

TABLE OF CONTENTS

INTRODUCTION.....	13
CHAPTER I : E-LEARNING AND SMART LEARNING ENVIRONMENT FOR THE PREPARING OF NEW GENERATION SPECIALISTS.....	17
Maria Potes Barbas, Pedro Matos (Portugal) TRAINING IN DIGITAL LITERACY FOR LABOUR MARKET: E-LEARNING FOR YOUNG PEOPLE WITH DISABILITIES	17
Anna Ślósarz (Poland) TALENTED AND INEPT STUDENTS AND SMART LEARNING.....	27
Rafael Martín Espada, Juan Arias Masa (Spain) IMPACT OF DIGITAL STORYTELLING IN STUDENTS' SATISFACTION, MEASURED THROUGH SEEQ QUESTIONNAIRE	49
Eugenia Smyrnova-Trybulska (Poland) SMART UNIVERSITY IN SMART SOCIETY – SOME TRENDS.....	65
Nuno Sotero Alves da Silva, Isabel Borges Alvarez, Paulo Pinto (Portugal) A CASE STUDY OF ETHICAL ISSUES AFFECTING THE IMPLEMENTATION OF E-LEARNING IN A CROSS-CONTINENTAL - EURO-AFRICAN UNIVERSITY	81
Magdalena Roszak, Iwona Mokwa-Tarnowska, Barbara Kołodziejczak (Poland) SMARTER EDUCATION - PREPARING A NEW GENERATION OF UNIVERSITY AND COLLEGE TEACHERS.....	97
Tatiana Noskova, Tatiana Pavlova, Olga Yakovleva (Russia) STUDY OF STUDENTS' EDUCATIONAL ACTIVITY STRATEGIES IN THE SOCIAL MEDIA ENVIRONMENT.....	113
Mark Peart, Prudencia Gutiérrez-Esteban & Sixto Cubo-Delgado (Spain) SECONDARY EDUCATION STUDENTS' TECHNOLOGY USE IN DIGITAL ENVIRONMENTS.....	125
Barbara Kołodziejczak, Iwona Mokwa-Tarnowska, Magdalena Roszak (Poland) DIRECTIONS OF THE EVOLUTION OF HIGHER EDUCATION....	135

Miroslav Hrubý (Czech Republic) TOOLS AND APPROACHES FOR THE PREPARATION OF CYBER DEFENCE SPECIALISTS	153
CHAPTER II. : THEORETICAL, METHODOLOGICAL AND PRACTICAL ASPECTS OF E- LEARNING:	161
Mariusz Marczak, Jarosław Krajka (Poland) CALL TRAINING IN RESOURCE-LIMITED CIRCUMSTANCES: STUDENT TEACHERS' PERSPECTIVES	161
David Richardson (Sweden) TECHNOLOGY AT WORK: REMOTE SUPERVISION OF TEACHING PRACTICE AT A SWEDISH UNIVERSITY	189
Magdalena Górajaska, Jacek Stańdo (Poland), Ján Gunčaga (Slovakia) THE INFLUENCE OF BIRTH ORDER ON THE RESULTS OF THE STATE E-TEST IN MATHEMATICS	199
Irena Pulak (Poland) CHILDREN AND SMART TOYS IN MODERN LEARNING ENVIRONMENT	221
Katarína Žilková, Edita Partová, Ján Gunčaga (Slovakia) DESIGN OF EDUCATIONAL APPLETS FOR INCREASING CHILDREN'S ABILITIES TO RECOGNIZE PATTERNS.	229
Renata Czaplikowska (Poland) APPLICATION OF E-LEARNING FOR THE DEVELOPMENT OF FOREIGN LANGUAGE TEACHERS BASED ON A COURSE DEUTSCH LEHREN LERNEN	243
Diana Bogdanova (Russia) ON THE EXPERIENCE OF AN EXPERT IN AN OPEN ONLINE COURSE CONTEST	255
Dominika Zegzuła, Eugenia Smyrnova-Trybulska (Poland) COOPERATION OF EDUCATIONAL INSTITUTIONS WITH PUBLIC LIBRARIES IN THE CONTEXT OF ICT-SUPPORTED MEDIA AND READING EDUCATION	265
Oksana Shelomovska, Liudmila Sorokina, Maryna Romaniukha (Ukraine) EDUCATIONAL ONLINE RESOURCES IN TEACHING SOCIOLOGY: UKRAINIAN EXPERIENCE	291

Natalia Maria Ruman (Poland), Piotr Kubiak (Austria) INFORMATION TECHNOLOGY IN THE CONTEXT OF PEDAGOGICAL INNOVATION FOR SUSTAINABLE DEVELOPMENT. EXAMPLES OF ACTIVITIES IN POLAND AND AUSTRIA	311
CHAPTER III. : INNOVATIVE METHODS, FORMS AND TECHNIQUES IN E-LEARNING:	327
Barbara Dębska, Agnieszka Kubacka (Poland) USE OF ARTIFICIAL NEURAL NETWORKS IN THE SELECTION OF EDUCATIONAL CONTENT ON AN E-LEARNING PORTAL....	327
Hanna Gulińska, Małgorzata Bartoszewicz, Wojciech Weiss (Poland) ICT AND INFOGRAPHICS OF ORGANIC CHEMISTRY TOPICS ON THE ELEMENTARY SCHOOL LEVEL, AS A METHOD OF INCREASING TEACHING EFFECTIVITY	343
Nataliia Morze (Ukraine), Eugenia Smyrnova-Trybulska (Poland), Mariia Gladun (Ukraine) SELECTED ASPECTS OF IBL IN STEM-EDUCATION	361
Anzhela Dolzhikova, Victoria Kurilenko, Yulia Biryukova, Alina Shuldishova, Larisa Loginova (Russia) TEACHING FOREIGN LANGUAGES TO ENGINEERS: MASSIVE OPEN ONLINE COURSES (MOOC)	381
R. Robert Gajewski (Poland) ALGORITHMS, PROGRAMMING, FLOWCHARTS AND FLOWGORITHM	393
Todorka Glushkova, Stanimir Stoyanov, Asya Stoyanova-Doycheva (Bulgaria) INTERNET OF THINGS ECOSYSTEM SUPPORTING E-LEARNING	409
Dana Országhová (Slovakia) E-LEARNING APPROACH IN MATHEMATICAL TRAINING OF FUTURE ECONOMISTS	427
Iwona Mokwa-Tarnowska, Magdalena Roszak, Barbara Kołodziejczak (Poland) ONLINE COLLABORATIVE PROJECTS TO ENHANCE SOFT SKILLS	443

Miroslav Kamenský, Eva Králiková, Jozefa Červeňová (Slovakia) EMPLOYING REMOTE ACCESS TEACHING SYSTEM FOR DIODE MEASUREMENT	465
Anna Czaja (Poland) IMPLEMENTING SP4CE LEARNING ROOMS CONCEPT AND AUTODESK ONLINE CERTIFICATION IN THE PREPARATION OF A NEW GENERATION OF ENGINEERS	477
Nadiia Balyk, Galyna Shmyger (Ukraine) DEVELOPMENT OF DIGITAL COMPETENCES OF FUTURE TEACHERS	487
Yuriy Horoshko, Andrii Kostiuhenko, Hanna Tsybko (Ukraine) METHODOLOGICAL APPROACHES TO THE SELECTION OF LEARNING MANAGEMENT SYSTEMS FOR USE IN THE EDUCATIONAL PROCESS	501
Anna Porczyńska-Ciszewska, Magdalena Kraczla, Anna Wziętek-Staśko (Poland) EXPERIENCING HAPPINESS AND COPING WITH STRESS AS THE KEY FACTORS IN THE DEVELOPMENT OF INTELLIGENT ORGANISATIONAL CULTURE IN ENTERPRISES APPLYING THE IDEA OF E-LEARNING	515
Svetlana Skvortsova, Maryna Haran (Ukraine) THE CONSTRUCTOR OF MULTIMEDIA LECTURE PRESENTATIONS AS A MEANS OF STUDYING THE DISCIPLINE "METHODOLOGY OF TEACHING MATHEMATICS AT PRIMARY SCHOOL"	531
CHAPTER IV. : EFFECTIVE DEVELOPMENT OF TEACHERS' SKILLS IN THE AREA OF ICT AND E-LEARNING	549
Paloma Paniagua Martín, Sixto Cubo Delgado (Spain) BIG DATA IN EDUCATION. ATTITUDES OF TEACHERS TOWARDS THE APPLICATION OF BIG DATA TECHNIQUES	549
Nataliia Morze, Olena Kuzminska (Ukraine) STUDENTS' DIGITAL PORTFOLIO AS A TOOL FOR DEFINING GENERIC COMPETENCES	565

Veneta Tabakova-Komsalova, Todorka Glushkova (Bulgaria) DEVELOPING THE SKILLS OF PRIMARY TEACHERS IN PROGRAMMING, ICT AND E-LEARNING	579
Rostislav Fojtík (Czech Republic) THE ROLE OF THE TEACHER IN DISTANCE EDUCATION.....	591
Nataliia Morze, Oleksandr Burov, Svitlana Spivak (Ukraine) METHODOLOGY OF RESEARCH INTO THE DYNAMIC FORMATION OF PROFESSIONALLY IMPORTANT COGNITIVE AND PERSONAL QUALITIES OF IT SPECIALTIES STUDENTS....	603
Oksana Strutynska, Mariia Umryk (Ukraine) ANALYSIS OF DEVELOPMENT LEVEL OF THE CERTAIN DIGITAL COMPETENCES OF THE UKRAINIAN EDUCATORS ...	615
Milena Janakova (Czech Republic) CONTEMPORARY IT SOLUTIONS WITH CRM KEY COMPETENCIES FOR MARKETING	639
Sébastien Ducourtioux (Poland) TRANSVERSAL SKILLS: A KEY ELEMENT DEVELOPED THROUGH HYBRID LEARNING.....	655