2021 1st International Conference on Technology Enhanced **Learning in Higher Education (TELE 2021)**

Lipetsk, Russia 24 – 25 June 2021



IEEE Catalog Number: CFP21AK8-POD **ISBN:**

978-1-6654-4397-5

Copyright © 2021 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP21AK8-POD
ISBN (Print-On-Demand):	978-1-6654-4397-5
ISBN (Online):	978-1-6654-4396-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400 Fax: (845) 758-2633 E-mail: curran@proceedings.com Web: www.proceedings.com



Table of Contents

Computing & IT Education

ON SOME POSSIBILITIES OF USING DIGITAL TECHNOLOGY IN FOREIGN LANGUAGE TEACHING AT HIGHER EDUCATION INSTITUTIONS Natalia Gerova and Vladimir Paskanny	1
MINIATURE POWER DIVIDER ON ARTIFICIAL TRANSMISSION LINES IN MODERN MARITIME COMMUNICATIONS Khiem Nguyen Khac and Hung Luu Quang	5
INTEGRATION OF SCIENCE AND EDUCATION: DIGITALIZATION AS THE BASIS FOR INTEGRATED INTERDISCIPLINARY LEARNING Dmitry Kononov	9
INNOVATIONS IN TEACHING NETWORK-BASED PLANNING Vladimir Mushrub and Alexander Vybornov	14
OPPORTUNITIES OF DIGITAL EDUCATION FOR SUSTAINABLE DEVELOPMENT OF SOCIETY Sergey Barkalov, Tatiana Averina and Elena Avdeeva	17
INFORMATIZATION AS A CONDITION FOR THE DEVELOPMENT OF ACADEMIC DISCIPLINES BY STUDENTS OF A HIGHER EDUCATIONAL INSTITUTION Elena Burlakova, Svetlana Kachalova, Inna Muzyleva and Liubov Iazykova	20
ON THE DEVELOPMENT OF THE CONCEPT OF INNOVATIVE TRAINING OF FUTURE TEACHERS OF INFORMATICS IN THE CONDITIONS OF DIGITAL TRANSFORMATION OF SOCIETY Yulia Bogatyreva and Alexandr Privalov	26
ANALYSIS AND FORECASTING OF THE MARKET OF EDUCATIONAL SERVICES OF THE REGION Irina Kashirina, Yulia Bondarenko and Tatiana Azarnova	30
INNOVATIVE INTELLIGENT TECHNOLOGIES AND INFORMATION SECURITY IN THE TRAINING OF DOCTORS Valentina Goryunova, Tatiana Goryunova and Igor Kukhtevich	35
MEDIA LITERACY AND MEDIA EDUCATION Viktar Kazachonak and Alexander Rusakov	40
APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE NETWORK INTERACTION OF EDUCATIONAL INSTITUTIONS, ENTERPRISES AND ORGANIZATIONS Igor Kozyr, Aleksey Komolikov and Sergey Kuzenkov	43
STUDENT RESEARCH PROJECT: DEVELOPMENT OF AN INTERACTIVE TERMINAL FOR THE SELECTION AND SALE OF CAR ELECTRONICS <i>Gramudin Abdulgalimov</i>	46
DIGITAL RESOURCES FOR VERIFYING PLAGIAT DOCUMENTS AT A HIGHER EDUCATION INSTITUTION: STANDARDIZATION ISSUES AND SPECIFICATIONS Natalia Pachina, Valeria Orobinskaya, Alexander Pachin and Dmitriy Konovalov	50

ASPECTS OF USING INTELLIGENT CLOUD TECHNOLOGIES IN PROFESSIONAL TRAINING OF GENERAL PRACTITIONERS Igor Kukhtevich, Valentina Goryunova and Tatyana Goryunova	53
IMPLEMENTATION OF THE "CLOUD TECHNOLOGIES IN EDUCATION" SUPPLEMENTARY VOCATIONAL EDUCATION PROGRAM Mariya Stupina	58
RELEVANT LEGAL ASPECTS OF SUSTAINABLE TECHNOLOGIES OF THE DIGITAL ECONOMY IN THE EDUCATIONAL ORGANIZATION <i>Natalia Kyzovleva and Anna Samoilova</i>	62
DIGITAL TRANSFORMATION OF THE MANAGEMENT OF THE POLYPROFESSIONAL TRAJECTORY OF THE CONSTITUENT ENTITY OF EDUCATION Natalia Pachina, Irina Polyakova, Olga Blinnikova and Alyona Ryazhenova	65
DIGITAL TECHNOLOGIES FOR CONTINUING EDUCATION USING FOREIGN LANGUAGE LEARNING Elena Rezak and Ellina Vikhtenko	68
DEVELOPMENT OF NONHOLONOMIC WHEELED MOBILE ROBOT MODEL FOR APPLYING TIME-EFFICIENT CONTROL STRATEGY IN COMPETITIVE MOBILE ROBOTICS Sergey Kondratyev, Vladimir Pikalov and Artem Muravyev	71
AUTOMATION OF PROCEDURES OF CLASSIFICATION OF SERVICE STAFF FOR COMPLEX MULTIFUNCTIONAL PROCESSES Andrey Korneev, Tamara Lavrukhina, Tatyana Smetannikova and Andrey Strukov	76
SEARCH FOR A NEW PARADIGM OF EDUCATION AND ARTIFICIAL INTELLIGENCE. PLACE AND ROLE OF ARTIFICIAL INTELLIGENCE IN THE NEW EDUCATION SYSTEM Igor Vostroknutov, Sergey Grigoriev and Lev Surat	80
ON SOME RESULTS OF THE WORK OF THE INFORMATION SYSTEM FOR MONITORING RESEARCH ACTIVITIES OF A UNIVERSITY Viktoria Dorofeeva and Yuriy Fedyaev	83
MONITORING SAFETY OF SUBJECTS' ACCESS IN INFORMATION LEARNING SYSTEM Inessa Vorobeva	87
INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE TRAINING OF STUDENTS MAJORING IN APPLIED MATHEMATICS AND COMPUTER SCIENCE Elena Kuznetsova, Tatiana Fomina, Faina Golovaneva and Natalia Zhbanova	90
DIGITAL TECHNOLOGIES IN PRESCHOOL EDUCATION: RISKS AND PROSPECTS Marija Lazareva and Lyudmila Zvezda	93
EDUCATIONAL TECHNOLOGIES FOR ADVANCED TRAINING IN FPGA DESIGN Ilya Tarasov	96
AUGMENTED AND VIRTUAL REALITY TECHNOLOGIES IN EDUCATION Inna Muzyleva, Liubov Iazykova, Alina Gorlach and Yakov Gorlach	99

THE ROLE OF DIGITALIZATION IN THE PROCESS OF TEACHING A FOREIGN LANGUAGE AND IN THE FORMATION OF A FOREIGN LANGUAGE COMPETENCE OF FUTURE SPECIALISTS Natalya Saraeva	104
DEVELOPING A DYNAMIC NUMBER CARD GAME TO SUPPORT STUDENTS' NUMBER SENSE: A PRELIMINARY STUDY Zetra Hainul Putra, Windi Wulandari, Mahmud Alpusari and Neni Hermita	107
AUTOMATIC GENERATION OF PROGRAMMING EXERCISES Peter Sovietov	111
TRENDS AND PROSPECTS OF THE EDUCATIONAL TECHNOLOGIES DEVELOPMENT Andrey Voronov, Gennady Voronov, Dmitry Voronov and Ivan Nefedov	115
Workplace and Industry-Based Learning	
OBSTACLES AND LIMITATIONS IN THE USE OF MODERN TECHNOLOGIES IN HIGHER EDUCATION DURING THE COVID-19 PANDEMIC IN SLOVAKIA Radoslav Štefančík and Eva Stradiotova	119
TRENDS IN THE DEVELOPMENT OF CONTINUING EDUCATION: A REGIONAL ASPECT Larisa Moskovtseva, Olga Mitrofanova and Olga Zhuravleva	123
UNDERSTANDING P-VALUE THROUGH EXPERIMENTS Nikolai Mishachev and Anatoly Shmyrin	129
RESEARCHING THE USAGE OF BLOCKCHAIN IN HIGHER EDUCATION Anton Dziatkovskii and Uladzimir Hryneuski	133
SOCIAL NETWORK VALUATION USING THE DISCOUNTING CASH FLOW METHOD Oleg Malafeyev, Ksenya Yupatova, Irina Zaitseva, Alexander Shuvaev, Anna Dolgopolov and Tatyana Gurnovich	139
THE TECHNOLOGY OF COLLABORATION BETWEEN SCIENCE AND GENERAL EDUCATION IN CASE OF THE ACTIVITIES OF A PUBLIC ORGANIZATION Natalia Sofronova, Anatoly Belchusov, Emilia Ignatieva and Yuri Grigoriev	143
REQUIREMENTS FOR ELECTRONIC EDUCATIONAL RESOURCES FOR BLENDED LEARNING IN TOPOLOGICAL OPTIMIZATION DISCIPLINE Oksana Nass and Svetlana Nass	147
CORPUS LINGUISTICS TECHNOLOGY IN TEACHING FOREIGN LANGUAGES Marina Matyteina and Tatiana Grigoryanova	152
IMPLEMENTATION OF INTERDISCIPLINARY RELATIONS ON THE EXAMPLE OF PROFESSIONAL TRAINING IN "BUSINESS INFORMATICS" IN THE CONTEXT OF A PANDEMIC	155
Maria Ushakova, Aleksey Gabalin and Irina Parshina	
SELECTION OF LEARNING PATH OF SPECIALIST TEAM FOR ACTIONS IN EMERGENCY SITUATIONS Valery Menshikh, Elena Sereda and Alexey Kopylov	160
LEARNING ACTIVITIES FOR MASTERING FLEXIBLE ROOF CONSTRUCTIONS Andrei Chesnokov, Vitalii Mikhailov and Ivan Dolmatov	165

INTRODUCING DYNAMIC NEIGHBORHOOD MODELS INTO THE EDUCATIONAL PROCESS Irina Sedykh and Vladimir Istomin	171
DEVELOPING RESEARCH SKILLS DURING ACTIVE LEARNING HYBRID BUILDING CONSTRUCTIONS Andrei Chesnokov, Vitalii Mikhailov and Ivan Dolmatov	176
STATE STRATEGY FOR ADULT EDUCATION Elena Kozlova and Maxim Novak	182
STABILIZATION OF NEIGHBORHOOD SYSTEMS WITH THE INTRODUCTION OF DYNAMIC COEFFICIENTS OF NEIGHBORHOOD FUZZINESS Alexey Yartsev and Anatoly Shmyrin	187
FAULT ANALYSIS SKILLS IN RESEARCH AND DEVELOPMENT OF ROOF CONSTRUCTIONS WITH POLYMER MEMBRANE SHELL Andrei Chesnokov, Vitalii Mikhailov and Ivan Dolmatov	190
MULTI-CRITERIA MODEL OF EVALUATING THE EFFECTIVENESS OF IT- DEPARTMENT EMPLOYEES Elena Matrosova, Anna Tikhomirova, Natalia Myklyuchenko and Anastasia Devyatkina	195
COMPETENCY FORMATION OF A UNIVERSITY GRADUATE: MODEL FOR ASSESSMENT Ekaterina Demenkova, Lyudmila Khaimina, Maksim Demenkov, Larisa Zelenina, Evgenii Khaimin and Inga Zashikhina	201
AN INNOVATIVE CONCEPT FOR THE CONSTRUCTION OF SHORT BASIC MATH COURSES Irina Sukhorukova, Alexandr Vybornov and Vladimir Mushrub	205
APPLICATION OF DATA MINING METHODS TO DEVELOPMENT OF QUALIFICATION FRAMEWORK STANDARDS Vsevolod Chernyshenko	209
TRAINING IN PROTECTIVE DRIVING OF A CAR AT A LARGE INDUSTRIAL ENTERPRISE Sergey Lyapin, Yulia Rizaeva, Dmitry Kadasev and Maria Shishkova	216
DIGITAL LITERACY IN THE ASPECT OF CONTINUING TEACHER'S EDUCATION Jessica Gorodova, Nataliya Pachina, Svetlana Tkachenko and Georgy Pachin	220
THE STATE OF HEALTH AND DYNAMICS OF THE ATTITUDE OF STUDENTS TO ITS STRENGTHENING BY MEANS OF PHYSICAL CULTURE Natal'ya Savvina, Alexander Volokitin and Ekaterina Vysotskaya	224
APPLICATION OF ROUTINE CALCULATIONS FOR ORGANIZATION OF INDEPENDENT WORK OF STUDENTS IN APPLIED AREAS OF TRAINING USING DIGITAL AND INFORMATION TECHNOLOGIES Vera Rusakova, Alexander Rusakov and Ekaterina Savateeva	227
THE SAFETY CONCEPT AND A NEW APPROACH TO WORKER SAFETY TRAINING Anton Butin, Maria Markova and Mikhail Shipulin	231

INSTITUTIONAL CAPACITY OF INFORMATIZATION OF EDUCATION Alexander Rusakov	235
ON THE ISSUE OF THE PROBLEMS OF LEGAL OBLIGATION IN THE WELFARE STATE IN THE CONTEXT OF A PANDEMIC <i>Nelli Gridchina and Sergey Zavyalov</i>	238
ON THE PROSPECTS OF INCREASING PUBLICATION ACTIVITY IN THE 'INFORMATIZATION OF EDUCATION' FIELD <i>Olga Kirillova</i>	243
Open, Flexible & Distance Learning	
DYNAMICS IN THE SPHERES OF STUDENT'S INDIVIDUALITY DURING THE PANDEMIC COVID-19 <i>Svetlana Nesyna</i>	247
SCREEN TIME AND HEALTH OF CHILDREN AND ADOLESCENTS Iskandar Mukhametzyanov	252
COLLABORATIVE LEARNING TECHNOLOGIES FOR PROJECT WORK Alexander Galkin, Semen Blyumin, Pavel Saraev and Vladimir Pimenov	256
USE OF HYBRID LEARNING IN SCHOOL EDUCATION IN FRANCE Vasilina Kastornova and Natalia Gerova	260
ENHANCEMENT OF MULTIMEDIA PROGRAMS TO IMPROVE THE QUALITY AND EFFICIENCY OF DISTANCE EDUCATION Muxabbatxon Mirzakarimova and Rabim Fayziev	265
DESIGNING ECO-CULTURAL DEVELOPMENT OF STUDENTS' PERSONALITY IN THE DIGITAL EDUCATIONAL ENVIRONMENT Yulia M. Grishaeva, Olga Yu. Matantseva, Alexander V. Gagarin, Iosif V. Spirin, Karina V. Vishnevskaya and Tatiana L. Mitrofanova	268
SOFTWARE SUPPORTS FOR REMOTE EXAMINATION ON MATHEMATICAL DISCIPLINES IN HIGHER EDUCATION Yuri Lubenets and Artem Miroshnikov	274
THE USE OF DISTANT TECHNOLOGIES FOR INTERNATIONAL SUMMER SCHOOL – 2020 AND WINTER SCHOOL – 2021 Denis Kovrizhnykh, Olga Ignatenko and Yuliya Fateeva	278
OPEN MOODLE TOOLS FOR A PSYCHOLOGICAL ASSESSMENT Anastasiya Zyamzina, Vladimir Parkhomenko, Alexander Schukin and Irina Bondarchuk	282
ANALYSIS OF THE FEATURES OF THE INTRODUCTION OF DISTANCE LEARNING DURING THE CORONAVIRUS PANDEMIC Aleksandr Bovkun, Larisa Kleymenova, Oleg Arkhipkin, Yulia Skorobogatova and Anna Gorban	288
THE PRACTICE OF IMPLEMENTING DISTANCE LEARNING DURING THE PANDEMIC: A REGIONAL ASPECT Larisa Moskovtseva, Olga Zhuravleva and Olga Mitrofanova	292

TECHNOLOGICAL EFFECTIVENESS OF THE RESULTS OF COMPUTER SCIENCE EDUCATION IN SECONDARY SCHOOL AS A FACTOR OF THE QUALITY OF EDUCATION IN THE DISTANCE LEARNING SYSTEM Makhmasharif Mirzoev, Oksana Shevchenko and Islomidin Dzhonmakhmadov	297
PROPORTIONAL OPTIMIZATION OF TRADITIONAL AND ONLINE FORMS OF TECHNICAL SPECIALTIES STUDYING IN HIGHER EDUCATIONAL Aleksey Popov, Olga Suslova, Aleksey Malakhov and Egor Budyukin	300
NATURE MANAGEMENT MODELS AS A TOOL FOR FORMING OPTIMISATION THINKING OF STUDENTS Serge Chernyshenko	303
LEGAL ASPECTS AND ISSUES OF E-LEARNING IN THE ARAB REGION Elena Trikoz, Anna Samoilova and Karina Sibagatullina	308
IOT IN EFFECTIVE DISTANCE LEARNING PROCESS Rodion Yakoubovsky and Vilyam Saryan	311
ONLINE LEARNING OF COMPUTER SCIENCE TO SCHOOLCHILDREN USING INTERACTIVE EDUCATIONAL POSTERS Natalia Kulikova, Elena Danilchuk, Alexey Sergeev and Anna Lukicheva	315
DISTANCE LEARNING TECHNOLOGIES AND DIGITAL LEARNING IN THE LEGAL FIELD OF THE EDUCATIONAL ENVIRONMENT. PROBLEMS AND PROSPECTS. Nelli Gridchina and Sergey Zavyalov	321
TRANSFORMATION OF THE INSTITUTE OF EDUCATION IN THE CONTEXT OF DIGITALIZATION Tatiana Bolshunova, Nataly Grigorieva and Olga Maslova	325
OPTIMIZATION OF THE SUBSYSTEM FOR THE MOVEMENT OF ELECTRONIC DOCUMENTS IN EDUCATIONAL ORGANIZATION Igor Lvovich, Yakov Lvovich, Andrey Preobrazhenskiy, Yuriy Preobrazhenskiy and Oleg Choporov	328
INTERACTIVE TRAINING MODEL OF THE THERMAL MODE FOR A HOT ROLLING MILL Maria Oreshina, Vladimir Pimenov and Monika Dabas	333
SCHOOL RESEARCH ACTIVITY AS A FORM OF EARLY MATHEMATICAL TRAINING Semen Blyumin, Elena Khabibullina, Tatiana Menshikova and Anton Sysoev	336
TEACHING SCHOOLCHILDREN TO PROGRAM IN PYTHON ENVIRONMENT IN ONLINE COMMUNITIES Sergey Kasyanov and Svetlana Komissarova	340