollá, P. Seidler	6287
POSSIBILITIES AND STRATEGIES OF PROBLEM SOLVING IN SECONDARY SCHOOL MATHEMATICS TEACHING K. Antoš	6298
USING SCIENTIFIC RESEARCH METHOD OF TEACHING FOR IMPROVING PUPILS' RESULTS IN MATHEMATICS K. Antoš	6306
CONTROL AND EVALUATION IN TEACHING I. Szőköl	6313
THE QUALITATIVE TRANSFORMATION OF UNDERSTANDING THE ESSENCE OF THE EDUCATION PROCESS AND LEARNING I. Szőköl, M. Nagy	6319
WHY EDUCATION 4.0 IS NOT ENOUGH – EDUCATION FOR SUSTAINABLE FUTURE T. Konst, M. Scheinin	6326
ASSESSING THE LEVEL OF FINANCIAL LITERACY OF STUDENTS AT A SELECTED UNIVERSITY M. Beranová, M. Navrátilová	6331
SOCIAL CONTEXT OF CHILD READING IN ONTOGENETIC COMPARISON S. Babiakova, B. Kasáčová	6341
PREVIOUS EXPERIENCE AND PRECLINICAL PRACTICAL SKILLS OF FIRST YEAR STUDENTS OF ODONTOLOGY C. González Losada, V. Vera, C. Bravo- Llatas	6352
<b>DETECTING STUDENTS AT RISK USING MACHINE LEARNING</b> <i>O. Hall Jr.</i>	6360
WAYS OF TEACHING FUNCTIONAL PARTS OF SPEECH TO YOUNG LEARNERS A. Pushkina, L. Krivoshlykova	6361
ALIGNING COURSE ASSESSMENT METHODS TO PROGRAM ASSESSMENT STRATEGY IN HIGHER EDUCATION P. Pestovs, S. Zariņa, J. Badjanova, D. Iliško, L. Popova	6366
CONTINUOUS IMPROVEMENT OF THE INSTITUTIONAL REVIEW BOARD AT ONE COMPLETELY ONLINE UNIVERSITY: A TRANSFERABLE FRAMEWORK T. Lehan, H. Hussey	6373
THE STUDY OF THE CONSCIOUS AGGRESSION IN CHILDREN WITH SPEECH DISORDERS O. Bielova, O. Milevska, Y. Haletska, L. Lisova	6374
<b>DIGITAL DEXTERITY FOR THE FUTURE OF WORK</b> C.M. Montaudon-Tomas, I.N. Pinto-López, A.L. Yáñez-Moneda	6379

<b>NEW WAYS OF WORKING IN TIMES OF CRISIS IN HIGHER EDUCATION</b> C.M. Montaudon-Tomas, I.N. Pinto-López, A.L. Yáñez-Moneda	6388
<b>UNIVERSITY TEACHING IN THE DAYS OF COVID-19</b> F. Zuccoli, L. Teruggi	6397
PRINCIPAL COMPONENT ANALYSIS (PCA) FOR ASSESSING THE STUDENTS' PERCEPTION TOWARD THE USE OF KAHOOT! IN HIGHER EDUCATION J. Gallego, F. Gulisano, L.A. Sánchez, J.R. Marcobal	6404
<b>FROM THE LESSONS OF COVID-19, A WHOLE NEW WORLD IN EDUCATION?</b> D.N. Dominguez-Perez, N. Dominguez-Vergara	6412
TRANSFER OF TRAINING IN MIDDLE LEADER TEACHERS' PROFESSIONAL DEVELOPMENT FOR ICT INTEGRATION IN SCHOOLS K. Terashima, S. Itagaki	6422
AN INVESTIGATION ON THE EMERGING 'SOCIAL INNOVATION' TREND IN THE UNIVERSITIES: BEST PRACTICES FROM SOUTHEAST ASIA F. Abd Majid, W.N.E.H. Sharil	6427
SCHOLARSHIPS OF TEACHING & LEARNING AMIDST THE PREPARATION FOR INDUSTRY REVOLUTION 4.0: IMPLICATIONS FOR THE ACADEMICS' PROFESSIONAL DEVELOPMENT TRAINING NEEDS F. Abd Majid	6436
IMPLEMENTATION OF FABLABS IN THE MINES AND ENERGY ENGINEERING STUDIES	6446
F. Barrio-Parra, B. Biosca, C. Montalvo, L.A. Torres, M. Izquierdo-Díaz, D. Bolonio, F.J. Ortega, L.F. Mazadiego, L.J. Fernandez-Gutierrez del Alamo	
REDUCING INEQUALITIES IN MASTER DEGREE STUDENTS DUE TO SKEWED CURRICULA R. Roman, C. Alcaraz, R. Rios, J.E. Rubio, J. Lopez	6455
CHANGES IN THE ARGUMENTATION CHARACTERISTICS OF MATHEMATICALLY GIFTED STUDENTS – A LONGITUDINAL STUDY S. Jablonski, M. Ludwig	6464
DIDACTIC ACTIVITIES IN TEACHING OF GEOGRAPHY IN PRE-SCHOOL AND SCHOOL FACILITIES FOCUSED ON NATURE CONSERVATION L. Petrikovičová, L. Wittlinger	6473
AUGMENTED LEARNING: EFFECTS OF AUGMENTED REALITY SUPPORTED INSTRUCTION ON SPATIAL ABILITY X.R. Reit	6481
DIVERSE EXPERIENCES LEAD TO HIGHER CREATIVITY IN UNDERGRADUATE STUDENTS V. Tidikis, N. Dunbar	6486
<b>PRODUCTIVE TEACHING OF FUTURE PHYSICS AND MATHEMATICS TEACHERS IN</b> <b>A DIGITAL EDUCATIONAL ENVIRONMENT</b> <i>M. Dammer, E. Leonova, V. Kudinov</i>	6491
<b>UNDERGRADUATE STUDENTS' SELF-EFFICACY IN USING ENGLISH TO</b> <b>COMMUNICATE AS A SECOND LANGUAGE</b> J.C. Lee, A. S. Shminan, S. Bujang, M.H. Barawi, M. A/L. Rathakrishnan	6500
STEM LEARNING OF UNDERGRADUATE STUDENTS THROUGH PARTICIPATION IN OUT-OF-CURRICULUM OUTREACH PROJECT ACTIVITIES AND THEIR MOTIVATION M. Hasegawa	6509
HIDDEN LIFE OF FARMED ANIMALS – THE ROLE OF HIGHER EDUCATION AS A CHANGE MAKER T. Konst	6515
LEADERSHIP SKILLS, ATTITUDES AND PRACTICES AS A MECHANISM TO DEAL WITH CONFLICT OF INTEREST IN THE UNIVERSITY INFORMATION ENVIRONMENT H. Vasileva	6520
THE CONSIDERATIONS REGARDING THE PROJECTION OF THE ONLINE COURSE FOR TRAINING THE REMOTE PILOTS IN RPAS FIELD IN THE NATIONAL DEFENSE UNIVERSITY "CAROL I" L.R. Popescu	6524

ACTIVE LEARNING IN ENGINEERING EDUCATION: EXPERIENCES IN ASIA AND	6531
<b>EUROPE</b> H. Tsalapatas, C. Vaz de Carvalho, O. Heidmann, C. Taka, S.S. Salim, A. Abu Bakar, R.J. Yusof, T.R. Bajracharya, S.R. Shakya	
<b>DEVELOPMENT OF TEACHING SKILLS UTILIZING ICT BY IMPROVEMENT OF</b> <b>LESSON PLANS</b> <i>C. Yata, S. Itagaki, N. Yamaguchi</i>	6537
THE REPRESENTATION OF INTERCULTURAL ISSUES IN TAIWAN'S HIGH SCHOOL EFL TEXTBOOKS Y.C. Su	6547
INCORPORATING THE CULTURAL PORTFOLIO PROJECTS IN EFL COLLEGE CLASSES: THEORY AND PRACTICE Y.C. Su	6548
<b>PROGRAMMING FOR GIRLS: A GAME-BASED APPROACH THAT DEPLOYS DESIGN</b> <b>THINKING PRINCIPLES</b> <i>O. Heidmann, C. Katsimentes, S. Panagiotopoulos, H. Tsalapatas</i>	6549
RELEVANCE OF INDIGENOUS KNOWLEDGE INTEGRATION IN LIFE SCIENCES TEACHING: WHAT DO THE TEACHERS SAY? L. Mavuru, X.K. Makhunga	6556
CLASSIFYING EMPIRICAL STUDIES IN AN EDUCATIONAL CONTEXT THROUGH AN EXPERIMENTATION FRAMEWORK L. Alves, P. Ribeiro, R. Machado	6564
PREPARING COMPUTER SCIENCE STUDENTS FOR JOB INTERVIEWS WITH ENGLISH VIDEO PRODUCTION AND ANALYSIS: A RESEARCH MODEL D. Roy	6575
LEARNING ENTREPRENEURSHIP-FOCUSED INFORMATION DESIGN FOR SMART HOMES IN A PROJECT-BASED LANGUAGE LEARNING CLASSROOM D. Roy, P. Kudry, K. Naya	6585
TRANSFERRING METHODS AND RITUALS FROM SOFTWARE ENGINEER TO EVERYDAY EDUCATIONAL LIFE IN PANDEMIC SCENARIOS M. Ulm, H. Schwab, E. Krainz	6596
DESIGN AND IMPLEMENTATION OF A BILINGUAL PRACTICE MODEL TO IMPROVE THE ACQUISITION OF SPECIFIC STATISTICAL INFERENCE SKILLS A.M. Martínez-Rodríguez, A. Oya-Lechuga	6601
<b>INTERVIEWING MODEL TO ENHANCE PROCESS MODELLING EDUCATION</b> S. Candrlic, M. Pavlic, M. Asenbrener Katic	6605
INSTRUCTORS AND STUDENTS ON THE SAME PAGE: USABILITY OF INSTRUCTOR LOADED RESOURCES IN LMS SITES G. Torrisi-Steele, T. Atkinson	6614
PREDICTIVE RELATIONSHIPS BETWEEN THE SELF-ESTEEM AND LIFE SATISFACTION IN PERUVIAN ADOLESCENTS F.N. Real-Torres, I. Iraola-Real, K. Iraola-Real, W. Iraola-Real	6620
THE IMPACT OF DIGITAL MATHEMATICS ENRICHMENT CURRICULUM ON GIFTED FEMALE STUDENTS LEARNING N.S. Alhazzani	6625
BUILDING BRIDGES TO STEM CAREERS FOR MINORITY STUDENTS IN MINNESOTA A. Asojo, H. Vo	6637
DIGITAL TEACHING-LEARNING IN LAW M.J. Mimoso, M.R. Anjos	6642
E-LEARNING TOOL TO CREATE AND MANAGE A CIVIC E-CAMPAIGN R. Rădescu	6648
AUTOMATIC ADAPTIVE SYSTEM FOR FILTERING FAKE NEWS BY METHODS BASED ON ARTIFICIAL INTELLIGENCE USING MACHINE LEARNING R. Rădescu	6659
<b>EFFECTIVENESS OF THE EMOTIONAL AND SOCIAL CAPABILITIES APPROACH IN UNIVERSITY STUDENTS</b> J.J. Pérez-Barea, A. García-Jurado, D. Taskan	6668
SMARTPHONE CONTRIBUTION IN HIGHER EDUCATION: MEASURING SATISFACTION AND ATTENTION LEVEL E. Salmerón-Manzano, A. Alcayde García, A.J. Zapata, F. Manzano-Agugliaro	6669

<b>TELEGRAM CHAT AS A MOBILE TEACHING TOOL: EXPERIENCE IN THE COVID-19</b> <b>CRISIS</b> <i>E. Salmerón-Manzano, A. Alcayde García, A.J. Zapata, F. Manzano-Agugliaro</i>	6679
TEACHING VISUAL COMPUTING AS A POST-DOCTORAL AREA IN A SMALL UNIVERSITY C.S. Yang	6688
A PRELIMINARY STUDY OF FEASIBILITY OF IMPLEMENTING A VIRTUAL REALITY SYSTEM FOR BRAIN SCIENCE LEARNING COMMUNICATION T.S. Lin, S.S.C. Young	6697
<b>INCLUSIVE CLASSROOM ENVIRONMENT THAT ENHANCE LEARNING</b> <i>C. Ateh</i>	6706
CASE STUDY: EXPERIENCE IN ABRUPT TRANSITION TO ONLINE TEACHING DURING THE COVID-19 PANDEMIC C. Ateh, K. O'Connor, C. Rolon, B. McCadden	6707
<b>IMPACT OF INTERPROFESSIONAL EDUCATION ON STUDENTS' AND PATIENTS'</b> <b>UNDERSTANDING ON HEALTH LITERACY IN THE COMMUNITY</b> <i>V. Lee, J. Chau, P. Lai, S. Wong, W. Chan</i>	6708
REFUGEE YOUTH: NO HUMAN BEING IS ILLEGAL L. Kajee	6709
INVOLVING THE STUDENTS IN THE EUROPEAN PROJECTS THROUGH THE FOCUS GROUP DYNAMIC: THE CASE OF AIMED – AIMING TO EDUCATE BY PROMOTING THE ACADEMIC DIMENSION OF ERASMUS+ S. Trasobares, C.E. Castillo, J.M. Piñero-López, N. Gómez-Aguilar	6715
DEVELOPMENT OF TRANSVERSAL SKILLS IN UNIVERSITY STUDENTS THROUGH EDUCATIONAL ACCOMPANIMENT S. Muñoz, P. Crespí, M.F. Gambarini	6716
<b>TRADITIONAL DIMENSIONS AND INNOVATIVE PARAMETERS OF NON-FORMAL</b> <b>ADULT EDUCATION</b> V. Vassileva, D. Stoyanova	6721
UNIVERSITY-INDUSTRY COLLABORATION IN HIGHER EDUCATION – INDUSTRY VIEWS ON INVESTING IN INDUSTRIAL PHD STUDENTS A.K. Olsson, I. Bernhard	6726
<b>THE ROLE OF KEY COMPETENCES IN SCHOOL TEACHING</b> V. Vassileva, D. Stoyanova	6734
CONNECTING SPEECH-LANGUAGE PATHOLOGY GRADUATE STUDENTS TO THEIR FUTURE; TELEPRACTICE PEDAGOGY IN THE CLASSROOM L. Lenkey	6740
STRUCTURING EDUCATIONAL CONCEPTS FOR APPLIED STEM TEACHING M. Fojcik, M.K. Fojcik, B. Pollen, C.G. Helgesen, J.O.R. Mjånes	6741
<b>APPLYING STEM IN EMBEDDED SYSTEMS TEACHING SUPPORTED BY ARDUINO</b> M. Novak, J. Pech, J. Kalova, J. Bárta	6750
AN EXAMPLE OF SUCCESSFUL USE OF SIMULATIONS INTO CHEMICAL ENGINEERING CORE MATTERS C. Roman, M.A. Delgado, J. Ramírez, M. García-Morales	6757
<b>EDUCATIONAL JUSTICE</b> C. Hall, W. Walter, A. Livingston	6765
DESIGN PRINCIPLES OF COLLABORATIVE LEARNING SPACE CONNECTING TEACHERS AND REFUGEE CHILDREN - A DESIGN SCIENCE RESEARCH STUDY I. Nurhas, M. Boutouil, S. Geisler, J. Pawlowski	6771
RESEARCH-BASED LEARNING: AN APPLICATION FOR GRADUATE AND POSTGRADUATE STUDENTS IN BUILDING C. Morón, D. Ferrández, E. Yedra, F. Muñoz	6781
GAMIFICATION OF THE MATHEMATICS COURSE FOR PRE-SERVICE PRESCHOOL AND PRIMARY SCHOOL TEACHERS I. Zsoldos-Marchis	6787
WHERE THE MUSEUM MEETS SCHOOLS: CREATING A COLLABORATIVE INSTRUCTIONAL GUIDE E. Polyudova, E. Olesina	6795
OPINION ON INCLUSIVE EDUCATION OF TEACHERS AND PARENTS OF NON- DISABLED CHILDREN IN RUSSIA – PILOT STUDY E.M. Kulesza, A. Zarin, S.Y. Ilina	6801

<b>THE ART OF TEACHING WITH HUMOR</b> T. Evans-Palmer	6808
<b>DEVELOPMENT ZONES OF TAIWANESE CHILDREN IN PRESCHOOL AGE</b> E.M. Kulesza, C.H. Huang	6814
FREEDOM AND RESPONSIBILITY IN THE STUDENT-TEACHER RELATIONSHIP IN HIGHER EDUCATION TRANSITIONED TO ONLINE VOICE INSTRUCTION: CONSIDERATION OF THE INFLUENCE OF JEAN-PAUL SARTRE'S PRINCIPLES S. Boddie	6820
A COMPARATIVE STUDY OF THE IMPORTANCE OF DANCE IN THE SELF-ESTEEM OF YOUNG UNIVERSITY STUDENTS F.N. Real-Torres, K. Iraola-Real, I. Iraola-Real, M. Iraola-Real, E. Iraola-Real	6827
SUMMARISING INITIAL RESULTS OF SHIFTING TO DISTANCE LEARNING URGED BY CORONAVIRUS PANDEMIC S. Sorokina, K. Ulanova, O. Musorina	6831
DEVELOPING JOB INTERVIEW SKILLS WITHIN BTEC INTERNATIONAL BUSINESS PROGRAMME S. Sorokina	6840
<b>DEVELOPMENT EDUCATION PROJECT IN UKRAINE TO IMPROVE THE QUALITY OF</b> <b>MEDIA LITERACY: A CASE OF MEDIASCHOOL GRINCHENKO UNIVERSITY</b> <i>M. Netreba, H. Horbenko</i>	6849
A MOBILE-BASED APPROACH TO ASSIST LEARNING IN A POLYMER TECHNOLOGY COURSE C. Roman, M. García-Morales	6856
STARTUP AS A DIPLOMA MASTER'S PROJECT: FROM THE IDEA TO A PRACTICAL IMPLEMENTATION H. Horbenko, M. Netreba	6864
APPLYING ADULT LEARNING THEORIES IN DIGITAL EDUCATIONAL AND TRAINING PROGRAMS A. Makri, D. Vlachopoulos	6869
THE ELECTRONIC DICTIONARY OF CURRENT EAST SLAVONIC PROVERBS AS A TOOL FOR PROJECT BASED LEARNING M. Kotova, N. Boeva, O. Sergienko	6879
DIGITAL SOURCES FOR PAREMIOLOGICAL RESEARCH ON TRANSNATIONAL PROSE	6884
M. Kotova, D. Lakomova HISTORIC PLANT BIOLOGY EXPERIMENTS INTEGRATED WITH MODERN TECHNOLOGY T.J.J. McCloughlin	6890
DISTINGUISHING CRITICAL SITUATIONS IN LANGUAGE LEARNING USING AVIATION GAMING SOFTWARE M. Landry, L. Landryova	6895
<b>AUGMENTED REALITY OF HERBARIUM SPECIMENS IN BIOLOGY EDUCATION</b> T.J.J. McCloughlin	6902
A PROPOSAL TO PROMOTE THE PARTICIPATION OF JAPANESE PEOPLE WITH LOW-INTEREST IN SCIENCE COMMUNICATION M. Nakamura	6906
REGIONAL DIFFERENCES IN STUDENTS' READING, MATHEMATICS AND SCIENCE OUTCOMES ON PISA 2018 IN RUSSIA K. Adamovich	6913
SPATIAL DIFFERENCES IN ACCESS TO SCHOOL RESOURCES, EDUCATIONAL TRAJECTORIES, AND ACADEMIC RESULTS AFTER 9TH AND 11TH GRADES: MULTILEVEL ANALYSIS ON RUSSIAN DATA K. Adamovich	6920
<b>PRINCIPAL'S LEADERSHIP PRESENCE IN SOCIAL MEDIA NETWORKS</b> N. Elyakim, Y. Buskila, T. Chen-Levi, H. Altarac, L. Shaked	6925
COMPARISON OF APPROACHES TO THE USE OF WEB AND MOBILE APPLICATIONS IN TEACHING ALGORITHMIZATION AND PROGRAMMING IN THE CZECH REPUBLIC AND ABROAD T. Dragon, M. Klement	6926
GIFTED STUDENTS' USE OF COMPUTATIONAL THINKING SKILLS APPROACHING A GRAPH PROBLEM: A CASE STUDY S. Wetzel, G. Milicic, M. Ludwig	6936

CHALLENGES WITH THE INTRODUCTION OF A «PROJECT MANAGEMENT GAME» IN HIGHER EDUCATION R. Andersen, K.E. Bonnier, D. Jaccard	6945
<b>PEDAGOGICAL IMPLICATIONS OF THE USE OF ENGLISH IN NIGERIA</b> L. Chimuanya, C. Awonuga	6951
SELECTED ASPECTS OF SEXUAL EDUCATION OF PEOPLE WITH INTELLECTUAL DISABILITIES Z. Kozáková, P. Hermanová	6960
PINKAMP: A NOVEL EDUCATIONAL FORMAT FOR THE RECRUITMENT OF HIGH SCHOOL GIRLS IN STEM SUBJECTS A. Di Marco, L. Tarantino	6967
ONLINE LEARNING: STUDENT ACTIVITIES AND THEIR PRIVACY CONCERNS R. Mekovec	6977
TRANSFORMING LECTURE CLASSROOMS INTO ONLINE LECTURES IN RECORD TIME	6984
L. Prieto González, A. de Amescua Seco, M. Sánchez-Segura, J.M. Gómez Berbis	
LEARNING ANALYTICS IN A NEXT GENERATION DIGITAL LEARNING ENVIRONMENT - LESSONS LEARNED AND EXPERIENCE FROM SECONDARY EDUCATION TEACHERS	6994
I. Otero-González, D. Pantazatos, M. Grammatikou, D. Docampo	
COMPUTATIONAL THINKING AND ITS DEVELOPMENT: TYPOLOGY OF PRIMARY SCHOOL STUDENTS BY THEIR PREFERENCE OF COMPUTING TOPICS M. Klement, T. Dragon	7002
<b>REPORT ON THE SELF-STUDY BEHAVIOR IN LEARNING FROM VIDEO LECTURES</b> <b>DURING A CONFINEMENT PERIOD</b> <i>A. Figueira</i>	7010
SPORTS EDUCATION IN RUSSIA. CRUCIAL ASPECTS AND CHARACTERISTIC FEATURES N. Parkhitko, S. Martynenko, O. Gordeeva	7016
ONLINE INVIGILATION: PERSPECTIVES FROM MULTIPLE PRACTITIONERS	7024
M. Lilley, G. Nashi, A. Pyper DISTANCE LEARNING DURING A PANDEMIA. HOW TO MAINTAIN AN ACTIVE LEARNING APPROACH: THE CASE STUDY OF SPACE4INSPIRACTION COURSE A. Dominoni, B. Quaquaro	7029
A CASE – BASED LEARNING APPROACH IN BIG DATA KNOWLEDGE DOMAIN. EXPERIMENTAL LABORATORY SESSION IN DATA ANALYSIS AND APPLICATION PROGRAMMING INTERFACE L. Gotsev, E. Shoikova	7039
TEACHING PRACTICAL SKILLS - RESPONDING TO ONLINE LEARNING IN TIMES OF NEED A.M. Simon	7050
<b>KEY INFLUENCING VARIABLES IN DEVELOPING ENGLISH LANGUAGE LISTENING</b> <b>SKILLS IN CHINA</b> J.B. Yang, M. Valcke	7057
<b>EVALUATING DESIGN THINKING TEACHING</b> A. Alyami, I. Hawryszkiewycz	7063
A META-ANALYSIS OF THE TAIWANESE PEDAGOGICAL AGENT STUDIES IN E- LEARNING ENVIRONMENTS T.H. Peng, T.H. Wang	7069
<b>DESIGN, USAGE AND IMPLEMENTATION OF AN AUGMENTED REALITY-BASED</b> <b>APP DESIGNED TO TRAIN SPATIAL SKILLS</b> <i>R. Llorens, J. Martín Gutiérrez, M. Contero, M. Alcañiz</i>	7074
<b>THE MORAL REASONING OF PUPILS IN MANAGING CONFLICTS</b> S. Ferkova, J. Derkova, M. Kuruc	7081
<b>RESEARCH INTO SCHOOL AND FAMILY COOPERATION FROM THE PERSPECTIVE</b> <b>OF TEACHERS AND PARENTS</b> <i>E. Toblova, S. Ferkova, A. Poliakova</i>	7091
THE FOREST AS A SCIENTIFIC LABORATORY FOR A TEACHING EXPERIENCE IN A HIGH SCHOOL	7100
G. Tagliaferri, G. Pesaresi, M.C. Carlà Campa, A. Raschi	

STUDY THE EFFECTIVENESS OF MOBILE LEARNING ON THE IMPROVEMENT OF MATHEMATICS LEARNING INTEREST OF THE SECOND GRADERS IN A PRIMARY SCHOOL C.H. Kao, T.H. Wang, T.J. Wang	7106
A NEW IDEA OF COFFEE: THE CONCEPT OF COCKTAIL-CAPPUCCINO M. Bisson, F. Memo, S. Palmieri, A. Ianniello	7110
A GAME-BASED, ACTIVE LEARNING APPROACH FOR BUILDING 21ST CENTURY SKILLS IN ENGINEERING AND ECONOMICS HIGHER EDUCATION H. Tsalapatas, O. Heidmann, C. Katsimentes, S. Panagiotopoulos, C. Taka, C. Vaz de Carvalho, T. Jesmin, J. Terasmaa, M. Caeiro Rodriguez, L. Tolstrup Sørensen	7116
GOING ONLINE LEARNING FULLY: THE CHALLENGES AWAIT J. Juhary	7124
HOW TO FORM ETHNOLINGUISTIC COMPETENCE AMONG FOREIGN STUDENTS OUTSIDE THE LANGUAGE ENVIRONMENT: AN ITALIAN EXPERIENCE A. Carluccio, I. Rubakova	7134
<b>COMPARATIVE STUDY ON PERCEPTION OF PAPER AND DIGITAL TEXTS WHEN</b> <b>WORKING WITH HEARING IMPAIRED STUDENTS</b> E. Ponomarenko, Y. Krasavina, O. Zhuykova, Y. Serebryakova	7141
A TECHNICAL REPORT ON LINKING TALIS 2013 AND PISA 2012: DEVELOPING A MULTI-LEVEL PERSPECTIVE ON THE STUDENT, TEACHER AND SCHOOL-LEVEL VARIABLES RELATED TO MATHEMATICS ACHIEVEMENT X. Liu, M. Valcke, K. Yang Hansen, J. De Neve	7147
<b>THE WRITING SKILLS ASSESSMENT AMONG STUDENTS WITH AND WITHOUT</b> <b>HEARING IMPAIRMENT</b> <i>Y. Serebryakova, E. Ponomarenko, Y. Krasavina, O. Zhuykova</i>	7154
<b>TEACHING NEW DESIGN PROCESSES TO ENVISION FUTURE SCENARIOS</b> E. Chiodo, M. Aquila	7160
COMMUNICATION DESIGN FOR PLASTIC POLLUTION: #SOUVENIRDAMARE FIFTEEN STORIES RETURNED BY THE WAVES E. Chiodo	7166
<b>MAPPING AND SEGMENTING THE ONLINE EDUCATION STUDENT EXPERIENCE</b> J. Harvey, B. Tretola	7170
<b>EVOLUTION OF SPATIAL ABILITY IN FRESHMAN ENGINEERING STUDENTS: A</b> <b>COMPARISON BETWEEN 2012 AND 2019 COHORTS</b> <i>R. Llorens, M. Contero, M. Alcañiz</i>	7172
<b>USING EFFECTIVE LEARNING STRATEGIES FOR LEARNING TO LEARN: A</b> <b>TEACHING AND LEARNING PROPOSAL</b> Y. Cerezo López, M.D. Vivas Urías	7180
USING TEXTUAL PROGRAMMING TOOLS TO DEVELOP COMPUTATIONAL THINKING SKILLS IN K-12 EDUCATION N. Humble	7188
<b>DEVELOPING A WEB APPLICATION FOR AUTO-GENERATING GRAMMAR TESTS</b> N. Humble	7196
COGENERATION FOR DESIGN TRAINING: NEW FRONTIERS FOR A CONTINUOUS GROWTH M. Bisson, M. Zinzone, S. Palmieri, A. Ianniello	7202
DOES STUDENT SATISFACTION GROW WITH MORE INTERACTIVE AND HANDS- ON TEACHING? - AN EXAMPLE OF GOOD PRACTICE P. Poscic	7212
DIGITAL EDUCATIONAL ENVIRONMENT: ARE NEW FORMS OF DIDACTOGENY POSSIBLE? A. Vladyko, T. Rezer	7217
CONECT-ID PROJECT. APPROACH AND ANALYSIS MECHANISMS OF HYPERCONNECTED YOUTH IDENTITY A. Murciano Hueso, B.M. Gutiérrez Pérez, J. Martín Lucas, J.M. Muñoz Rodríguez	7221
CONSCIOUS EDUCATION: A NEW THEORY BASED ON JAPANOLOGY EXAMPLES G. Petkova	7227
<b>ECONOMIC EDUCATION CHALLENGES DURING CORONAVIRUS PANDEMIC</b> <i>M.C. Suciu, A.T. Paşa</i>	7233

STEM PROJECTS IN A MIDDLE SCHOOL: A PATH TO STIMULATE CREATIVITY IN	7242
YOUNG STUDENTS M. Hahn, P.S. Carvalho	
MIXED METHODS ASSESSMENT STRATEGY: THE CASE OF A FUTURE OF WORK MODULE M. Coleman, M. Jennings, R. Hennigan	7251
GAME BASED LEARNING (GBL) IN PRIMARY SCHOOLS FROM ROMANIA I. Zsoldos-Marchis, T.H. Hari	7255
<b>BIG DATA MINING IN SKILLS 4.0 FOR AMELIORATING 14.0</b> D. Farid, A. Sekhari, O. Yacine	7261
THE ANALYSIS OF SELECTED FACTORS AFFECTING SAFE ONLINE ENVIRONMENT OF THE ADOLESCENTS V. Poláčková, H. Zelená	7271
<b>CLUSTER-BASED KNOWLEDGE TRANSFER APPROACH FOR SMART FARMING</b> D. Farid, A. Sekhari, O. Yacine	7279
THE IMPORTANCE OF ALCOHOL CONSUMPTION AMONG YOUNG PEOPLE: AN APPROACH AT AN INSTITUTE OF MADRID I. Recalde, A. Morón, D. Ferrández, C. Morón	7286
INTERNATIONAL BOULEVARD: EXPLORING A NEW WAY OF TEACHING ARCHITECTURAL HOUSING STUDIO R. Davids	7295
THE RESEARCH OF PSYCHOLOGICAL WELL-BEING PREDICTORS: COMPARATIVE STUDY OF TEACHERS IN LATVIA AND RUSSIA S. Ignatjeva, Z. Bruk	7302
FRAGMENTS FROM SOVIET AND RUSSIAN CARTOONS AS A TOOL FOR FORMING AUDITIVE SKILLS AND LINGUOCULTUROLOGICAL COMPETENCE IN TEACHING A FOREIGN LANGUAGE S. Deryabina, O. Aleksandrova, A. Petrova, P. Zavarukhina	7312
CHANGING PRACTICES AND SELF-REFLECTION? IMPLICATIONS OF THE CORONA CRISIS REGARDING PRIVATE AND PROFESSIONAL DIGITAL MEDIA USE OF PRE- SERVICE TEACHERS H. Höfer-Lück, M. Delere, T. Vogel	7319
PERSONAL COMPETENCIES AS RESOURCE OF ACADEMIC MOBILITY OF STUDENTS (CASES OF LATVIA AND RUSSIA) S. Ignatjeva, L. Fedina, Z. Bruk, I. Patrusheva	7328
<b>THE ROLE OF ICT IN MATURE AGE STUDENTS' DISTANT EDUCATION</b> <i>P. Andres, D. Dobrovska, D. Vaněček</i>	7337
SOCIAL CONTEXT OF YOUNG READERS IN INTERNATIONAL COMPARISON S. Babiakova, B. Kasáčová	7343
ON-LINE+OFF-LINE HERITAGE CONSERVATION/RESTORATION PROGRAMME FOR HIGHER AND FURTHER EDUCATION – «FACES OF RUSSIA» IN ITALY L. Devel, E. Volkova, A. Timashkov	7352
<b>THE COVID 19 PANDEMIC - A CHALLENGE FOR MILITARY EDUCATION. THE E- LEARNING SOLUTION BETWEEN NECESSITY AND EFFICIENCY</b> <i>N.T. Lehaci, D. Roman, D.E. Tutuianu</i>	7361
THE WORKFLOW CONCEPT IN EDUCATION FOR SOCIETAL SECURITY IN THE CONTEXT OF A MAJOR CRISIS N.T. Lehaci, D. Roman, D.E. Tutuianu	7371
<b>THE POINT OF VIEW OF TEACHERS AND STUDENTS IN SECONDARY EDUCATION</b> <b>ON THE PROBLEMS AFFECTING THE CLASSROOM CLIMATE</b> D. Gavilán-Martín, G. Merma-Molina, M. Urrea-Solano, L.A. Sauleda Martínez	7380
<b>LEARNING TO LEARN WITH CONCEPT MAPS: A DIDACTIC APPLICATION WITH FUTURE ENGINEERS</b> L. Canós-Darós, V.E. García-Félix, C. Santandreu-Mascarell	7388
<b>INTERMEDIATE TESTS: A SUCCESSFUL TOOL TO MOTIVATE STUDENTS IN USING</b> <b>ONLINE FORMATIVE ASSESSMENTS?</b> <i>E. Blondeel, P. Everaert, E. Opdecam</i>	7396
CHANGE AND CRISIS: SHIFTING DYNAMICS IN DIGITAL LEARNING G. Lotrecchiano, L. Tidmore	7397

THE PROBLEMS THAT AFFECT COEXISTENCE DEPENDING ON THE TYPE OF EDUCATIONAL CENTRE	7408
G. Merma-Molina, D. Gavilán-Martín, L. Vega-Ramírez, R. Martinez-Roig TARGETED COMMUNICATION AT UNIVERSITY INSTITUTES: AN EMPIRICAL STUDY ON HOW TO DESIGN INFORMATION OFFERS IN AN ATTRACTIVE WAY FOR STUDENTS	7416
V. Koch, D. Enzensberger, C. Mustata, B.M. Zunk	
FAVOURABLE METHODOLOGIES FOR EDUCATIONAL INTERVENTION WITH STUDENTS WITH AUTISM SPECTRUM DISORDER A. Gilabert Cerdá, E. García Albaladejo, A. Lledó Carreres, G. Lorenzo Lledó, E. Pérez Vázquez, A.	7426
A. Guidert Ceruu, E. Gurcui Albuiudejo, A. Lieuo Curreres, G. Lorenzo Lieuo, E. Perez Vuzquez, A. Lorenzo Lledó	
SUPERVISING DESIGN STUDIOS WITH THE TEACHER, COUNSELOR, CRITIC (T2C) FRAMEWORK D. Knowlton	7434
<b>NEWTON'S LAWS OF MOTION: ANALYSIS OF A COMPLETE VIRTUAL EXPERIMENT</b> <b>WITH INTERACTIVE MATERIAL</b> N. Machado, P.S. Carvalho	7442
ZONES OF INTEREST IN NEW AND OLD SHOPPING MALLS ANALYZED THROUGH COGNITIVE MAPS WITH STUDENTS AS CO-INQUIRERS. THE ATRIUM AS A RENEWAL SOLUTION FOR MALLS M. García-Broch Martín, I. Asensio Andrés, J. Gual Ortí	7448
TEACHERS' PERCEPTION OF THE LEADERSHIP OF FEMALE ISLAMIC BASIC SCHOOL HEADS IN THE WA DISTRICT OF THE UPPER WEST REGION OF GHANA: LESSONS FOR ADULT TOLERANCE IN LEARNING COMMUNITIES F. Yengeh, E. Pajibo, A. Agordah	7456
HUAWEI ENSP ENVIRONMENT FOR E-LEARNING OF CORPORATE NETWORK CONFIGURATION AND MAINTENANCE A. Sierszen	7464
INCLUSIVE CHEMISTRY LABORATORY PRACTICES WITH NO BARRIERS FOR BLIND AND VISUALLY IMPAIRED STUDENTS A. Herrero, S. Palmero, T. Osorio, J. Muñoz	7471
ACADEMIC LITERACY IN ENGINEERING STUDENTS: FORMULATION OF AN INSTRUMENT TO ASSESS READING COMPREHENSION AND METACOGNITIVE STRATEGIES	7481
J.F. Calderón Maureira, A. Puente Ferreras, M. Mendoza-Lira DIAGNOSIS AND INTERVENTION OF UNIVERSITY ORIENTATION NEEDS: AN EXPERIENCE OF EDUCATIONAL INNOVATION OF CHALLENGE - BASED LEARNING M.F. Againtage Purpage	7486
M.E. Aguirre-Burneo	<b>5</b> 405
<b>TEACHING POSTGRADUATE TO OVERCOME DIFFICULTIES IN TRANSLATION</b> <b>SCIENTIFIC ARTICLES</b> <i>G. Fassakhova, R. Gataullina, R. Mukhametzyanova, L. Islamova, R. Badrieva, L. Chumarova, A.</i> <i>Yarkhamova</i>	7495
<b>USAGE OF FOLKLORE (MYTHS) IN FOREIGN LANGUAGE TEACHING</b> G. Fassakhova, L. Chumarova, R. Gataullina, A. Yarkhamova, R. Mukhametzyanova, L. Islamova, S. Shvetsova	7499
SOME ISSUES OF MINORITY EDUCATION (EXAMPLES FROM BULGARIA) B. Buzhashka, V. Dobreva	7504
SYNCHRONOUS VS. ASYNCHRONOUS DISTANCE EDUCATION DURING A WORLDWIDE EPIDEMIC A.M. Mutawa	7510
<b>THE NEW INTERACTIVE ANCIENT WORLD OF AQUAE CALIDAE</b> D. Paneva-Marinova, L. Zlatkov, L. Pavlova, D. Luchev, R. Pavlov	7516
MOBARTECH, AN INFORMAL EDUCATION PROJECT FOR BRINGING PEOPLE CLOSER TO CULTURAL HERITAGE F. Zuccoli	7521
<b>REFLECTIVE LEADERSHIP AS A FACTOR EMPOWERING EMPLOYEES TO LEARN IN THE ORGANIZATION</b> <i>I. Dargužienė, R. Bubnys</i>	7526
TEACHING SOFT SKILLS THROUGH EXPERIENTIAL COURSES DURING THE COVID-19 SANITARY EMERGENCY L. Sbattella	7535

TEACHER LEADERSHIP PERCEPTIONS IN A K-12 SCHOOL IN THE UNITED ARAB EMIRATES Z. Hojeij	7546
DIDACTIC APPROACH OF MUSIC INTEGRATION IN PRE-SCHOOL CHILDREN'S DAILY LEARNING ACTIVITIES: LIMITATION OF THEMES AND USE OF METHODS R. Bilbokaitė, I. Bilbokaitė-Skiauterienė, M. Kravale-Pauliņa, V. Peskur	7547
PROGRESS REPORT OF AN ONGOING PROJECT ON TEACHING NON-EUCLIDEAN GEOMETRIES AT HIGH SCHOOL A. Cardinali, S. Benvenuti	7555
<b>PROCESS ORIENTED GUIDED INQUIRY LEARNING (POGIL) AS A GRUPAL</b> <b>LEARNING STRATEGY IN SCIENCE SUBJECTS</b> <i>F. Montilla, D. Salinas-Torres, M. Navlani-García, J. Chaparro-Garnica, B. Martínez-Sánchez, J.X.</i> <i>Flores-Lasluisa</i>	7565
<b>REFLEXIVE PHOTOGRAPHY AS A TOOL FOR EXPLORING STUDENTS'</b> <b>PERCEPTIONS ABOUT THE VALUE OF A TOURISM DESTINATION</b> <i>A.I. Rodrigues, M. Gallarza</i>	7571
<b>LAB-ON-A-SCREEN: GAMIFICATION OF INORGANIC CHEMISTRY EXPERIMENTS</b> <i>M. Navlani-García, D. Salinas-Torres, A. Berenguer-Murcia, J. Fernández-Catalá, J. Quilez-Bermejo,</i> <i>E. Vilaplana-Ortego, A. Vallés-Botella, O. Cornejo-Navarro, I. Martínez-Mira, R. Torregrosa-Maciá,</i> <i>M. Molina-Sabio, G. Alemany-Molina</i>	7582
PERSONAL RESPONSES SYSTEMS AND ACTIVE LEARNING IN BIOLOGY: TEACHING EPIGENETICS WITH A SANDWICH-BASED MODEL G. Katsioudi, E. Kostareli	7587
USE OF KAHOOT IN E-LEARNING OF PHYSICS CONTENTS: A CASE STUDY DURING COVID-19 C. Costa, A. Soares, P. Catarino	7588
FROM PHYSICAL TO VIRTUAL: A CASE STUDY ON TEACHING NANOTECHNOLOGIES AND FUNCTIONAL MATERIALS FOR DESIGN WITH SMART LESSONS F. Papile, A. Marinelli, B. Del Curto	7594
STUDENTS' PERCEPTIONS OF BLENDED LEARNING IN FOREIGN LANGUAGE LEARNING: A CASE STUDY E. Bech, J.F. Ghesquière, H. Mustafa, P. Lorenz	7603
A METHODOLOGY TO ASSESS LEARNING PATTERNS IN ONLINE COURSES MEDIATED BY AN LMS A. Figueira	7604
CONTINUOUS ADAPTATION OF THE TEACHING AND EVALUATION PROCESS AT THE STUDENTS' REQUEST L.G. Popescu, G.M. Moraru	7609
GOING MOBILE: A PROPOSAL FOR TEACHERS' TRAINING I. Noguera	7614
THE IMPORTANCE OF MODELLING TEACHING TOOLS IN THE EDUCATIONAL PROCESS L.G. Popescu, G.M. Moraru	7624
<b>LEARNING OF LABORATORY SKILLS VIA AUGMENTED REALITY - CASE STUDY IN</b> <b>PHARMACY</b> <i>K. Kapp, M. Sivén, P. Laurén, M. Aejmelaeus, S. Virtanen, N. Katajavuori, I. Södervik</i>	7631
DESIGN AND EVALUATION OF TWO MOBILE COMPUTER-ASSISTED PRONUNCIATION TRAINING TOOLS TO FAVOR AUTONOMOUS PRONUNCIATION TRAINING OF ENGLISH AS A FOREIGN LANGUAGE C. Tejedor-Garcia, V. Cardeñoso-Payo, D. Escudero-Mancebo	7639
THE IMPACT OF AI IN TEACHING EFL WITH FLIPPED LEARNING H. Obari, S. Lambacher, H. Kikuchi	7647
REALISTIC LEARNING BASED ON COORDINATED TEACHING IN HIGHER EDUCATION. AN EXAMPLE AT MASTER'S DEGREE IN TEACHING TRAINING M. Vives, M. Escoda, E. Ribas, M.M. Garau	7653
APPLICATION OF EDUCATIONAL MATERIAL IN SAFETY FIELDS L. Brumarova, J. Pokorny, S. Krocova	7658
EDUCATION OF COMMUNITY AND EVALUATION OF EDUCATION IN THE CZECH REPUBLIC L. Brumarova, J. Brumar, E. Polcarova	7665

lx

OPTIMIZATION OF DYNAMIC MATHEMATICAL APPLETS FOR PUPILS OF YOUNGER SCHOOL AGE E. Partová, A. Poliaková, J. Záhorec, K. Žilková	7672
"COEXISTENCE AND CONFLICT MANAGEMENT", FROM UNIVERSITY THEORY TO PRACTICE M. Vives	7681
<b>REINVENTING THE CLASSROOM: TOWARDS A MODEL FOR THE DESIGN OF OPEN EDUCATIONAL RESOURCES ACROSS THE CURRICULUM</b> <i>M.A. Fernandez Cifuentes, G. Wilson Aranguren</i>	7685
MINECRAFT: EDUCATION EDITION AS A GAME-BASED LEARNING IN SLOVAKIA J. Sajben, N. Klimova, G. Lovaszova	7686
EDUCATORS' EXPERIENCES WITH THE USE OF COMPARISON-BASED FEEDBACK TO SUPPORT SELF-REGULATED STUDENT LEARNING M. Fellenz, M. Brady, M. MacMahon	7694
<b>BLENDED LEARNING: LEARNING SOLUTION IN THE INDUSTRY 4.0</b> <i>Y. Helsa, A.K. Kenedi, Y. Ariani</i>	7702
TWITTER FOR RESEARCH-INFORMED TEACHING ON IMMUNITY & EPIGENETICS: LESSONS FROM A POSTGRADUATE CLASS E. Kostareli	7708
PRACTICALITY OF DIGITAL MATHEMATICS LEARNING MODELS FOR ELEMENTARY SCHOOLS Y. Ariani, Y. Helsa, A.K. Kenedi	7709
RAISING STUDENTS' INTEREST IN TECHNOLOGY RELATED CAREERS THROUGH DESIGN-BASED SCIENCE LEARNING APPROACH T. Vaino, K. Vaino, M. Rannikmäe	7715
<b>PROTECTIVE FACTORS AS RESILIENCE PREDICTORS</b> L. Lackova, D. Hanuš, A. Ramírez García, T. Kimplova	7722
<b>EMOTIONAL LABOUR: A PSYCHOANALYTIC CONTRIBUTION TO TRAINING AND</b> <b>PROFESSIONAL DEVELOPMENT OF TEACHERS</b> <i>L. Mortari, R. Bombieri</i>	7728
ANALYSING THE CONTEXTS' NEEDS IN ORDER TO OPTIMIZE THE PRE-SERVICE TEACHERS' TRAINING PROGRAM: A RESEARCH CONDUCTED BY THE UNIVERSITY OF VERONA R. Silva, M. Ballarini	7735
GENDER PERCEPTION ABOUT FAKE NEWS AND DISINFORMATION: CASE STUDY WITH PORTUGUESE HIGHER EDUCATION STUDENTS N.S. Morais, M. Cruz	7746
STUDENTS' BEHAVIOURAL INTENTION TO USE MOBILE DEVICE FOR LEARNING AT HOME IN TIMES OF COVID-19 G. Masilo, S. Simelane-Mnisi, A. Mji, I. Mokgobu	7754
FAKE NEWS IDENTIFICATION: ARE FUTURE COMMUNICATION PROFESSIONALS PREPARED? M. Cruz, N.S. Morais	7764
DOUBLE TEACHER CLASSROOM: A NEW FORM OF BALANCED DEVELOPMENT OF BASIC EDUCATION PROMOTED BY "INTERNET PLUS" INTELLECTUAL RESOURCES SHARING P. Ma, X. He, X. He, X. Zhang, Y. Fan, H. Chen	7772
DESIGN INQUIRY LEARNING - USING DESIGN THINKING METHODS AS SCAFFOLDING IN PROBLEM-BASED LEARNING S. Lundmark, M. Jonsson	7779
<b>DESIGN THINKING FOR SUSTAINABILITY EDUCATION IN K12</b> H. Tsalapatas, O. Heidmann, C. Katsimentes, S. Panagiotopoulos, C. Taka	7780
DEVELOPMENT OF MATERIALS SCIENCE HIGH-SCHOOL EXCELLENCE PROGRAMS AND OUTREACH ACTIVITIES BASED ON ENVIRONMENTAL APPLICATIONS OF FUNCTIONAL POLYMER FOAMS S. Barroso-Solares, M.A. Rodriguez-Perez, J. Pinto	7785
<b>CRYSTALLOGRAPHIC AND SPECTROSCOPIC APPROACHES TO IMPROVE THE</b> <b>SOLID-STATE PHYSICS LABORATORY PRACTICES PROGRAM</b> <i>S. Barroso-Solares, D. Cuadra, M.A. Rodriguez-Perez, J. Pinto</i>	7793
<b>ARE SOFT SKILLS BEING ACHIEVED IN THE SPANISH UNIVERSITIES?</b> D. Díaz-Gutiérrez, R. Pérez-Fernández, J.E. Pérez-Martínez, L. Martínez-Muneta, R. D'Amore-Domenech, A. Villalba-Herreros, T.J. Leo	7802

DRUG LEARNING THROUGH THE SPACED REPETITION SYSTEM USING "ANKI" AND "MNEMOSYNE" SOFTWARE IN NURSING STUDENTS A.J. Marín-Paz, V. Casado-Arjona	7809
EDUCATING FUTURE OCCUPATIONAL HEALTH PRACTITIONERS FOR EXCELLENT STRESS MANAGEMENT ACROSS EUROPE J.P. Czakert, J.A.M. Reif, R. Berger	7815
IMPROVING DECISION-MAKING IN NURSING STUDENTS THROUGH INTERACTIVE FICTION USING "TWINE" SOFTWARE A.J. Marín-Paz, J.J. Cobacho-de-Alba, M. Sanlés-Pérez, R. González-Rodríguez, A.M. Sainz-Otero	7819
<b>TEACHERS' PERCEPTIONS TOWARDS THE PEDAGOGICAL USE OF INTERACTIVE</b> <b>WHITEBOARD IN SOUTH AFRICAN HIGH SCHOOLS</b> <i>M. Mokoena, S. Simelane-Mnisi, A. Mji</i>	7825
NEW TRAINING REQUIREMENTS FOR MANAGERS AND ECONOMISTS IN THE TWENTY-FIRST CENTURY: "HAPPINESS ECONOMY" VS "GROWTH ECONOMY" N. Levkin	7834
<b>TO PLAY OR NOT TO PLAY, THAT IS THE QUESTION!</b> A. Teles Vieira	7839
"LAST SEEN RECENTLY": HOW PRIMARY SCHOOL STUDENTS USE SOCIAL NETWORKS AND INTERNET FOR COMMUNICATION V. Keller, A. Gorbunova, A. Kapuza	7847
SUSTAINABLE DEVELOPMENT GOALS AND GENERAL SKILLS INTEGRATED THROUGH GAMIFICATION IN HIGHER EDUCATION: A CASE STUDY I. Guillén-Guillamón, H. Moreno-Ramón, M. Cabedo-Fabrés, M. Ferrando-Bataller, S. Calvet-Sanz, S. Ibáñez-Asensio, A. Jiménez-Belenguer	7853
FACT CHECKING PANORAMA IN HIGHER EDUCATION A. Teles Vieira	7860
CONTINUITY OF EDUCATIONAL PROCESS THROUGH VIRTUAL KINDERGARTEN DURING COVID-19 OUTBREAK – CASE STUDY FROM CROATIA I. Somolanji Tokić, A. Vukašinović	7861
MAPPING OF TECHNOLOGICAL INNOVATION LEVEL IN PROJECTS IN A UNIVERSITY OF AREQUIPA, PERU J. Sulla-Torres, J. Esquicha Tejada, K. Rosas Paredes, S. Moreno Rojas, Z. Guerra De Castillo, A. Garcia-Carrillo	7871
HOW ARE MOTIVATIONAL ASPECTS AND LEARNING STRATEGIES RELATED TO SATISFACTION WITH ONLINE LEARNING? M. Divjak, V. Prevolnik Rupel	7879
THE CREATION AND EVALUATION OF MATHEMATICAL APPLETS ON SYMMETRY FOR PRIMARY SCHOOL PUPILS K. Žilková	7886
USE OF ELECTRONIC EDUCATIONAL RESOURCES IN TEACHING A VARIETY OF DISCIPLINES A. Vladyko, T. Rezer	7894
<b>TROUBLESHOOTERS FOR OBJECT-ORIENTED PROGRAMMING HOMEWORK</b> <b>ASSIGNMENTS</b> <i>M. Lepp, A. Klaanberg</i>	7895
<b>CONFLICTS AMONG TEACHERS. SOURCES, CAUSES AND PRINCIPAL'S ROLE</b> M. Constantinides, S. Orphanos	7905
<b>DIGITIZED EDUCATIONAL PREVENTIVE PROGRAM FOR CHILDREN PROTECTION:</b> <b>DEVELOPMENT OF THE CONTENT AND THE ROLE OF AN EDUCATOR</b> <i>J. Pivoriene, B. Kairiene, A. Katkoniene</i>	7913
INTERNSHIPS FOR ENHANCING SOCIAL AND CIVIC KEY COMPETENCES FOR LIFELONG LEARNING IN TECHNICAL UNIVERSITIES: THE ERASMUS+ IN4SOC PROJECT J.M. Zavala-Pérez, A. Jiménez-Rivero, J. García-Navarro	7921
<b>TEACHERS' PRACTICES OF USING DIGITAL INTERACTIVE MATERIALS IN</b> <b>HISTORY LESSONS</b> <i>A. Kulieva, V. Markina</i>	7931
SOCIAL AND CIVIC COMPETENCES FOR THE LIFELONG LEARNING OF HIGHER EDUCATION STUDENTS: ASSESSMENT OF INTERNSHIPS WITH SOCIETAL IMPACT AND SOCIAL RESPONSIBILITY J.M. Zavala-Perez, A. Jiménez-Rivero, J. García-Navarro	7938

MODERN EDUCATIONAL APPROACHES - INTEGRATING THE NEW EDUCATIONAL PARADIGM FOR STUDENTS, PHD STUDENTS AND YOUNG SCIENTISTS SUPPORT AND REALIZATION	7947
S. Denchev, D. Stoyanova, R. Yotova, S. Yordanova INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT'S) IN THE TEACHING OF AN INTERUNIVERSITY MASTER'S DEGREE IN AGRI-FOOD	7951
A. Jiménez-Cantizano, A. Amores-Arrocha, P. Sancho-Galán, V. Palacios, J.M. Gómez LITERARY TEXTS THROUGH VISION OR REFLECTIONS ON THE SENSORY PERCEPTION OF FICTION V. Nikolova, M. Simeonova	7956
MULTIWORD COMPOSITIONAL PHRASES WITH FACULTATIVE REFERENCE AS ESSENTIAL DEVICES OF TEXT COHERENCE K. Rysová	7962
MAKING 4.0: DEVELOPING AN OFFICIAL MASTER DEGREE FOR ADAPTING THE CURRICULA OF FUTURE WORKERS AND MANAGERS OF WOOD AND FURNITURE SECTOR TO THE SKILLS REQUIRED BY THE INDUSTRY 4.0 J.L. Romero-Gázquez, G. Cañavate-Cruzado, J.J. Ortega-Gras, J. Garrido-Lova, M.V. Bueno-Delgado, M.V. Gómez-Gómez, M. Zbiec, J. Ratnasingam, S.Z. Abidin, R. Hashim, S. Zakaria, M.N. Zamri Mat Amin	7968
TEACHING SPANISH AS A LANGUAGE FOR SOCIAL INCLUSION IN AN ADULT MIGRANT TRAINING CENTER C. Orna-Montesinos	7978
MLEARNING IN PRIMARY EDUCATION: AN ONLINE TEACHER TRAINING PROPOSAL BASED ON MONTESSORI EDUCATION PRINCIPLES J. Azevedo-Gomes, A. Sartor Harada	7979
SIGNIFICANT ATTENDANCE IN THE DEVELOPMENT OF THE EUROPEAN HIGHER EDUCATION AREA AT SPANISH UNIVERSITIES E. Raya Diez, F. Navaridas Nalda	7984
ICT SKILLS FOR TEACHER EDUCATION A. Sartor Harada, J. Azevedo-Gomes	7992
CONNECT LEARNING WITH REALITY: USE OF SOCIAL NETWORKS IN THE UNIVERSITY CLASSROOM E. Raya Diez, S. Montenegro Leza, A.B. Cuesta Ruiz-Clavijo	7998
<b>REFLECTIVE LEARNING, TEACHER TRAINING, AND VIRTUAL ENVIRONMENTS:</b> <b>PRACTICAL CONTRIBUTIONS</b> <i>A. Sartor Harada, J. Azevedo-Gomes</i>	8006
MLEARNING FOR HERITAGE SPEAKERS: AN APP DESIGN PROPOSAL BASED ON CONSTRUCTIVISM J. Azevedo-Gomes, A. Sartor Harada	8015
IMPROVING THE STUDENTS INTEREST AND INVOLVEMENT IN THEORETICAL SUBJECTS USING SELF-ASSESSMENT TECHNIQUES A. Amores-Arrocha, P. Sancho-Galán, V. Palacios, A. Jiménez-Cantizano	8020
TEACHERS' OPINIONS REGARDING THE INTEGRATION OF STEM-BASED ACTIVITIES IN PRIMARY EDUCATION I.A. Babos, L. Ciascai	8027
LEANING INTO CORONA VIRUS PEDAGOGY: WE SHOULD NEVER GO BACK D. Knowlton	8032
INVESTIGATION OF TEACHER CANDIDATES' PERCEPTIONS FOR THE PRESENT AND THE FUTURE OF THE ENVIRONMENT §. Kösem	8038
<b>CHILDHOOD ADVERSITY</b> S. Laurian Fitzgerald, C. Fitzgerald	8039
DIGITAL TRANSFORMATION CHALLENGES AND OPPORTUNITIES IN UNIVERSITY EDUCATION D. Laitkep, K. Repkova Stofkova	8048
<b>STAKEHOLDER PERSPECTIVES ON A EUROPEAN UNION SUPPORTED PROJECT</b> <b>FOR APPLIED GAME DESIGN</b> <i>P. Cowley, P. Hollins, D. Hyams-Ssekasi</i>	8056
PUBERTY FROM THE PERSPECTIVE OF ABSENCE OF KNOWLEDGE IN PRIMARY SCHOOL PUPILS M. Rašková, D. Provázková Stolinská, M. Bartošová	8061

lxiii

<b>EXPLORING TEACHERS' VIEWS ON THE USE OF INQUIRY-BASED APPROACHES IN</b> <b>TEACHING</b> <i>V.G. Turşan, L. Ciascai</i>	8065
<b>STUDENT SATISFACTION SURVEY WITH E-LEARNING FORM OF EDUCATION IN</b> <b>UNIVERSITY ENVIRONMENT</b> D. Laitkep, K. Repkova Stofkova, J. Stofkova	8072
CUSTOMER PROFILE IDENTIFICATION IN IT SERVICE DEVELOPMENT R. Mekovec, K. Pažur Aničić	8077
HOW STUDENTS' PERCEIVE VALUE OF THE HIGHER EDUCATION EXPERIENCE DURING THE CORONAVIRUS 19 CRISIS? M. Gallarza, A.I. Rodrigues, R. Sanchez-Fernandez	8083
TEACHING TECHNOLOGICAL DESIGN: ENHANCING STRATEGIES AND APPROACH	8094
A. Violano, A. Bosco, M. Cannaviello, R. Franchino, C. Frettoloso, F. Muzzillo, S. Rinaldi	
ACTIVITY THEORY AS A TOOL FOR MAKING SENSE OF ACADEMIC WORK ENVIRONMENTS P. Cowley	8104
<b>MAKE LEARNING FUN</b> S. Laurian Fitzgerald, C. Fitzgerald	8111
PHRASEOLOGY IN THE ASPECT OF TEACHING THE RUSSIAN LANGUAGE O. Raina	8120
MODERNIZING THE VOCATIONAL EDUCATIONAL TRAINING IN THE FIELD SOCIAL SCIENCES AND HUMANITIES TOWARDS THE KEY ENABLING TECHNOLOGIES IN THE DIGITAL TRANSFORMATION G. Cañavate-Cruzado, F.J. Moreno-Muro, M.V. Bueno-Delgado	8125
CRIME PREVENTION EDUCATION AS AN EFFECTIVE TOOL FOR REDUCING ANTI- SOCIAL ACTIVITY V. Soltes, Z. Stofkova	8133
MANAGEMENT TRAINING FOR SPECIFIC CRISIS SITUATIONS J. Kubas, Z. Stofkova	8141
CORONAVIRUS AGAINST EDUCATION: E-LEARNING TO THE RESCUE IN THE CASE OF GREECE A. Giannakoulopoulos, L. Limniati, N. Konstantinou	8148
THE ROLE OF LEADERSHIP IN CULTURAL HERITAGE EDUCATION USING NEW INFORMATION AND COMMUNICATION TECHNOLOGIES M. Modeva, S. Modev	8155
SUSTAINABLE FASHION DESIGN: PRODUCT FROM PROCESS A. Violano, A. Cirafici	8164
COMPUTATIONAL THINKING AND PROBLEM SOLVING IN PROGRAMMING INTERACTIVE COMPONENTS AND CREATING ANIMATED PLOTS BY USING AN ACE IN STEM C. Fissore, A. Genovese, M. Marchisio, M. Pulvirenti	8173
ON THE CREDIBILITY OF SOCIAL MEDIA INFLUENCERS AS TUTORS: THE CASE OF NUTRITION IN YOUTUBE AND INSTAGRAM A. Giannakoulopoulos, L. Limniati, N. Konstantinou	8184
COMPARISON AND ANALYSIS OF OWN REMOTE LEARNING EXPERIENCES IN A SUPERVISED AND NON-SUPERVISED ENVIRONMENT A. Sierszen	8192
JUMPING THE GAP BETWEEN COLLABORATIVE READING OF FOLK TALES AND ICTS IN THE EFL CLASSROOM: A DIDACTIC PROPOSAL FOR PRIMARY EDUCATION D. Guzman Medrano, M. García Lledó	8199
<b>THE PECULIARITIES OF A UNIVERSITY LEARNING ENVIRONMENT IN A MIXED</b> <b>GROUP OF INTERNATIONAL AND LOCAL STUDENTS</b> <i>D. Gudaityte, E. Butrime, S. Morkeviciene, V. Tuomaite</i>	8208
ADAPTING A GALLERY WALK TO DIGITAL MODE: AN EXPERIENCE WITH PRESERVICE TEACHERS IN TIMES OF COVID-19 R. Tomás Ferreira	8218
EDUCATE TO INNOVATE ORGANIZATIONS TOWARDS SOCIAL, ENVIRONMENTAL AND ECONOMIC RESPONSIBILITY: A NEW POST-GRADUATE TRAINING PROPOSAL <i>M. Parente</i>	8228

EXPLORING PEDAGOGICAL CONTENT KNOWLEDGE (PCK) AND CONTENT KNOWLEDGE (CK) OF CHINESE AS A FOREIGN LANGUAGE (CFL) TEACHERS IN TEACHING CHINESE PRONUNCIATION L. Li	8236
<b>EVALUATING THE IMPACT OF DIFFERENT PEDAGOGICAL AND TECHNOLOGICAL</b> <b>RESOURCES TO TRAIN TRANSFERABLE SKILLS IN THE AREA OF CHEMICAL</b> <b>ENGINEERING</b> <i>A. Jiménez, J.D. Badia, L. Borrás, J.P. Cerisuelo, A. Cháfer, O. Gil-Castell, J.B. Gimenez, M.D. Hernáiz,</i> <i>M. Izquierdo, N. Martí, J. Ribes, M.V. Ruano, R. Sánchez-Tovar, R. Sanchis, P. San Valero, Á. Robles</i>	8240
E-LEARNING METHODS FOR UNDERGRADUATE AND POSTGRADUATE COURSES IN DESIGN DURING THE COVID-19 EMERGENCY M. Parente	8250
DRAG-AND-DROP E-LEARNING SOLUTIONS FOR TRAINING BUSINESS ADMINISTRATION TO ENGINEERS M.A. Rafart Serra, A. Bikfalvi, J. Poch Garcia, J. Soler Masó	8258
COORDINATES OF THE ROMANIAN EDUCATION SYSTEM IN THE RURAL ENVIRONMENT C. Țurcanu (Dimitriu), A.S. Tecău, C.P. Constantin	8267
<b>EFFECTIVE CONFLICT MANAGEMENT: THE ROLE OF PRINCIPALS</b> <i>M. Constantinides, S. Orphanos</i>	8277
DEALING WITH CONTROVERSIAL TOPICS AND PEACEBUILDING IN THE CLASSROOM: THE CASE OF DEMOCRATIC DIALOGUE EXAMINED BY THE PRINCIPLES OF CONFLICT RESOLUTION PROGRAMS IN EDUCATION M.S. Göregen, E. Cornelissen	8283
ANALYSIS AND DEVELOPMENT OF DIGITAL SKILLS AT SCHOOL: OBSERVATION AND DIDACTIC PLANNING L. Kazantseva, P. Nicolini	8293
<b>USE OF EXPERIENTIAL LEARNING IN KINDERGARTEN</b> V. Šindelářová, P. Simbartl	8300
ANALYSIS OF THE CREATIVE INDUSTRY IN THE DEVELOPMENT OF EMPLOYABILITY, DURING THE 2016 CRISIS IN ECUADOR D. Jordán, M. Pilamunga-Poveda, A.D. Jordán	8305
ORCHESTRATING TEACHERS FOR INNOVATION: A COMMUNITY APPROACH FOR INTEGRATING HEALTH AND SAFETY IN SCHOOLS A. Bikfalvi, G. Gimenez, M. González-Carrasco, N. Mancebo, E. Villar	8310
<b>EMPIRICAL STUDY ON THE IMAGE OF THE RURAL SCHOOL SYSTEM</b> C. Țurcanu (Dimitriu), C.P. Constantin, A.S. Tecău	8320
<b>BARRIERS IN ADULT EDUCATION</b> L. Madlenakova, M. Majercakova	8328
NAVIGATIONAL CHARACTERISTICS OF DIGITAL TEXTS AS A FACTOR OF THE INFORMATION SEARCH EFFICIENCY A. Kovalev, T. Ledneva	8337
SYSTEMATIZING INTERNATIONALIZATION CRITERIA OF HIGHER EDUCATION INSTITUTIONS T. Göritz, M.D. Nguyen, T. Tinis, A. Clauss	8342
DESIGNING CASES TO FOSTER VIRTUAL MOBILITY IN INTERNATIONAL COLLABORATIVE GROUP WORK M. Altmann, A. Clauss	8350
ENGINEERING STUDENTS' AWARENESS OF THEIR PRESENT AND FUTURE PROFESSIONAL EXPERTISES C. Pinto, L. Babo, J. Mendonça	8360
EDUCATIONAL SERVICES, TOOLS, AND INFRASTRUCTURE FOR REMOTE DELIVERY OF SOFTWARE DEVELOPMENT COURSES IN WEB AND MOBILE COMPUTING B. Mihaljević, M. Žagar, A. Radovan	8370
<b>LEARNING BY DOING: AN EXPERIENCE WITH ACCOUNTING STUDENTS</b> <i>R. Bertuzi, P. Silva</i>	8381
<b>EXPERIENCES RELATED TO USING ONLINE COMMUNICATION TOOLS FOR DISTANCE LEARNING</b> A. Radovan, B. Mihaljević, M. Žagar	8386

CAREER DECISION-MAKING LEARNING ACTIVITIES IN STEM: AN INTEGRATED CAPSULE MODEL EARMARKED FOR HIGHER AND VET EDUCATIONS	8390
N. Chelin, M.M. Socias Camacho, S. Rouvrais, G. Matthíasdóttir ELDERLY PEOPLE, COVID-19 AND TECHNOLOGIES: A QUALITATIVE RESEARCH	8401
E. Cirilli, P. Nicolini HEALTH PROFESSIONALS' PREPAREDNESS ABOUT THE GLOBAL COVID-19	8411
P. Trendafilova, G. Tchaneva	0111
<b>MODELLING THE SOLAR SYSTEM: INNOVATIVE RESOURCES IN A DIGITAL ERA</b> <i>M.C. Costa, P. Santos, A. Manso, H. Simões, V. Marçal</i>	8417
<b>PANELS GOING INTERNATIONAL WITHOUT LEAVING THE CAMPUS</b> P. Lane, R. Lafferty	8425
MOTIVATING ENGINEERING STUDENTS TO LEARN MATH: HINTS FROM A CALCULUS COURSE L. Babo, C. Pinto, J. Mendonça, M. Zannin	8433
USE OF WIRES AND BEADS FOR THE DEVELOPMENT AND DETECTION OF FINE MOTOR SKILLS OF CHILDREN IN KINDERGARTEN A. Nekolová, P. Simbartl	8441
PROBLEM SOLVING IN THE DEVELOPMENT OF CRITICAL THINKING IN PRIMARY SCHOOL	8445
H. Campos, C. P. Campos SEA MUSEUMS AS SOCIOTECHNICAL EDUTAINMENT ARTEFACTS	8454
R. Grácio, N. Cintra Torres, I. Duarte, C. Quico, E. Sarmento, R. Muchacho	
<b>STORIES WITH MATHEMATICS: A TEACHING EXPERIENCE IN PRIMARY SCHOOL</b> <i>H. Campos, A.C. Pires</i>	8461
NEW CONTRIBUTIONS TO IMPROVE PERFORMANCE ISSUES RELATED TO A MOBILE AUGMENTED REALITY LOCATION-BASED GAME A. Manso, M.C. Costa, P. Santos, J. Patrício, F. Monteiro, B. Alegria, G. Rocha	8467
COOKING TO LEARN: A DIGITAL EDUCATIONAL RESOURCE FOR THE PROMOTION OF CURRICULAR INTEGRATION IN PRIMARY SCHOOL A. Cardoso, R. Rodrigues, J. Souza, N. Palma	8468
TECHNOLOGY INTEGRATION AND STUDENT TEACHERS' CONCEPTIONS ABOUT THE ROLE OF DIGITAL RESOURCES IN THE CHILEAN PRIMARY CLASSROOMS: ARE THEY TRAINED TO SHIFT TO NEW TEACHING PRACTICES? A. Canales-Tapia	8475
EDUCATION DOCTORATE GRADUATES' PERCEPTIONS OF A SCHOLARLY PRACTITIONER DOCTORAL PROGRAM PREPARING THEM TO BE PROBLEM SOLVERS AND CHANGE-AGENTS J. McAtavey	8485
USING WEB-BASED MUSIC COMPOSITION APPLICATIONS TO ENHANCE NON- SPECIALIST PRIMARY TEACHERS' SELF-EFFICACY IN MAKING AND TEACHING MUSIC J. Harris, C. Carroll	8489
STOP: THE NEW AND MODERN TEACHING AND LEARNING PROCESS OF ACCOUNTING J. Legčević, R. Abreu, A.I. Ventura	8496
INCLUSION OF COLLABORATIVE TOOLS SUCH AS DIGITAL COMPETENCE IN UNIVERSITY STUDENTS F. Leyva Picazzo, R. Cordoba Del Valle, M. Rodríguez León, A. Figueroa Leal	8501
SUCCESSES AND CHALLENGES OF TECHNOLOGY-ENHANCED PERSONALIZED LEARNING J. Conan Simpson	8505
EDUCATIONAL TOOL BASED ON AUGMENTED REALITY TO SUPPORT THE TEACHING OF ELECTRIC FIELDS D. Rivera, D. Quiroga, H. Marín	8510
INDUSTRY 5.0 EXPECTATIONS OF ENGINEERING CRITICAL THINKING J. Mendonça, C. Pinto, L. Babo	8518
THE FUTURE OF UNIVERSITY QUALIFICATIONS S. Marshall	8530
UNBUNDLING THE LEARNING MANAGEMENT SYSTEM S. Marshall	8540

INSTITUTIONAL DIGITAL INITIATIVES AND FACULTY ENGAGEMENT IN SELECTED UNIVERSITIES IN NIGERIA H. Falola, O. Salau, A. Osibanjo, O. Ogueyungbo, T. Atolagbe	8546
<b>ELECTRICFIELD VR: A VIRTUAL REALITY APPLICATION TO SUPPORT THE</b> <b>TEACHING OF ELECTRIC CHARGES</b> J. Camargo Bernal, D.M. Rivera Pinzón, N. Montero Gómez	8554
NURSES' EDUCATION OF PEOPLE WITH TYPE 2 DIABETES AT THE GENERAL HOSPITAL OF NICOSIA P. Trendafilova, F. Nouemssi	8561
METADESIGN ARCHITECTURE WORKING STUDIO ACTIVITIES. AN EDUCATIONAL EXPERIENCE BETWEEN FACE-TO-FACE TEACHING AND ONLINE TEACHING F. Maroldi, M. Lunati, G. Vitale	8571
<b>TEACHERS' PROFESSIONAL DEVELOPMENT: MAIN FACTORS FOSTERING PROGRESS OF EDUCATION</b> R. Bilbokaitė, I. Šedeckytė-Lagunavičienė, J. Tumlovskaja, I. Bilbokaitė-Skiauterienė	8580
<b>INTERACTIVE BOARD DESIGN TO MAKE HOMEWORK MORE FUN (5 TO 8 YEARS)</b> N.M. Elgeneady, R.S. Basalama	8588
GAMES AND M-LEARNING IN PORTUGAL: EXPLORATORY META-ANALYSIS OF OPEN ACCESS STUDIES BETWEEN 2012 AND 2018 T. Cardoso, M. Ferreira Marques	8594
WIKIS, EDUCATION & RESEARCH: THE INTERNATIONAL ACADEMIC NETWORK WEIWER® T. Cardoso, F. Pestana, J. Pinto	8602
THE ISSUE OF PERSISTENT NEGATIVE CONSEQUENCES OF FIXED MOUTH BREATHING AFTER PARTIAL OR COMPLETE REMOVAL OF THE ADENOIDS ON THE DEVELOPMENT OF THE PRESCHOOL CHILD IN THE CONTEXT OF EDUCATION E. Šlesingrová, K. Vitásková	8609
DIVERSITY AND INCLUSIVE TEACHING C. Ruggieri-Joseph	8617
COVID-19 PANDEMIC: OPPORTUNITIES FOR ONLINE LEARNING TO UNBLOCK THE MINDS OF STUDENTS DURING LOCKDOWN PERIOD S. Simelane-Mnisi, A. Mji	8621
<b>STUDY HABITS IN STUDENTS OF A NURSING PROGRAM</b> R.E. Perez-Siguas, H.H. Matta-Solis, E.P. Matta-Solis	8630
<b>ATTITUDES TOWARD RESEARCH IN NURSING STUDENTS OF A PRIVATE</b> <b>UNIVERSITY OF LIMA</b> <i>R.E. Perez-Siguas, H.H. Matta-Solis, E.P. Matta-Solis</i>	8636
<b>EMPATHY IN NURSING STUDENTS WHO INITIATE PRE-PROFESSIONAL</b> <b>PRACTICES IN A PRIVATE UNIVERSITY OF LIMA</b> <i>H.H. Matta-Solis, R.E. Perez-Siguas, E.P. Matta-Solis</i>	8642
<b>LEARNING STYLES IN STUDENTS WHO START STUDIES IN A NURSING PROGRAM</b> <b>AT A UNIVERSITY OF LIMA</b> <i>H.H. Matta-Solis, R.E. Perez-Siguas, E.P. Matta-Solis</i>	8648
USING ACTIVATING TEACHING METHODS FOR IMPROVING STUDENT MOTIVATION B. Micieta, V. Binasova, M. Kasajova, G. Gabajova	8653
<b>RESEARCH AND APPROACHES TO THE TRAINING AND EXCHANGE OF NATIONAL</b> <b>TRADITIONS AND LIVING CULTURAL HERITAGE</b> <i>K. Nikolov, G. Bogdanova</i>	8660
<b>DEVELOPMENT OF LEARNING ENVIRONMENT MEASUREMENT INSTRUMENT</b> <b>FOR ARCHITECTURAL EDUCATION: A QUANTITATIVE APPROACH</b> <i>G. Sen, A. Adeboye, O. Alagbe</i>	8667
THE ROLE OF ORAL CORRECTION IN SPANISH AS A FOREIGN LANGUAGE STUDENTS' (DE)MOTIVATION F. Gatón Gabriel	8674
USE OF MONTE-CARLO METHOD IN TEACHING AT UNIVERSITY IN VARIOUS SCIENTIFIC DISCIPLINES J. Rada, V. Kohout	8678

THE POTENTIAL OF KAHOOT IN THE TEACHING AND LEARNING PROCESS IN ALGORITHMS AND COMPUTER PROGRAMMING CLASSES P. Carvalho	8686
KAHOOT! A DIDACTIC RESOURCE TO SUPPORT THE PROJECT/INTERNSHIP REPORT WRITING OF FUTURE ENGINEERS P. Carvalho	8694
A VR GAME TO IMPROVE COMMUNICATION SKILLS IN SECONDARY-SCHOOL TEACHERS M. Bocos-Corredor, A. Diaz-Nieto, A. Lopez-Garcia, A. Romero-Hernandez, I. Alvarez, B. Manero	8701
GLOBAL COMPETENCE FOR EMBRACING DIVERSITY BY THE GLOBALLY MINDED CITIZENS IN HIGHER EDUCATION D. Iliško, Z. Rubene, E. Oļehnoviča, D. Medne	8711
IT STARTS WITH A STORY! TOWARDS EXTENSIVE READING M. Kepe	8718
THE USE OF DRONES/REMOTE CONTROLLED VEHICLES IN THE EVENT OF APPEARANCE OF EMERGENCY SITUATIONS AND THE VALUE OF THE DISTANCE EDUCATION AT THESE SITUATIONS L.R. Popescu	8732
CHANGING FROM FACE TO FACE TO E-LEARNING IN EMERGENCY CONTEXTS: EXPERIENCES FROM COVID-19 2020 PANDEMIC CRISIS IN UNIVERSITY CONTEXTS IN PORTUGAL	8741
F. Ramalhete, L. Pascueiro, T. Santos, I. Pedro Vicente <b>THE LINKS BETWEEN THE 9TH GRADE STUDENTS' ACHIEVEMENT GOALS</b> <b>ORIENTATIONS AND PERCEIVED SCHOOL ENVIRONMENT</b> A. Augustiniene, B. Simonaitiene, R. Erentaite, R. Vosylis, S. Raiziene	8750
<b>CHOVR: A VIRTUAL REALITY TOOL FOR CHORAL CONDUCTING TRAINING</b> <i>A. Pinar-Adán, E. Romero-Guantes, C. Villaescusa-Sifuentes, A. Romero-Hernandez, B. Manero</i>	8751
THE ROLE OF DIGITAL TECHNOLOGY IN TEACHING ENGLISH FOR SPECIFIC PURPOSES (ESP) IN HIGHER EDUCATION V. Kareva	8758
EDUCATION AS AN INSTRUMENT OF HUMAN CAPITAL DEVELOPMENT V. Kirko, E. Kononova, A. Lukyanova, V. Razumovskaya	8765
<b>DEVELOPING AND TESTING WIND TURBINE MODELS AT UNIVERSITY NORTH</b> L. Havaš, J. Srpak, A. Šumiga, S. Skok	8771
PARENTING STYLE AND ACADEMIC SELF-CONCEPT IN STUDENTS OF OLDER SCHOOL AGE M. Popelková, E. Jurišová	8778
FINAL DEGREE PROJECTS AS A TOOL FOR INNOVATION AND ENTREPRENEURSHIP L.I. Hojas Hojas, E.M. García Del Toro	8786
EFFECTIVENESS OF GRAPHICAL REPRESENTATIONS IN SOLVING WORD PROBLEMS IN ELEMENTARY MATHEMATICS CLASSES N. Cibulskaite	8794
SEXUALITY IN PERSONS WITH MENTAL DISORDERS AND ITS CONCEPTION IN RESIDENTIAL SOCIAL SERVICES Z. Kozakova, T. Prochazkova	8803
<b>RE-EXAMINING IDENTITY THROUGH RECONSTRUCTING AND DIGITIZING OLD</b> <b>STORIES</b> <i>Z. Hojeij, P. Ozdemir-Ayber</i>	8813
COLLABORATIVE LEARNING ADVANCING STUDENTS FROM AFRICAN PORTUGUESE SPEAKING COUNTRIES: A MULTIDISCIPLINARY APPROACH I. Inácio, A. Virtudes, V. Cavaleiro	8814
THE 'FOCUS GROUP': A TOOL TO TRAIN METACOGNITIVE STRATEGIES AND CALIBRATE JUDGEMENTS IN UNIVERSITY STUDENTS OF ENGLISH A. Puente Ferreras, J.F. Calderón Maureira	8824
NEGOTIATING IMMIGRANT STUDENT CHALLENGES THROUGH CULTURALLY SUSTAINING PEDAGOGY L. Kajee	8831
LANGUAGE AND LITERACY ACQUISITION IN SIGN LANGUAGE: THEORIZING ABOUT THE APPLICABILITY OF THE CRITICAL PERIOD HYPOTHESIS FOR DEAF CHILDREN'S LANGUAGE DEVELOPMENT A. van Staden	8836

PHONOLOGICAL AWARENESS AS PREDICTOR OF SECOND LANGUAGE READING ABILITY AMONG SOUTH AFRICAN LEARNERS A. van Staden, A.A. van Rhyn, N. Purcell	8844
EDUCATION AGAINST VIOLENCE - INTERVENTION PROGRAM IN AN EDUCATIONAL INSTITUTION. APPLICATION OF THE IDEA OF HOW TO REDUCE THE SENSE OF INSECURITY CULTURE AND INSTITUTIONAL VIOLENCE IN EDUCATION <i>M. Farnicka, M. Kowalski</i>	8851
EXPERIENCES AND FEELINGS OF BEING A TEACHER IN THE INITIAL STAGE OF PROFESSIONAL ACTIVITY R. Bubnys	8855
<b>THE CONCEPT OF SERVICE LEARNING AND HOW IT CAN BE INTEGRATED INTO</b> <b>THE CURRICULUM OF A HIGHER LEARNING INSTITUTION IN MALAYSIA</b> <i>N. Ismail, K.Y. Soo, H. Ahmad, D.S. Ratan Singh, W.N.H. Wan Mohd, N. Arbin, S. Elias, I.S. Mohd</i> <i>Ariff Albakri</i>	8861
ADVANCING STEM EDUCATION AND RESEARCH IN PETROLEUM AND NATURAL GAS WORKFORCE DEVELOPMENT AND TRAINING INSTITUTIONS S. Egarievwe	8867
ASSERTIVENESS IN TEACHER COMMUNICATION M. Kabat, K. Zajdel	8873
<b>USE OF TRAINING INTINERARIES FOR COMPETENCY-BASED TRAINING IN THE</b> <b>UNIVERSITY: A SYSTEMATIC REVIEW</b> <i>L.I. Llinares-Insa, P. Gonzalez-Navarro, R. Zurriaga-Llorens, C. Jiménez-Lagos</i>	8880
<b>TRAINING ITINERARIES AS A METHODOLOGY FOR COMPETENCY-BASED</b> <b>TRAINING: AN INNOVATIVE APPROACH</b> <i>L.I. Llinares-Insa, P. González-Navarro, R. Zurriaga-Llorens, C. Jiménez-Lagos</i>	8890
EXPLORATORY STUDY OF INFORMATION ADMINISTRATION 2 IN THE SCHOOL OF COMPUTING AT AN OPEN DISTANCE UNIVERSITY R. Naidoo	8896
EXPLORATORY STUDY OF A MANUFACTURING MODULE IN AN ENGINEERING DEPARTMENT AT AN OPEN DISTANCE E-LEARNING INSTITUTION R. Naidoo	8902
<b>DYNAMIC FACTORS AFFECTING TECHNOLOGY INTEGRATION IN ACCOUNTING</b> <b>CLASSROOMS: A LITERATURE REVIEW</b> <i>M. Skhephe, N.P. Caga</i>	8907
ONLINE TUTORIALS AND STUDENT ACHIEVEMENT: A CASE OF ECOLOGY COURSE Y.T. Hewindati, T. Belawati	8914
FACTORS AFFECTING THE TEACHING OF READING COMPREHENSION: A CASE OF GRADE 3 ISIXHOSA HOME LANGUAGE LEARNERS L. Fesi, S. Makeleni, N. Duku	8922
<b>TEACHING STRATEGIES USED BY TEACHERS TO SUPPORT GRADE 4 LEARNERS</b> <b>WITH READING DIFFICULTIES</b> <i>L. Fesi, S. Makeleni</i>	8932
<b>EXPLORATION OF LEARNER-CONTENT INTERACTION USING INTERACTIVE</b> <b>DIGITAL MATERIALS</b> <i>T. Belawati, D.A. Padmo, D. Prasetyo</i>	8939
WHAT DETERMINES PROGRESS IN LANGUAGE SKILLS DEVELOPMENT OF ADULT LEARNERS IN THE CONTEXT OF ENGLISH COURSES FOR CZECH MILITARY PERSONNEL? H. Brzobohata, J. Rozsypalkova	8949
EXPLORING INFORMATION AND COMMUNICATION TECHNOLOGY INTEGRATION IN LIFE SCIENCES TEACHING IN RURAL SCHOOLS IN SOUTH AFRICA X. Khalo	8954
<b>THE EFFICACY OF ONLINE RESOURCES IN THE LAW CLASSROOM: A CASE STUDY</b> <i>H. Schoeman, P. Tarwireyi</i>	8962
MOCK EXAM AND FEEDBACK AS INSTRUMENTS TO ENHANCE EXAM SUCCESS I. Mrozkova, K. Kučerová, M. Sikolova, J. Dooley	8972
TRANSITIONING TO PERSONALISED AND PERSONAL LEARNING S. Wheeler	8982

<b>LEARNING BASED IN PRACTICAL CASES ON A MATERIALS ENGINEERING COURSE</b> S.G. Prolongo, N. Abuwarda, X.X. Fernandez Sanchez-Romate	8983
<b>EXPLORING READINESS OF SOUTH AFRICAN UNIVERSITIES FOR THE FOURTH</b> <b>INDUSTRIAL REVOLUTION</b> <i>V. Mncube, E. Olawale</i>	8989
THE ROLE OF HEAD TEACHERS IN THE IMPLEMENTATION OF INCLUSIVE EDUCATION POLICY IN THE PRIMARY SCHOOLS IN ESWATINI. A CASE STUDY M.R.S. Magagula, B. Kafu-Quvane	8996
MULTIPLE LANGUAGES IN CLASSROOMS IN ZIMBABWE: IS IT A MYTH? S.K. Luggya, P. Bhebhe, E.O. Adu	9005
INTEGRATING DIGITAL SEMIOTICS TO SECOND LANGUAGE TEACHING IN PRE- SERVICE TEACHER TRAINING M.N. Mdledle	9011
<b>LEARNERS' PERSPECTIVES ON VANDALISM IN SCHOOLS</b> V. Mncube, J. Shumba	9017
<b>TEACHER MOTIVATION ON SCHOOL PERFORMANCE IN SOUTH AFRICA</b> S.K. Luggya, E.K. Luggya, M. Skhephe	9025
STEM STUDIES NOWADAYS: ANALYSIS OF PERCEPTION, ACTUAL ASPECTS AND NEED OF FURTHER INTERACTION DURING HIGH SCHOOL EDUCATION S.G. Prolongo, A. Jiménez-Suárez, M. Campo	9031
<b>EFFECT OF BRAND PERSONALITY ON EMPLOYEES RETENTION: EVIDENCE FROM</b> <b>SELECTED HIGHER EDUCATIONAL INSTITUTIONS IN SOUTH WEST NIGERIA</b> <i>P. Adebayo, O. Kehinde, O. Ogunnaike</i>	9040
ANALYSING THE EMPOWERMENT OF WOMEN LEADERSHIP: A CASE STUDY OF A SOUTH AFRICAN HIGHER EDUCATION INSTITUTION K. Ngwane, A. Ngcobo	9046
AN INVESTIGATION INTO THE EFFECTIVENESS OF SMALL MEDIUM MICRO ENTERPRISES (SMMES) IN REDUCING UNEMPLOYMENT SOUTH AFRICA: A CASE STUDY OF UMSUNDUZI LOCAL MUNICIPALITY IN KWAZULU-NATAL K. Ngwane, K. Cebekhulu	9053
RETHINKING THE EFFICACY OF EXTENDED CURRICULUM PROGRAMS AS A PANACEA FOR STUDENT UNDER-PREPAREDNESS FOR TERTIARY STUDIES S. Ramaila	9062
THE IMPLICATIONS OF COVID-19 ON INNOVATIVE TEACHING METHODS IN THE DIGITAL ENVIRONMENT: AN ASSESSMENT OF TECHNOLOGICAL POVERTY BY ANALYZING THE INTERVENTIONS FINANCED BY PON 2014/2020 R. Manna, S. Calzone	9066
ASSESSING SOCIAL INCLUSION USING A LONGITUDINAL ANALYSIS: PON 2014/2020 "FOR THE SCHOOL: SKILLS AND ENVIRONMENTS FOR LEARNING" R. Manna, S. Calzone	9067
<b>ESPOUSING THE DETERMINANTS OF ACADEMIC STAFF RETENTION PRACTICES</b> <b>IN THE PUBLIC UNIVERSITIES</b> <i>O. Salau, H. Falola, D. Ufua, T. Atolagbe, A. Osoko, F. Adeoye, J. Salau</i>	9068
EXPERIENCES OF STUDENT SUPPORT FOR STUDENTS FROM RURAL CONTEXTS STUDYING TOWARDS RECEPTION YEAR TEACHING QUALIFICATION AT A DISTANCE C. Makwara	9077
IMPLEMENTATION OF AN ACADEMIC PROGRAM BASED ON INNOVATION AND ENTREPRENEURSHIP IN THE NURSING DEGREE M. Muñoz Gimeno, C. Martinez Gaitero	9085
LECTURERS' PERSPECTIVES ON THE USE OF BLACKBOARD AS A LEARNING SUPPORT TOOL: A CASE OF A UNIVERSITY IN SOUTH AFRICA N.P. Caga	9089
THE USE OF PROCESS APPROACH TO IMPROVE LEARNERS' ENGLISH FIRST ADDITIONAL LANGUAGE WRITING SKILL: LITERATURE REVIEW N.P. Caga, M. Skhephe	9094
META-EVALUATION STRATEGIES FOR HIGHER EDUCATION: A REVIEW OF THE METRICS USED TO ASSESS UNIVERSITIES' BUSINESS TRANSFORMATION AND INNOVATION READINESS V. Paraschiveanu, R. Voicu Dorobantu	9095

lxx

# IMMERSIVE LEARNING: HEURISTIC DEVICE FOR TRANSMITTING SOCIAL IMAGINARIES

S. Dugal, N. Colicci, A. Bikash, A. Weston, L. Janz, N. Katchen, K. Bugbee, T. Martinez, L. Denicola, L. Cardono, M. Degnan, A. Roberti, O. Palumbo, K. Solomon, S. Wordell, B. Bolofsky, T. Mulligan, A. Lopez, C. Morganelli, B. Matarese, K. Jensen, A. Sullivan, B. Mulligan, D. Jones, N. Amodio, M. Augustine, K. Fasano, R. Forte, H. Mecca, V. Volpe, M. Oppliger, T. Ritacco, M. Boelter, M. Bowman, C. Chen, M. Pelisson, B. Nong, S. Costello, P. Costanzo, Z. Buckley, K. Naranjo, E. Lis, D. Ayrassian, J. Milder, Y. Aloshban, J. Repoza, M. Fuhrman, R. Kattan, C. Hladick, D. Brysch, S. Vicedomine, M. Volpe, D. Meyen, M. Troiano, R. Singh, S. Singh

TEACHING COMMUNICATION SKILLS: LEARNING FROM THE BEST. MOTIVATIONAL SPEECHES OF W. CHURCHILL, S. JOBS, AND E. WATSON I. Mrozkova 9098

9096

## ELDERLY PEOPLE, COVID-19 AND TECHNOLOGIES: A QUALITATIVE RESEARCH

#### E. Cirilli, P. Nicolini

University of Macerata (ITALY)

#### Abstract

From a psycho-pedagogical point of view, entering the category of elderly people means having an age from 65 years onwards. The medical development, the increase in the level of education and the progressive postponement of leaving the world of work have contributed to improve the quality of life of elderly people and, increase the survival rate. At this historic moment, the health emergency caused by the uncontrolled spread of the Covid-19 virus has significantly reduced the quality of life of the whole population, from children to the elderly. Technologies, as never before, expand the possibilities of communication, sociality, information and access to services.

This paper aims to illustrate the qualitative research carried out with older people during the quarantine period for the Covid-19 emergency. This research stems from a question: How do older people manage to get out of the aloneness created by the Covid-19 emergency?

The researchers chose to carry out a qualitative research to answer this question. Participants will be 30 elderly people aged 65 or more, present in Italy. The research methodology has provided the realization of a semi-structured interview. The interview questions were also divided into three topics: daily life before and after Covid-19, ways of interacting with people during the emergency from Covid-19 and the use of technologies. This qualitative research is still in progress due to the prolongation of the Covid19 emergency and represents a starting point.

The data of this research can be useful for the design of trainings for educators, social workers, family members who relate daily to older people, but at the same time they are used to be able to implement concrete actions with and for older people in order to help them improve the quality of life both in emergency and in "normal" contexts.

Keywords: Elderly people; the Covid-19 emergency; ICT skill; Lifelong learning

#### 1 INTRODUCTION

The WHO defined the health as "a state of complete physical, mental and social well-being and not simply the absence of disease or infirmity". [1] Analysing with a critical thought the health emergency that we are experiencing today in Italy and in the rest of the world, the question arises spontaneously: "How should these characteristics be maintained in this period of emergency COVID-19?" World Health Organization director Tedros Adhanom Ghebreyesus said in a press conference in Geneva that "WHO has assessed that Covid-19 can be considered as a pandemic." This Covid-19 emergency does not allow simultaneously physical, mental and social well-being, characteristics of the definition of health.

From the Italian Ministry of Health website, we can read all the containment measures adopted in Italy: "The Council of Ministers passed a law decree on February 23, 2020 with measures for the prohibition of access and removal in the municipalities where there are outbreaks and the suspension of demonstrations and events. Subsequently, the following implementing decrees were issued: the Dpcm 25 February 2020, the Dpcm 1 March 2020, the Dpcm 4 March 2020, the Dpcm 8 March 2020, the Dpcm 9 March 2020 #lorestoacasa, the Dpcm 11 March 2020 which imposes the closure of nonessential commercial activities. Among the measures also adopted the ordinance of 22 March 2020, jointly signed by the Minister of Health and the Minister of the Interior, which prohibits all the people from relocating or moving with public or private transport to a different municipality than that one in which they are located, except for proven work needs, of absolute urgency or for health reasons. The Government then issued with the Presidential Decree of 22 March 2020 new additional measures regarding the containment and management of the epidemiological emergency from COVID-19, applicable throughout the national territory. The provision provides for the closure of non-essential or strategic production activities. Food shops, pharmacies, basic necessities shops and essential services remain open. The same provisions apply, cumulatively to the Prime Ministerial Decree of 11 March 2020 as well as to those provided for by the ordinance of the Minister of Health of 20 March 2020, whose

terms of effectiveness, already set for 25 March 2020, are both extended to 3 April 2020. With DPCM April 1, 2020, all measures to combat the spread of coronavirus infection have been extended until April 13, 2020. The decree which came into force on April 4 also suspends the training sessions of athletes, professionals and non-professionals, at interior of sports facilities of all kinds. Subsequently, with the Prime Ministerial Decree of April 10, 2020, all measures were extended until May 3. The Dpcm allows the reopening from April 14 of the baby stores, bookstores and stationery stores. Finally, with the Prime Ministerial Decree of April 26, 2020, they specified the measures for the containment of the Covid-19 emergency of the so-called "phase two". The provisions of the decree apply from May 4, 2020 to replace those of the Prime Minister's Decree of April 10, 2020 and they are effective until 17 May 2020, with the exception of what is foreseen for business activities, which apply cumulatively from 27 April 2020."[2]

Reading these containment measures implemented in Italy, the uncontrolled spread of Covid-19 has significantly reduced the quality of life of the whole population, from children to the elderly. Separation from loved ones, loss of personal freedom, uncertainty about their health or illness can have negative effects on individuals' psyche. As the Greek philosopher Aristotle wrote in the fourth century BC, man is a social animal because he tends to aggregate with other individuals and to constitute himself in society. Aristotle himself wondered if such sociality was a primary instinct or the result of other needs. In this historical moment, the absence of social relationships is strongly felt by the entire population. Private and public people are promoting initiatives to safeguard the quality of life of the population in economic, health, education, relationship terms,...

The methods of interaction, information and entertainment are favouring the mediation of the technological tool. There are numerous examples that we can observe within our daily lives: people who were used to buying the paper newspaper are preferring television as a medium of information or the websites of the publishers themselves; schools, from kindergartens to university, have changed the training methods, preferring distance learning and webinars; companies have enabled their workers to perform smart working; sports centres started to perform gymnastics lessons online; people are discovering numerous platforms that allow them to keep in touch with family, friends, relatives who are not inside their housing unit; public and private people have started direct cooking, concerts, ... First of all, these initiatives allow us to continue participating and interacting with people. Secondly, they allow us to carry out the "normal" daily activities as we would have done thanks to participation and face-toface interaction with other people. In this Covid-19 pandemic, technological tools are making this possible. Technologies in the role of mediators favour the quality of life because they make our daily routine continue, even if transformed by the restrictions of some of its domains. In this emergency situation the new technologies represent the most used tool by the whole population to face the isolation to which we are forced to impose. These technologies were already used before the start of this pandemic. To date, the number of people who use them has grown exponentially. The whole population started using them. When we talk about population and technologies, a naive theory makes us eliminate the range of older people within this dichotomy.

According to the psycho-pedagogical disciplines, the age group of people aged 65 and over fall into the category of the elderly. Within this category there are subcategories of older people who are divided as follows: young seniors ranging from 65 to 74 years old, seniors from 75 to 84 years old, big seniors from 85 to 99 years old and centenarians from 100 years old upward. According to naive theories, elderly people would not be very competent in the use of technologies. The ISTAT data of the 2019 annual report, however, tell us that in the last decade, in Italy, young elderly people have significantly increased the share of regular internet use from 6% to 34%. If we consider all the subcategories of the elderly, people aged 65 and over, the data tells us that 21.7% regularly use the internet. Analysing this data, we can observe that people born before 1934 use the internet in a limited way for men and not for women. The data of people born after 1934 are slightly different from the previous ones, since the use of the internet would be 8% for men and 0.7% for women. The young elderly category would represent the highest utilization figure among all the elderly categories: men for 44.7% and women for 34.9%. The most used device is the smartphone, used for instant messaging services (70.7% of the elderly), for email (64.7%), for reading newspapers, information and online magazines (57, 6%) and for health information (47.7%). [3] The percentages are lower for video and music sharing services, mostly used by older men, and for the use of social networks, mostly used by older women. Technologies are chosen by older people, as they represent an opportunity to maintain interpersonal contacts, to exchange information and to be updated on the outside world by reducing the feeling of social and relational isolation.

## 2 METHODOLOGY

The research team, made up of the two authors, has as its main theme "the interaction between people and technologies". Based on the scientific literature and driven by the historical emergency that is involving us all, the authors asked themselves as a research question: How do older people manage to get out of the aloneness created by the Covid-19 emergency?

For this research the authors have chosen older people as the reference sample. Incline with the choice to carry out a qualitative research. 30 is the maximum number of elderly people intended to reach. According to the psycho-pedagogical area, entering the category of elderly people means having an age ranging from 65 years upwards. Psycho-pedagogical scholars have divided this macro-category of the elderly into 4 micro-categories: young elderly people from 65 to 74 years old, elderly people from 75 to 84 years old, elderly adults from 85 to 99 years old and centenarians from 100 years upwards. People were selected on the basis of three criteria: chronological age, living at home and people residing in the Marche region of Italy. The choice of the first criterion for selecting people arises from the state of the art mentioned above and from the research question. The second selection criterion is strongly connected with the domain of self-determination of the quality of life. The studies in this regard tell us that the possibility of choice is one of the domains that allows people to be autonomous both in daily life and in the choice of the tools that support us. [4] The third criterion is connected to the home of our membership, the University of Macerata, which is located in the Marche region too. The Marche region is an Italian region of central Italy, with the province of Ancona. Geographically: to the east it overlooks the Adriatic Sea; to the west, the Umbria-Marche Apennines mark the border with Tuscany and Umbria; to the north the region borders with Emilia-Romagna and the Republic of San Marino, to the south with Abruzzo and Lazio. Much of the territory is hilly. Most of the inhabited centers are placed on the top of the hills. The inhabited centers have an urban dimension and vocation. The economic-entrepreneurial model, called the "Marche model", is characterized by the thriving and diversified high-specialization small-medium industry distributed equally throughout its territory, but mainly concentrated on the coast and in the valleys.

The methodological tool chosen by the research team is that of the semi-structured interview. The interview was created on the basis of three topics: daily life before and after Covid-19, ways of interacting with people during the Covid-19 pandemic and the use of technologies. The structure of the research tool is characterized by 3 parts: the introductory part on the research and methodology chosen; 9 open, fixed and ordered questions; and the part on the interviewee's demographic data: gender, chronological age, residence, profession prior to retirement. The date, time and name of the researchers who carried out the interview were also noted. The questions are divided on the basis of the preset topics:

- on daily life before and after Covid-19 there are 2 questions: "How was your daily life before the epidemic?", "How did you organize your daily life at this time at home?";

- the ways of interacting with people during this pandemic, there are 2 questions: "Who is he in contact with now?", "How is he in contact?"

- on the use of technologies there are 5 questions: "What technological devices are present in your home?", "What type of use do you make of these devices?", "As a result of the situation of Covid-19, you started using of technological devices / instruments? "," Did you use these technological devices before? "," How did you come to use them? ".

The research team conducted the interviews via a call to the selected sample and each interview was recorded in order to be able to better analyze the data that will emerge. The data of the interviewees will be treated with respect for anonymity. The interview was transcribed immediately after its conclusion and prior to the execution of the next. Each interview was transcribed respecting the person's narrative order and trying to use the words and phrases used by the interviewer.

The analysis of the interviews took place inductively, from the particular to the general. The research team carried out two analysis steps: longitudinal and transversal. The first analysis took place longitudinally. Each individual interview was analyzed individually: initially by connecting the answers given to the questions asked and subsequently to the topics. The second analysis took place transversely: initially all the answers of each interviewee connected to the topics were transcribed in a single file; subsequently the answers were compared to have conceptual labels which were in turn collected into broader thematic categories. This second analysis was carried out in two sub-steps: the first sub-step provided for the cross-sectional analysis of all the interviews for each micro-category of elderly people: young elderly, elderly, elderly adults and centenarians; the second sub-step involved cross-cutting analysis of all the interviews carried out. The type of analysis chosen is halfway between

the illustrative and restitutive type. The research team wants to bring out the content and theme of the interviews on the one hand and on the other hand wants to bring out the knowledge of the interviewees.

This qualitative research began from the end of February 2020 and is still ongoing, since on the one hand the researchers are trying to expand the sample to other sections of the population and on the other hand they want to have a diachronic view of the research results given the prolong the pandemic from Covid-19.

#### 3 RESULTS

In this paper, the researchers will illustrate the results of the longitudinal and transversal analysis carried out on the interviews with young elderly people. As already explained, young seniors are that microcategory of seniors who are aged between 65 and 74. The young elders selected and interviewed are 11: 3 women and 8 males. The average age of women is 67.3 years. The average age of men is 68.8 years. The average age of the people interviewed is 68.4 years (Table 1).

	F	M	TOTAL
The Young Elder	3	8	11
average age	67,3	68,8	68,4

Table 1. Shows the respondents' gender and average age.

All the interviewees live in their home, are resident in the Marche region and are all retired except the interviewee F. (Man, 65 years old).

## 3.1 Results of the longitudinal analysis

First of all, from the longitudinal analysis of the individual interviews it emerges that the respondents answered all the questions asked.

As for the structure of the interview, some have anticipated the answers of the subsequent questions. For example, after explaining the introductory part to the research and methodology, the interviewee L. answered all the questions that the interviewer should have asked him later. The interviewee S. and F. (Female, 65 years old) anticipated the second question of the topic on how to interact with people during Covid-19, naming the methods of interaction. During the interview of the interviewee G. (72 years old), the answers to the first two questions were indirectly suggested by a background voice, subsequently the interviewee gave direct and first-person answers. The background voice was no longer heard and Mr. G. also added unsolicited anecdotes, but still related to the Covid-19 emergency.

As for the topic on daily life before and after the Covid-19 emergency: before the interviewer asked him the questions and during the interview, the interviewee G. (65 years old), U., G. (73 years old), F (F, 65 years old) have repeated several times that their daily lives are not so different between before and during, since they were all already retired or as F. housewife. Unlike the three previous interviewees, the interviewee F. (71 years old) and T., want to emphasize that their daily lives have changed a lot, since before the emergency they didn't spend much time at home, they were always with friends or engaged with the numerous associations to which they belong. The interviewee F. (F, 65 years old) believes that her daily life has changed in the frequency of the activities / commitments she had and has now. Before she went shopping every two days and now only once a week or once a week, she had training lessons at a dog center. Always F. (F, 65 years old), T. and S. add that they can no longer cultivate the same hobbies that they previously had: walks in the open air, attending cultural centers, ... The interviewees T., S., F. (71 years old), G. (73 years old), G. (65 years old) say that the frequency and quality of relationships with friends and relatives has changed compared to vis a vis. Respondents who have a garden or a piece of land say they are spending more time on it than before. The interviewees L. and T. point out that they paid a person other than the family to guard the garden or the piece of land. In some respondents, the pandemic has led to the rediscovery or discovery of new passions / activities. The interviewee F. (M, 65 years old) has started painting again. The S. and G. interviewees (72 years old) started to prepare the food with their hands, rediscovering the authenticity and flavors of the past. Other people, however, had to put rewarding passions / activities on standby. The interviewee U. cannot go to mushrooms or pick wild herbs. The interviewee G. (72 years old) cannot help the parish priest of the city. Some others have reorganized how they can use their businesses. Interviewee G. (72 years old) attended a face-to-face dance course and now performs it online thanks to the dance lessons that the club sends him.

As for the second topic on the methods of interaction, almost everyone remained in contact with friends and / or family members and in different ways. Some people interviewed prefer to make simple calls and / or exchange messages with friends and use video calls, the exchange of photos and videos with family members, such as respondents S., G. (73 years old) and G. (65 years old). Other people use all the technological tools they have to stay in touch with both friends and family, such as the interviewees G. (73 years old), F. (F, 65 years old) and F. (M, 71 years old). The interviewee F. (M, 65 years old) prefers to use the smartphone and interacts with friends with social networks, while with WhatsApp he interacts with family members. Interviewee T. uses her husband's smartphone to contact friends and family, as she has an older generation phone. Interviewee P. has only been in contact with family members via calls, since despite having a smartphone she does not use it for relations.

As for the third topic on the use of technologies, all respondents have some technological devices in their home and they were already using before the pandemic. All the interviewees have at least one smartphone, except the interviewee T. uses her husband's devices, since until a few months ago she had an old generation phone. In this pandemic, her husband gave her an old generation smartphone, but they failed to connect it to the internet. Instead, the interviewee G. (65 years old) independently uses the mobile phone with WhatsApp to receive and send messages and relies on his teacher wife to be able to make group video calls thanks to the platforms that she uses for work. The method of use, the apps downloaded and used vary from person to person. Some interviewees, such as F. (M, 65 years old), mostly use Facebook and WhatsApp. The interviewee F. (M, 65 years old) points out that the pandemic and the technological tool of the smartphone with WhatsApp has allowed him to reconnect with his cousins and cousins from the Lombardy region that he has not heard for a long time. F. (M, 65 years old) adds that he manages to find out about the same news from several points of view thanks to Facebook and searches on the websites used via smartphone. The interviewee P., on the other hand, mostly uses an older generation mobile phone despite having a smartphone available. The use of the smartphone is strictly connected to the search for news: P. says that the night before he reads all the news which will then be published in the paper newspaper. Even the interviewee G. (65 years old) uses the phone to stay up to date on the news, since he does not buy the paper newspaper as little as possible. The interviewee S. downloads telegram, which is a cloud-based instant messaging and broadcasting service within which municipal administrations send information about the Covid-19 emergency right now. From the interview of Mr. P., it emerges that he rarely used the smartphone to search for health information, since he prefers to seek medical attention given the lack of competence in discerning the actual symptoms of the alleged disease and his own symptoms. Mr. F. (M, 71 years old) claims not to be a technological person, despite having understood how to use WhatsApp. This interviewee states that he calls the people who called him and that thanks to his grandchildren he managed to make group video calls with family members. Interviewee S. downloaded game apps to her smartphone to pass the time and improve her cognitive skills. She adds that in some games there is the possibility to chat with one's opponent and this service gratifies her a lot since she interacts with people all over Italy and abroad. Mr. G. (73 years old) wanted to download games on the advice of his Belgian cousin, but was unable to download. Interesting answers were given by three interviewees, Mr. U. and Mr. L., Mr. F. (M, 71 years old) and Mrs. S. have inserted in the technological devices used some tools related to their previous profession. Mr. U., previously a nurse, says he continues to use the pulse oximeter and sphygmomanometer at home. Ms. S., previously sales manager, continues to use the computer to shop online and to manage the fiscal aspect of the family. Regarding the use of the computer, the interviewees G. (73 years old), F. (M, 71 years old), F. (M, 65 years old), G. (72 years old), G. (73 years old) and L. say that they prefer the smartphone as it is within reach, has everything inside and is easier to use. For example: the interviewee F. (M, 71 years old) and L. rarely use it and to check emails; the interviewee F. (M, 65 years old) to print the files; interviewee G. (71 years old) says that its use bores him; interviewee G. (73 years old) used it to buy and sell vintage motorcycles in past years. Instead, the interviewee F. (F, 65 years old) and U. use it more than the previous interviewees. F. (F, 65 years old) and U. use the computer to view Facebook, to search for news, make individual or group calls with Skype. In addition to this, F. (F, 65 years old) thanks to the computer sees the fiction or television series of the previous days, instead, U. views the medical reports through the sanitary platform. The results that emerge from the answers to the last question of this topic of the interviewees G. (73 years old), F. (F, 65 years old), F. (M, 71 years old), S. and T. say that initially they were routed and supported by a familiar figure towards the use and choice of technological tools. Other respondents, such as G. (65 years old) and U., have started using these tools for work and after mandatory training in the company. Instead, the interviewee L. learned to use them as a self-taught. The interviewees U., F. (F, 65 years old), G. (72 years old), P. ask for support from family members in case of blocking of the device or in case of problems that they cannot independently resolve. Three interviewees F. (M, 65 years old), F. (F, 65 years old) and S. are keen to point out in their responses that in this pandemic they have increased the frequency of use. Even the interviewee G. (72 years old) says that despite having them, he did not use them at all because his day was dedicated to other activities.

#### 3.2 Results of the cross-sectional analysis

Subsequently, the research team carried out the cross-sectional analysis of the interviews of the microcategory of the young elderly already analyzed individually. 4 thematic categories emerge from this analysis: "change", "the need to stay in touch"; "the choice of technological tools and the purpose of use" and "the support of previous generations". From the comparison of all the answers, from the subsequent cataloging and comparison of the conceptual labels, "change" was chosen as the thematic category. In Table 2 the results of some significant text units that allowed us to choose this thematic category were transcribed:

Table 2. significant text units for the thematic category "change".

#### SIGNIFICANT TEXT UNITS

"Before I didn't do many things, but every morning I went to the bar, I went for walks, I read the newspaper, I talked with friends." "Now I don't go out anymore, I dedicate myself to chores at home, I do gardening." (G. 73 years old)

"My daily life was made up of work, free time, commitments to my family and an invalid brother". "Now for my safety and that of my colleagues I have a day off, I go shopping a lot less than before and I go to visit my brother only once a week." (F. M, 65 years old)

"Being part of many associations, I was very busy in their activities, then in the morning I worked the garden, in the afternoon I went to the bar with friends and after 16 I went home and from spring to summer I went back to my garden." "Now my day is structured as follows: countryside, countryside, and countryside." (F. M, 71 years old)

"Having food intolerances, I had started to prepare everything at home, but I had stopped." "Now I have started again and rediscovered the flavors and pleasure of homemade things." "Before I went to the P.P.P. study center, I played "burraco", I went to the opera, I met friends, I went to the cinema, ..." "Now I am at home, I go around the house, I interact with friends through calls, ... " (S.)

"I devoted myself to doing housework, I went to gym, I took care of my grandchildren, I was busy with volleyball." "Now I'm at home with my husband, I always do household chores and take care of the garden." (T.)

"After retiring, I continued to follow the companies I worked for free of charge." "Now I can't do it, but fortunately being in the countryside I started to take care of the olive trees, avoiding to call a person who would do it instead of me." (L.)

"My daily life as a pensioner was so structured: I did some chores around the house, I went to the bar and bought the newspaper, I played cards, I collected the mushrooms and the herbs of the field." "Now I'm more restricted in the activities I can do, I can't move from home." (U.)

"Before the pandemic I went around, I played cards at the bar, I did a dance class, I helped the parish priest, I volunteered when I left the schools." "Now I play cards with my son, I do the dance course through videos, I can't help the parish priest, ..." (G. 72 years old)

Another thematic category that emerges from the cross-sectional analysis is "the need to stay in touch". In Table 3, the authors transcribed some answers:

Table 3. significant text units for the thematic category "the need to stay in touch". SIGNIFICANT TEXT UNITS

"I am in contact with friends and family even far from me" (F. F, 65 years old)

"I am in contact with friends and family via the smartphone [...] and we spend a lot of hours on the phone." (G. M, 72 years old)

"I am in contact with friends and family via the smartphone and we often hear each other." (F. M, 71 years old)

"I am in contact with my family in the presence, I feel with my superiors and we change posts and messages with friends on social networks. [...]"It is now a necessity for quality of life." (F. M, 65 years old)

"I am in contact with family members [...] and friends with whom we interact to exchange tips on gardening that we used to do together before." (G. 73 years old)

"I am in contact with my family and friends and we make long calls and we exchange many messages to comment on the day and the television programs." (S.)

"I am in direct contact with family members who live with me and by telephone with those far away." (P.)

The third thematic category that emerged from the cross-sectional analysis is "the choice of technological tools and the purpose of use". Table 4 shows the significant text units that deal with this category:

Table 4. significant text units for the thematic category "the choice of technological tools and the purpose of use".

#### SIGNIFICANT TEXT UNITS

"I have an old generation phone with which I receive / send calls and messages. I have a smartphone, granted to me by a family member, with whom I search for news on the web." "Sometimes I use the smartphone to search for health news, but they generate more anguish than anything else. I do it only to have the technical knowledge of some pathologies." (P.)

"With my smartphone and computer, I send and receive messages, photos, videos, I go to Facebook to read news, recipes, to communicate with my friends. I use TV to watch numerous TV series, documentaries, entertainment programs, fiction and the newscasts since I turn it on early in the morning."(F., F, 65 years old)

"Apart from those useful in the health sector such as the pulse oximeter, the pressure device, I use the computer to go to Facebook, to search the internet for news, I make single and group calls." (U.)

"With the smartphone I use Facebook and WhatsApp [...] During this pandemic, I had the pleasure of being part of a WhatsApp group with my cousins from Lombardy with whom we write, send photos. I was pleased because they I feel close." "I also have a desktop computer at home, I don't use it almost for nothing, just to print. I prefer to use the smartphone." (F., M, 65 years old)

"I phone via WhatsApp. I'm not very technological, but for video calls with family members, I use the platforms that my wife uses to teach." (G. 65 years old)

"I used and use the computer. I use messenger, WhatsApp, telegram to make up for the times and chat with some friends or family. I download and spend time with apps for games that allow me to improve my cognitive skills, to play online "burraco" that has chats that allow you to interact with people who play with the app both in Italy and abroad." (S.)

In this thematic category, as regards the choice of technology tools, the research team counted the number of devices used by respondents. Table 5 shows that the smartphone represents the tool most cited by the interviewees (10/11), the computer is in second place (5/11), the smart TV or normal TV is in third place (4/11), followed by the old generation phone (2/11) and finally by medical devices (1/11), nobody mentioned the tablet.

TECHNOLOGICAL TOOLS	N°
Smartphone	10
Computer	5
Smart tv e tv normale	4
Old generation phone	2
Medical equipment	1

Table 5. The choice of technological tools.

Based on these data, the research team found it useful for a better understanding to make a correlation between the technological tool chosen and the purpose of use. The five tools nominated by the interviewers was associated with the purposes of use in Table 6. As emerges from the table, the smartphone is the most used tool and the main purposes for which it is used are.

TECHNOLOGICAL TOOLS	PURPOSE OF USE
Smartphone	<ul> <li>WhatsApp:</li> <li>videocalls, calls, messages, exchange of photos and videos with distant family members (6/11);</li> <li>videocalls, calls, messages, exchange of photos and videos with friends (1/11).</li> </ul>

Table 6. Correlation between technological tools and purpose of use.

	Normal calls:
	<ul> <li>long calls and many messages with friends (5/11).</li> </ul>
	Telegram:
	- read the local information that is written by the municipal
	administration (2/11).
	Facebook:
	- write and share posts with friends (1/11);
	- write messages with messenger (4/11);
	- read current news (5/11);
	- look for funny videos and photos (1/11).
	Web sites:
	- search and read current news (2/11);
	- read the web newspapers (2/11);
	- rarely seek sanitaire news (1/11).
	Game apps:
	- download the game apps the respondents' used to play
	with people (1/11);
	- chat with the gamers (1/11).
Computer	- receive and send emails (2/11);
•	- print files (1/11);
	- buy and sell classic cars (1/11);
	- use Facebook page and make calls with Skype (2/11);
	- review TV series, fiction and television programs (1/11).
Smart tv and normal tv	- look the newscasts (4/11);
	- look the documentary (3/11);
	- look historical and geographic documentaries (2/11);
	- look TV series, fiction and television programs (2/11).
Old generation phone	- calls with distant family members (1/11);
	- calls and messages with friends (1/11).
Medical equipment	- pulse oximeter and sphygmomanometer to measure
	oxygen saturation and blood pressure (1/11).

The last thematic category that emerged from the cross-sectional analysis is "the support of previous generations" both in daily activities and in the choice and initial and sometimes subsequent use of technologies for people in this micro-category of elderly. In Table 7 the authors have transcribed some significant text units.

 Table 7. Significant text units for the thematic category "the support of previous generations".

 SIGNIFICANT TEXT UNITS

"I came to use them thanks to my son who is a computer engineer who introduced us and directed us towards the choice of the device, then independently thanks to my curiosity looking on the web I try to use it and download things on my own." (S.)

"My son do not want me to go out and they go shopping for me since I am old and according to them it is better if I stay at home." "My son advised me to buy them. My son, who is a computer engineer, helped me choose the technological tools and explained how to use them. If I do any "damage" I call them." (F. M, 71 years old)

"My grandchildren helped me use it, gave me some tips and then I left alone. If I have any problems, I call them." (G. 73 years old)

"Every now and then I ask my son and he helps me. Every now and then I can't remember or I don't take it, so I ask my son." (G. 72 years old)

"I would like to do more, but I am afraid of making mistakes. I would like to use internet banking, pay bills online, buy online, ... but I am afraid to buy one thing for another and therefore I ask my son." (U.)

"I came to use them with the help of my son, otherwise I don't understand much and still understand very little. When the computer or smartphone freezes or strange writing appears, I stop and call my son." (F. F, 65 years old)

#### 4 CONCLUSIONS

In this paper, the researchers showed part of the results of the qualitative research that they have partially carried out and are carrying out. If we were to resume the research question that the authors asked at the beginning "How do older people manage to get out of the loneliness created by the Covid-19 emergency?" the answer is clear from the data emerging from the longitudinal and transversal analyses.

On the basis of the data shown, it can be said that the micro-category of young elderly people has tried to reorganize their lives in light of the considerable restrictions that the government has taken and continues to take. A second reorganization of your daily routine. Second reorganization, since the first major reorganization is due to the transition from the condition of worker to the condition of pensioner. Like every step in our life, being in a new condition that of being a pensioner involves losing a balance, a routine that for years was a source of habit and personal gratification. The transition from worker status to pensioner status provides for a moment of reasoning generated by the same bureaucratic practices. This period of reason allows the person to imagine his new status, to be able to choose the activities to do when retirement arrives, to be able to reorganize his daily routine. This step and this reorganization take time and the new condition is matured mentally. The Covid-19 emergency did not allow people to have time to reorganize their daily lives. He asked all the people to stay at home, where to stay at home, one intends not to leave the house. Analysis of the interviews shows that young elderly people have not felt this sudden and sudden change heavy. Many of the interviewees started their interviews saying "I didn't do many things, I was retired". When asked to deepen their daily routine, the activities they used to perform were considerably greater and more varied than those that are still being carried out. The pandemic has certainly generated the social distancing, since the measures chosen by governments around the world and also in Italy do not allow social interaction intended in the ways in which we are used to reasoning. A social interaction that brings people closer to each other. A social interaction that presupposes physical presence. This definition is already outdated, as the context we are experiencing makes us physically distant, but socially close. The results of this part of the research show how all the people interviewed found a way to stay in touch, a different contact that does not contemplate the possibility of touching, but of being close in the same way. The people interviewed by social animals as they are have started to use all those tools available to be close. The technological tools chosen are the means that allows all this. The results show that everyone who more or less uses the technological tools to be able to interact with family and friends. If you re-read the ISTAT data regarding the technologies used by the category of the elderly population with the results of the interviews carried out, you can see how the micro-category of the young elderly has become more competent and they have increased the purposes of using the devices. [3] Most of the interviewees add that although they already had the devices before the pandemic, they discovered new features and significantly increased their use in terms of daily frequency. The merit of this specialization derives from two causes: digital skills and intergenerational exchanges. To date, digital skills have become part of the set of cardinal objectives for the development of the child now and the adult subsequently. These skills have been taught and evaluated at the Italian school for less than 5 years.[5] The people interviewed were not lucky enough to be able to learn these skills in school age, but some acquired them through training courses, others by self-taught, others with the support of family members, ... The support of previous generations, more competent, has allowed the so-called intergenerational exchange.[6] Like any exchange, the intergeneration exchange allows the improvement of a given competence both for the bigger person and for the smaller person. From the interviews it emerged that grandchildren, sons and daughters were the main support in choosing the right tool for their loved one, but in the initial training and sometimes also in the resolution of small blocks of the technological tool and in the person.

This qualitative research represents a starting point, since other interviews have already been conducted with the micro-categories of older people. In addition, interviews with other categories of the population have been scheduled. Authors are starting to carry them out for people who are of working age always in the Marche region. A limitation of this research is the absence of direct and visual contact with the people interviewed, since through calls it is not possible to observe the whole set of non-verbal behaviours except the tone of the voice. The other limit could be in the choice of people residing in the Marche region. Later it could also include other people throughout Italy. The strengths of the research are numerous: the first is in the possibility given to the people interviewed to be able to make the social knowledge of the people involved say; the other point is in the results, the researchers think that the results that emerged are useful for trainers, educators, social workers. The results can allow these workers to plan activities, training, life projects that take into account people's needs, needs and potential. At the same time, efforts were made to destroy the naive theory that limits the planning of activities with technological tools for older people with the results of the interviews. Finally, the aim was

to give voice to the people who are experiencing this emergency, in order to give organizational cues for other people as well.

## ACKNOWLEDGEMENTS

The research team wants to thank the interviewees: Sisa, Federica, Giovanni, Franco, Teresita, Franco, Giorgio, Lucio, Piergiorgio, Giovanni, Umberto and Giovanni.

#### REFERENCES

- [1] WHO, Constitution, Accessed 14 April, 2020. Retrieved from https://www.who.int/about/who-we-are/constitution.
- [2] Ministro della Salute, Covid-19 Situazione in Italia, Accesseed 28/04/2020, Retrived from http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioContenutiNuovoCoronavirus.jsp?ling ua=italiano&id=5351&area=nuovoCoronavirus&menu=vuoto.
- [3] ISTAT, Rapporto annuale 2019 La situazione del Paese, Accesseed 27/03/2020, Retrieved from https://www.istat.it/it/archivio/230897.
- [4] C. Giaconi, Qualità della vita e adulti con disabilità. Percorsi di ricerca e prospettive inclusive. Milano: Franco Angeli, 2015.
- [5] MIUR. (n.d.). Piano Nazionale Scuola Digitale. Retrieved 30 March, 2020, from http://www.istruzione.it/scuola\_digitale/allegati/Materiali/pnsd-layout-30.10-WEB.pdf.
- [6] E. Cirilli, P. Nicolini, L. Mandolini, "DIGITAL SKILLS FROM SILENT TO ALPHA GENERATION: AN OVERVIEW" in EDULEARN19 Proceedings 11th International Conference on Education and New Learning Technologies, IATED Academy; pp. 5134 - 5142 (ISBN: 978-84-09-12031-4).