

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
H.S. Skovoroda Kharkiv National Pedagogical University
SSI “Institute of Education Content Modernization” (Ukraine)
Babeş-Bolyai University (Romania)
Ludwigsburg University of Education (Germany)
Mid-West State University – UNICENTRO (Brazil)
Northeastern University of Boston (the USA)
Sinop University (Turkey)

CONFERENCE PROCEEDINGS

**IV International Scientific and
Practical Conference**

EUROPEAN STUDIES. LEARNING AND TEACHING: IN THE WORLD OF TECHNOLOGIES

»
**Kharkiv,
Ukraine –
Cluj-Napoca,
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November 12,
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**To the 80th Anniversary of the
University Being Named after H. S. Skovoroda**

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November 12, 2025

**Kharkiv
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Костікова І. –	доктор педагогічних наук, професор, Харківський національний педагогічний університет імені Г. С. Сковороди.
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CONTENTS

HUMANITARIAN SECTION

ABAZINA, Liudmyla

THE HISTORY OF THE EMERGENCE OF SOCIAL PARTNERSHIP AS A PEDAGOGICAL PHENOMENON	20
---	----

ALTANETS, Oleksandra

INTEGRATING DIGITAL TECHNOLOGIES INTO ENGLISH LANGUAGE TEACHING TO YOUNG LEARNERS.....	23
---	----

ARKHIPOVA, Ksenia, & SPIESIVTSEVA Iryna

THE IMPORTANCE OF MATHEMATICAL LANGUAGE IN THE CLASSROOM...	24
---	----

BAI, Wen Zhe

THE ROLE OF DIGITAL TECHNOLOGIES IN EDUCATIONAL MANAGEMENT AT CHINESE UNIVERSITIES	25
---	----

BELETSKA, Maryna, & GOLENKOVA, Yuliia

METHODOLOGICAL FEATURES OF DESIGNING A FITNESS PROGRAM USING TRX FOR WOMEN	27
---	----

BELOZOROVA, Natalia, & BLAZHKO, Olena

THE IMPACT OF <i>INFORMATION AND COMMUNICATION TECHNOLOGIES</i> ON THE DEVELOPMENT OF LEARNING MOTIVATION IN YOUNGER SCHOOLCHILDREN	28
---	----

BELOZOROVA, Natalia, & IVANOV, Vladislav

IMPROVING THE MODEL OF THE INFORMATION EDUCATIONAL ENVIRONMENT OF PRIMARY SCHOOLS THROUGH DIGITISATION.....	29
--	----

BELOZOROVA, Natalia, & KHARITYUK, Nataliia

THE IMPACT OF INTERACTIVE ELECTRONIC RESOURCES ON THE DEVELOPMENT OF CREATIVE THINKING IN YOUNGER SCHOOLCHILDREN	30
--	----

BELOZOROVA, Natalia, & MAZHUGA, Vladimir

USING GOOGLE WORKSPACE FOR EDUCATION CLOUD SERVICES IN COMPUTER SCIENCE EDUCATION	31
--	----

BELOZOROVA, Natalia, & SEMENOV, Alexey

CREATIVE DIGITAL TOOLS FOR CREATING EDUCATIONAL CONTENT IN COMPUTER SCIENCE	32
--	----

BELOZOROVA, Natalia, & SHAPOVALOVA, Daryna

USING GAMIFICATION TECHNIQUES TO DEVELOP THE CREATIVE ABILITIES OF YOUNGER SCHOOLCHILDREN DURING LESSONS IN THE NEW UKRAINIAN SCHOOL.....	33
---	----

BELOZOROVA, Natalia, & TKACHENKO, Yulia

EXPERIENCE OF IMPLEMENTING STEAM EDUCATION IN MODERN PRIMARY SCHOOLS	34
---	----

BERESTOK, Olha	
BLENDED LEARNING AS SOLUTION TO NEGATIVE EFFECTS OF INCORPORATING INFORMATION TECHNOLOGIES IN EDUCATIONAL PROCESS.....	35
BESARAB, Andrii	
COMPUTER TECHNOLOGY FOR LEARNING DURING WAR IN KHARKIV.....	36
BEZNOS, Yevgeny, NAGAYEV, Viktor, & KUSKOVA, Svitlana	
TECHNOLOGICAL FOUNDATIONS OF PROFESSIONAL TRAINING OF FOREIGN ECONOMIC ACTIVITY MANAGERS IN THE CONDITIONS OF DIGITAL TRANSFORMATIONS.....	37
BIRCHENKO, Nataliia, & OSTAPENKO, Roman	
ACADEMIC INTEGRITY AS THE BASIS FOR PROFESSIONAL DEVELOPMENT AND SCIENTIFIC RELIABILITY.....	38
BOCHAROVA, Yulia	
THE USE OF <i>VR/AR TECHNOLOGIES</i> FOR SIMULATING CLINICAL CASES IN THE TRAINING OF FUTURE PSYCHOLOGICAL COUNSELORS.....	39
BÖHMER, Anselm, DILLIG, Marcella, ISSO, Illie, & ORHAN, Dilara	
Harnessing the Bot: Prompt Engineering as a Catalyst for Inclusive and Intersubjective Learning in Higher Education.....	40
BOLBIT, Yuliia	
DIGITAL TECHNOLOGIES IN TRANSLATION: CLASSIFICATION, FUNCTIONS, AND APPLICATIONS.....	42
BONASSA, Melissa de Matos, & TREVISOL, Juliane Regina	
TASKS AND DIGITAL TECHNOLOGIES: THE USE OF TIKTOK FOR LANGUAGE TEACHING AND LEARNING	43
BONCHUK, Olha	
INTEGRATION OF ARTIFICIAL INTELLIGENCE INTO TEACHER PRACTICE	44
BONDARENKO, Artem	
MILITARY TERMINOLOGY IN ENGLISH: APPLICATION IN UKRAINIAN CONTEXT	45
BORTOLOTTI, Fernanda Seidel	
LANGUAGE DEVELOPMENT AT EARLY CHILDHOOD: THE ORAL COMMUNICATION AND AN INTRODUCTION TO THE WORLD OF WRITING.....	46
BOYKO, Artem, & GOLENKOVA, Yuliia	
METHODOLOGICAL APPROACHES TO IMPROVING REACTION SPEED IN BOXERS.....	47
BOZHKO, Yuliia	
YOUTUBE AND TIKTOK AS PLATFORMS FOR LEARNING PHRASAL VERBS THROUGH CONTEXT.....	48
BREDIKHINA, Mariya	
MODERN APPROACHES TO INTERNATIONAL EXCHANGE OF EXPERIENCE IN EUROPEAN STUDIES IN THE DIGITAL AGE.....	49

BRIUKHOVYCH, Mariia, & GULICH, Olena

HOW TO MOTIVATE STUDENTS TO LEARN: THE KEY TO EFFECTIVE
EDUCATION.....51

BUDUS, Olga

THE IMPACT OF TECHNOLOGY ON THE DEVELOPMENT OF
INTERCULTURAL COMMUNICATION IN THE CONTEXT OF EUROPEAN
STUDIES52

BUT, Anastasiia, & MUKHINA, Tetiana

MOBILE APPLICATIONS AS A TOOL FOR DEVELOPING DIGITAL LITERACY IN
PRIMARY SCHOOL STUDENTS.....53

CHALA, Yuliia

Psychological Requirements for University Lecturers in the Context of a New
Stage of Educational Digitalization..... 54

CHECHOTKIN, Igor, & PONOMAROVA, Nataliia

CONDITIONS FOR IMPLEMENTING THE PROJECT METHOD FOR FORMING
STUDENTS' LEARNING MOTIVATION.....55

CHERNEGA, Ivan

ACADEMIC MOBILITY AND DISTANCE TECHNOLOGIES: NEW
OPPORTUNITIES FOR EUROPEAN STUDIES..... 56

CHERNIHA, Yaroslav

EDUCATION OF THE FUTURE: EUROPEAN STUDIES IN THE WORLD OF
DIGITAL TECHNOLOGIES.....57

CHERNONKOV, Yaroslav

INNOVATIVE DIGITAL PRACTICES IN LANGUAGE EDUCATION: FROM
THEORY TO EUROPEAN CLASSROOM..... 58

CHERVONYI, Sergii, & NAGAYEV, Viktor

FORMATION OF MANAGEMENT COMPETENCE OF TANK UNIT
COMMANDERS IN THE PROCESS OF PROFESSIONAL TRAINING:
TECHNOLOGICAL ASPECT 60

CHETVERYK, Victor

THE ROLE OF *GENERATIVE AI* IN DEVELOPING PERSONALIZED
MICROLEARNING MODULES FOR LANGUAGE LEARNER 61

CRUZ, Poliana, & TREVISOL, Juliane

TASKS AND DIGITAL TECHNOLOGIES: INVESTIGATING THE USE OF DIGITAL
RESOURCES WITH MUSIC FOR FOREIGN LANGUAGE LEARNING..... 62

DEGTIAROVA, Albina, & MUKHINA, Tetiana

INTEGRATION OF DIGITAL TECHNOLOGIES IN PRIMARY SCHOOL:
EUROPEAN EXPERIENCE AND UKRAINIAN PERSPECTIVES..... 63

DIDENKO, Roman

PHYSICS AND DIGITAL TECHNOLOGIES IN SECONDARY EDUCATION64

DIDUK, Inna, & RULA, Natalia

VOLODYMYR VERNADSKY'S PLACE IN THE MODERN UKRAINIAN
INTELLIGENTSIA..... 65

DMYTRIACHA, Roman, & VOSTROKNUTOV, Leonid	
MODERN APPROACHES TO THE DEVELOPMENT OF GENERAL PHYSICAL PREPAREDNESS IN ELITE BOXING	66
DOBROVOLSKA, Svitlana	
ARTIFICIAL INTELLIGENCE AS A FACTOR IN THE MODERNIZATION OF THE TRANSLATION INDUSTRY	67
DOBRUNOV, Oleksii	
PEDAGOGICAL TOOLKIT FOR DEVELOPING STUDENTS' SOCIAL SKILLS.....	68
DULKAI, Andrii	
BLENDED AND VIRTUAL MOBILITY IN EUROPEAN HIGHER EDUCATION....	69
FEDINA, Diana	
INCLUSIVE EDUCATION AND DIGITAL EQUALITY IN EUROPE.....	70
FEDORCHENKO, Anastasiia, & MUKHINA, Tetiana	
INTEGRATING DIGITAL TECHNOLOGIES IN PRIMARY EDUCATION: ENHANCING LEARNING AND ENGAGEMENT IN YOUNG LEARNERS	71
FOMENKO, Tetiana	
FOSTERING STUDENTS' SOFT SKILLS VIA ONLINE FOREIGN LANGUAGE LEARNING.....	72
FROLOVA, Olena	
ARTIFICIAL INTELLIGENCE AS AN INTEGRATIVE TOOL IN <i>ESP</i> LANGUAGE EDUCATION.....	73
GULICH, Olena	
PSYCHOLOGICAL CHALLENGES IN LEARNING ENGLISH: ONLINE VS OFFLINE FORMATS.....	74
GULICH, Igor	
STRUCTURE AND CONTENT OF TRAINING CAMPS FOR ARCHERS AT THE STAGE OF BASIC PREPARATION	75
GUTSAN, Tetiana, & GOLENKOVA, Yuliia	
METHODOLOGICAL APPROACHES TO ENHANCING COORDINATION ABILITIES IN YOUNG GYMNASTS THROUGH CLASSICAL CHOREOGRAPHY	76
HÄBLER, Camilla	
EXPLORING LITERARY AND SUSTAINABILITY COMPETENCE: TEACHER- GUIDED LITERARY CONVERSATIONS IN PRIMARY SCHOOL	77
HÄBLER, Camilla	
THE POTENTIAL FOR ENGAGEMENT IN READING CHALLENGING LITERARY TEXTS – TEACHERS' INTERPRETATIONS	78
HÄBLER, Camilla	
WE ARE EACH OTHER'S WORLD – REFLECTIONS ON COMMUNITY IN H. C. ANDERSEN'S " <i>THE UGLY DUCKLING</i> " (1844).....	79
HALAIBIDA, Oksana, & MARCHYSHYNA, Alla	
COGNITIVE-COMMUNICATIVE APPROACH TO LANGUAGE LEARNING AND TEACHING.....	80

HAUG, Sarah	
ENRICH NOT REPLACE	81
HLUSHCHENKO, Maksym, & KRAVCHUK, Tetiana	
SPECIFIC FEATURES OF STRENGTH FITNESS EXERCISE SELECTION FOR THE GENERAL PHYSICAL PREPARATION OF FEMALE ATHLETES IN AEROBIC GYMNASTICS.....	82
HOLENKOV, Anton	
CHARACTERISTICS OF THE STAGES OF THE TECHNOLOGY FOR PREPARING FUTURE PHYSICAL EDUCATION TEACHERS FOR ANIMATION AND LEISURE ACTIVITIES.....	83
HOLZWARTH, Jan	
THIS IS WHY I WANT TO BECOME A PHYSICAL EDUCATION TEACHER	84
HONCHAROVA, Olha	
INTEGRATING GAMIFICATION AND PROJECT-BASED LEARNING TO TEACH PROFESSION-ORIENTED SPEAKING SKILLS	85
HORDIIENKO, Oksana	
THE THEME OF WAR IN CONTEMPORARY UKRAINIAN LITERATURE	86
HRONA, Natalia	
DIGITAL TRANSFORMATION OF LANGUAGE EDUCATION: INTEGRATION OF ARTIFICIAL INTELLIGENCE IN SPECIALIST TRAINING	87
HRYNCHENKO, Ihor, & ZMIIIEVSKYI, Vadym	
THE IMPACT OF CONCENTRATED AND DISTRIBUTED ALLOCATION OF COORDINATION TRAINING MEANS ON THE DEVELOPMENT OF MOTOR ABILITIES IN YOUNG HANDBALL PLAYERS AGED 11-13 YEARS.....	88
HRYNCHENKO, Oksana	
THE INFLUENCE OF PILATES EXERCISES ON BALANCE DEVELOPMENT IN 8-10-YEAR-OLD GYMNASTS AT THE STAGE OF SPECIALIZED BASIC TRAINING	90
HURKINA, Olena	
CRITICAL THINKING IN THE SYSTEM OF TRAINING FUTURE TEACHERS.....	91
HUSEINOV, Rustam, & GOLENKOVA, Yuliia	
THE ROLE OF INTERVAL TRAINING USING SPECIALIZED EQUIPMENT IN THE MODERN TRAINING OF HIGHLY SKILLED BOXERS.....	92
IVANYSHYN, Nataliia	
CHALLENGES FOR TRANSLATORS IN THE AGE OF ICT	93
JESUS, Ediclecio, & NUNES, Rodrigo	
DIGITAL MEDIA AND COLLABORATIVE TOOLS: RESOURCES FOR ENGLISH LANGUAGE LEARNING.....	94
KABUS, Natalia, & PAVLOVSKA, Liudmyla	
FACTOR STRUCTURE OF CITIZENS' RESILIENCE UNDER MARTIAL LAW	95

KACHALO, Anastasiia	
LEARNING ENGLISH THROUGH GAMES: TYPES AND METHODS OF APPLICATION	96
KALASHNYK, Oksana	
MICROLEARNING IN COURSES OF UKRAINIAN FOR PROFESSIONAL PURPOSES	97
KALUGIN, Illia	
ORGANIZATION OF UNIVERSITY STUDENTS' ACADEMIC MOBILITY	98
KASHENA, Alona	
USING INTERACTIVE TECHNOLOGIES IN FOREIGN LANGUAGE TEACHING	99
KASHYRINA, Iryna	
TEACHING PHRASEOLOGICAL UNITS: TRANSLATOR METHODOLOGY	100
KAZACHINER, Olena	
USING FAIRY TALE AT DIFFERENT STAGES OF THE CONSULTATION PROCESS	101
KHRABAN, Tetiana	
CHALLENGES AND PROSPECTS FOR TEACHING ENGLISH IN CONTINUING EDUCATION	102
KHYZHA, Ivan	
MYTH AND REALITY IN POST-MAO NARRATIVES	103
KHYZHNIAK, Hanna	
THE DEVELOPMENT OF STUDENTS' CRITICAL THINKING IN THE AGE OF MEDIA INFLUENCE: PRELIMINARY RESULTS OF THE STUDY «DEMOCRACY, TOLERANCE, MEDIA AND CIVIC RESPONSIBILITY THROUGH THE EYES OF YOUTH AND TEACHERS»	104
KIPROVA, Valentyna	
“THE GETHSEMANE GARDEN” by IVAN BAHRYANYI: THE REPRESENTATION OF RESISTANCE TO THE TOTALITARIAN REGIME	105
KIRIIACHENKO, Iryna	
DEVELOPMENT AND FORMATION OF THE PRESCHOOL EDUCATION SYSTEM IN CHINA	106
KOCHYN, Vladyslav	
DEVELOPING DIGITAL LITERACY FOR FUTURE LAW ENFORCEMENT OFFICERS IN THE CONTEXT OF CYBERPEDAGOGICAL APPROACHES	107
KOLESNYK, Natalia	
ONLINE LEARNING PLATFORMS AND CROSS-CULTURAL EXCHANGE IN EUROPEAN STUDIES	108
KOLYAKA, Oleksandra	
METHODS FOR DEVELOPING CRITICAL THINKING IN ENGLISH LANGUAGE LEARNING	109
KOMAR, Iryna	
THE ROLE OF A FOREIGN LANGUAGE IN VOLUNTEER ACTIVITIES	110

KONONENKO, Dmytro, & KRAVCHUK, Tetiana	
STEP PLATFORM AS AN EFFECTIVE TOOL FOR DEVELOPING SPEED AND STRENGTH ABILITIES IN SPORTS AEROBICS.....	111
KOROBENIK, Vitalii, & MASLOV, Maksym	
USE OF A COMPREHENSIVE APPROACH IN DEVELOPING SPEED-POWER ABILITIES OF YOUNG MIDDLE-DISTANCE RUNNERS.....	112
KOROTIN, Anatolii	
THE BEST PRACTICES OF DIGITAL INCLUSION IN EUROPEAN EDUCATIONAL SYSTEM.....	113
KOSTETSKA, Halyna	
FLIPPED CLASSROOM AS AN INNOVATIVE STRATEGY IN FOREIGN LANGUAGE TEACHING.....	114
KOSTIKOVA, Ilona	
UNDERGROUND SCHOOLS IN KHARKIV: NEW IDEAS AND TECHNOLOGIES	115
KOVALENKO, Andrii	
METHODS OF DEVELOPING SKELETAL MUSCLE HYPERTROPHY IN BODYBUILDING	116
KRAVCHENKO, Hanna	
TRAINING PROFESSIONAL EDUCATION TEACHERS FOR WORK IN DIGITAL ENVIRONMENT.....	117
KRYVOSHEI, Kyrylo	
PSYCHOSOCIAL FACTORS OF DISTRESS AMONG UNIVERSITY STUDENTS IN THE CONTEXT OF ARMED CONFLICT	118
KSHEVETSKIY, Volodymyr	
EVALUATING THE IMPACT OF THE “PROJECT-BASED LEARNING WITH ETWINNING/ERASMUS+ FOR INTERCULTURALITY” COURSE ON INTERCULTURAL AND DIGITAL COMPETENCES	119
KUPCHANKO, Dmytro	
EUROPEAN DIGITAL EDUCATION POLICY: STRATEGIC DIRECTIONS AND IMPLEMENTATION	120
KUSKOV, Mykyta, & KUSKOVA, Svitlana	
TECHNOLOGICAL APPROACH TO THE DEVELOPMENT OF THE EDUCATIONAL PROCESS.....	121
KUZA, Andrian, & MUKHINA, Tetiana	
DIGITAL COMPETENCE OF PRIMARY SCHOOL TEACHERS AS A FACTOR OF INNOVATIVE EDUCATIONAL ENVIRONMENT.....	122
LAGUTINA, Anastasia	
Possibilities of Using STEM Education during English Lessons at Primary School	123
LAVRYNOVYCH, Konstantin, & GOLENKOVA, Yuliia	
THE INFLUENCE OF MODERN FITNESS EQUIPMENT ON THE FUNCTIONAL STATE OF BOXERS IN THE BASIC TRAINING GROUP	124

LEBED, Oleksii	
CONTENT FEATURES OF THE CONCEPT OF “PROFESSIONAL COMPETENCE OF A NATIONAL GUARD PSYCHOLOGIST”	125
LEVCHENKO, Anna	
THE USE OF <i>CLIL</i> (CONTENT AND LANGUAGE INTEGRATED LEARNING) IN PRIMARY SCHOOL	126
LEVKOPULOS, Ihor, & KRAVCHUK, Tetiana	
SPECIAL PHYSICAL TRAINING TASKS FOR FEMALE AEROBIC GYMNASTICS ATHLETES AT DIFFERENT STAGES OF TRAINING.....	127
LISNYCHA, Albina	
MODERN METHODOLOGICAL APPROACHES TO TEACHING ENGLISH IN PRIMARY SCHOOL	128
LYTKEVYCH, Yelyzaveta	
GAME-BASED AND INTERACTIVE TEACHING METHODS DURING ENGLISH LESSONS IN PRIMARY SCHOOL.....	129
LITTIKH, Marharyta	
THE PSYCHOLOGY OF TEACHING IN A TECHNOLOGICAL WORLD: A EUROPEAN CONTEXT.....	130
LIU, Gengchen	
THE CONTENT OF STATE LANGUAGE COMPETENCE FOR YOUNG LEARNERS IN THE PRC.....	131
ILBOVNYK, Yana, & PONOMAROVA, Nataliia	
SYSTEMATIZATION AND GENERALIZATION OF STUDENTS' KNOWLEDGE IN INFORMATICS AS A METHODOLOGICAL PROBLEM.....	132
LOIBL, Philipp	
ENGLISH TEACHING WITH DIGITAL MEDIA: ENHANCING STUDENT ENGAGEMENT AND LANGUAGE ACQUISITION.....	133
LOZOVA, Nataliia	
PROJECT TECHNOLOGIES IN TEACHING UKRAINIAN LITERATURE	134
LOZOVY, Vasyl	
ADVANTAGES AND DISADVANTAGES OF USING ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL SPACE OF UKRAINE	135
LUKIANENKO, Nataliia	
IMPROVING ACADEMIC WRITING SKILLS IN ENGLISH FOR UNIVERSITY STUDENTS	136
LYSENKO, Natalia, SHVARP, Nataliia, & FESENKO, Volodymyr	
APPLICATION OF <i>PBL</i> IN HIGHER EDUCATION INSTITUTIONS OF MEDICAL AND PHARMACEUTICAL PROFILE	137
LYSYTSKYI, Mykola	
SELF-EDUCATIONAL SKILLS AS THE BASIS OF STUDENTS' SELF-EDUCATIONAL COMPETENCE	138

LYTVYNENKO, Olha

MOTIVATING CADETS IN LEARNING ENGLISH FOR PROFESSIONAL
PURPOSE139

LYU, Qiang

MAIN FORMS AND METHODS OF COUNSELOR MANAGEMENT WORK IN
CHINESE COLLEGES AND UNIVERSITIES..... 140

MARCHUK, Alisa

HYBRID LEARNING IN UKRAINIAN HIGHER EDUCATION: CHALLENGES
AND PERSPECTIVES 141

MAZEPA, Iryna

FORMATION OF SOCIOCULTURAL COMPETENCE IN THE PROCESS OF
LEARNING THE ENGLISH LANGUAGE..... 142

MELO, Juliana, & FÉLIX, José

CARTOGRAPHIES OF ANCESTRAL VOICES: INDIGENOUS LITERATURES IN
ENGLISH AND BRAZILIAN LANGUAGES 143

BRUNO, Ediclecio, & MENDES, Valdiney

ENGLISH FOR ACADEMIC READING: SKILLS FOR UNIVERSITY SUCCESS ...144

MYKHAILENKO, Lina

EMPATHIC TEACHING: THE ROLE OF EMOTIONAL INTELLIGENCE IN
TEACHERS’ PROFESSIONAL PRACTICE..... 145

NAGAYEV, Viktor, & BOBLOVSKYI, Oleksandr

PHILOSOPHICAL DIMENSION OF DIGITAL TRANSFORMATIONS IN THE
CONTEXT OF HUMANIZATION OF EDUCATION 146

NAGAYEVA, Galyna

FINANCIAL COMPETENCE OF INSURED PERSONS AS THE BASIS FOR THE
FORMATION OF INSURANCE CULTURE..... 147

NAUMENKO, Elizaveta

ENHANCING MOTIVATION IN FOREIGN LANGUAGE LEARNING AMONG
YOUNG LEARNERS 148

NAZARETS, Nazar

THE TRANSFORMATION OF UNIVERSITY EDUCATION IN EUROPE UNDER
THE INFLUENCE OF ARTIFICIAL INTELLIGENCE..... 149

NEPRAN, Anastasiia

EFFECTIVE METHODOLOGIES FOR TEACHING VOCABULARY IN PRIMARY
SCHOOL ENGLISH LESSONS 150

NIKISHYNA, Anzhela

BUILDING UP CONFIDENCE ON THE WAY TO BETTER SPEAKING SKILLS...151

NIKOLAIENKO, Yuliia

ENHANCING SOFT SKILLS DEVELOPMENT THROUGH COLLABORATIVE
ONLINE INTERNATIONAL LEARNING..... 152

NOSYRYEVA, Olena

BRITISH EXPERIENCE IT EDUCATION STANDARDIZATION 153

NOVIK, Victoria

PRINCIPLES AND APPROACHES TO PLANNING ENGLISH LESSONS IN
PRIMARY SCHOOL 154

PAVLENKO, Tetyana

CYBERPSYCHOLOGY: THE INFLUENCE OF DIGITAL TECHNOLOGIES ON
MENTAL HEALTH AND PERSONAL DEVELOPMENT 155

PAVLIUCHEKO, Inna

MOTIVATING VOCABULARY GROWTH: THE IMPACT OF GAMIFIED DIGITAL
TOOLS 156

PEREIRA, Letícia Souza, & FELIX, José Carlos

DECOLONIAL LITERARY CARTOGRAPHIES – DIALOGUES AMONG
CONTEMPORARY BLACK WOMEN WRITERS IN ENGLISH AND BRAZILIAN
PORTUGUESE 157

POHORILA, Anna

ADAPTATION OF THE “FLIPPED CLASSROOM” MODEL IN THE PROCESS OF
FOREIGN LANGUAGE LEARNING 158

PONOMAROVA, Nataliia

PSYCHOLOGICAL ASPECTS OF CAREER GUIDANCE WORK WITH STUDENTS
OF THE NEW UKRAINIAN SCHOOL 159

PONOMAROVA, Vlada

PSYCHOLOGICAL DIMENSIONS OF STUDENTS’ DIGITAL ADAPTATION TO
THE UNIVERSITY EDUCATIONAL ENVIRONMENT 160

POPKO, Mariia, & SYDORIV, Sergiy

FOSTERING CRITICAL THINKING IN THE DIGITAL WORLD WHILE TEACHING
CHILDREN WITH DISABILITIES 161

PRYMAK, Artem

DIGITAL LITERACY AND CYBERSECURITY AWARENESS AMONG
EUROPEAN STUDENTS 162

PUHAREVYCH, Valentyn

REGULATORY FRAMEWORKS FOR CYBERSECURITY IN EUROPEAN
HIGHER EDUCATION 163

PYLYPCHUK, Roman, & VOSTROKNUTOV, Leonid

BREATHING EXERCISES AS AN EFFECTIVE MEANS OF DEVELOPING
STRESS RESILIENCE IN BOXERS 164

PYSKUN Danylo

MORAL QUALITIES AS THE BASIS OF PROFESSIONAL AND ETHICAL
CULTURE OF POLICE OFFICERS 165

RADCHENKO, Iryna, & YEHORKINA, Daria

THE VALUE OF ENGLISH IN THE MODERN EDUCATIONAL WORLD 166

ROMENSKA, Nataliia

FEATURES OF FEMALE CHARACTERS PORTRAYING IN THE STORY
“MERDIVEN” BY SHAMIL ALYADIN 167

RUDAKOVA, Sofia

GAME-BASED METHODS AS A TOOL FOR ENHANCING THE COGNITIVE
ACTIVITY OF PRIMARY SCHOOL LEARNERS 168

SAIENKO, Nataliia

EXPLORING THE POTENTIAL OF DIGITAL TECHNOLOGIES IN DEVELOPING
THE PHONETIC COMPETENCE OF FUTURE PHILOLOGISTS.....169

SAMOILENKO, Nadiia, & KRAVCHUK, Tetiana

THE IMPACT OF DANCE AEROBICS ON THE SPECIAL PHYSICAL
PREPAREDNESS OF ATHLETES IN RHYTHMIC GYMNASTICS 170

SANTOS, Jaiane, & SANTOS, Taisson, & TREVISOL, Juliane

EXTENSION ACTIVITIES IN THE UNDERGRADUATE ENGLISH LANGUAGE
AND LITERATURE TEACHING PROGRAM AT UNEB-JACOBINA: CURRENT
PROJECTS.....171

SAVRASOV, Mykola, & KRAVCHENKO, Olha, & POLYKOVA, Julia

STRUCTURE OF ACADEMIC AND PROFESSIONAL SUCCESS OF MODERN
HIGHER EDUCATION APPLICANTS.....172

SELIVANOV, Yevhen

PHYSICAL EDUCATION AND DEVELOPMENT OF PERSON'S HEALTH.....173

SHALAMOVA, Yelyzaveta

THE ROLE OF FAIRY TALES IN TEACHING ENGLISH IN PRIMARY SCHOOL 174

SHCHERBYNA, Anatolii

DEVELOPMENT OF SUBJECT COMPETENCE IN PHYSICS WITHIN THE STEM
APPROACH175

SHUMSKA, Olha

PEDAGOGICAL CONDITIONS OF FORMING PROFESSIONAL CULTURE OF
FUTURE MUSIC TEACHERS.....176

SHUMSKYI, Oleksandr

THE PRC'S EXPERIENCE IN HIGHER EDUCATION INTERNATIONALIZATION
.....177

MOTA, Maria Luísa Silva, & FELIX, José Carlos

ON THE BLOOM OF COMING OF AGE: INFLECTIONS OF NARRATIVE FOCUS,
TIME, AND REFLECTIVE SETTING IN IAN MCEWAN'S SHORT STORY *FIRST
LOVE, LAST RITES* (1975) AND ITS FILM ADAPTATION (1997) 178

**SIVEVSKA, Despina, STAVREVA VESELINOVSKA, Snezana,
PETROVSKA, Sonja**

THE ATTITUDES AND OPINIONS OF PRESCHOOL TEACHERS AND INITIAL
TEACHERS IN RELATION TO ENVIRONMENTAL EDUCATION AND THEIR
AWARENESS OF SUSTAINABLE DEVELOPMENT.....179

SKLIAR, Iryna

DIGITAL HUMANITIES AS AN INTERDISCIPLINARY PHENOMENON.....181

SKLYAROVA, Tetyana

CHALLENGES AND OPPORTUNITIES IN DEVELOPING SUSTAINABLE
MOTIVATION FOR LEARNING ENGLISH AMONG NON-PHILOLOGY
STUDENTS183

SKUBANOVA, Olena

CHALLENGES OF TEACHING INTERCULTURAL COMMUNICATION IN THE
WORLD OF TECHNOLOGIES 184

SMOLIANIUK, Natalia

Development of Logical Thinking of Senior Preschoolers.....185

SMOLIANIUK, Natalia, & STOLNA, Olha

CONDITIONS FOR THE DEVELOPMENT OF EMOTIONAL INTELLIGENCE OF
YOUNGER SCHOOLERS..... 186

SNISARENKO, Iryna

SOME Ways of speaking skills formation in future law enforcement 187

SOBCHENKO, Tetyana, TSYMBALOV, Danylo, & KYRYLENKO, Serhiy

ADVANTAGES OF USING AI IN THE EDUCATIONAL PROCESS..... 188

SOLOSHENKO-ZADNIPROVSKA, Natalia

INTEGRATING STORYTELLING INTO THE LANGUAGE CURRICULUM:
METHODS AND BENEFITS 189

STRIUK, Natalia, & ODINTSOVA, Olha

ENHANCING RESEARCH AND COLLABORATION IN EFL CLASSROOMS
THROUGH PROJECT MANAGEMENT TOOLS: THE CASE OF EVERNOTE AND
MY RESEARCH PROJECTS 190

STUPAKOVA, Valentyna, & KABUS, Natalia

FACTOR STRUCTURE OF FUTURE PSYCHOLOGISTS' READINESS TO WORK
WITH CHILDREN WITH DISABILITIES.....191

SUSLOVA, Yuliia

BENEFITS AND METHODS OF USING AUDIO AND VIDEO MATERIALS IN
ENGLISH LESSONS.....192

SYCHOV, Anto

TEACHERS' TRAINING FOR THE PREVENTION OF ADOLESCENTS' DEVIANT
BEHAVIOR.....193

SYDORIV, Lidia

DEVELOPING INCLUSIVE CULTURE IN THE UNIVERSITY ENVIRONMENT.. 194

TIGLI, Amir-Idris

PREPARING TEACHERS FOR INTERCULTURAL AND INCLUSIVE
CLASSROOMS195

TKACHENKO, Victoria

PREVENTION AND OVERCOMING LANGUAGE BARRIERS196

TODOROVA, Kseniia

RIISING THE AWARENESS OF AVIATION SPHERE STUDENTS ON NOISE
POLLUTION197

TOLMACHOVA, Tetiana

THE SPECIFICS OF THE FAIRY-TALE GENRE IN THE WORK OF ZIRKA
MENZATIUK..... 198

TRINDADE, Max, & TREVISOL, Juliane

TASKS AND DIGITAL TECHNOLOGIES: INVESTIGATING THE USE OF
WHATSAPP FOR ENGLISH LANGUAGE LEARNING199

TSEBRO, Sofia

THE POLLYANNA PRINCIPLE AS A TOOL FOR SUPPORTING
PSYCHOLOGICAL WELL-BEING IN LITERATURE LESSONS200

TSYHANOK, Hanna

INFORMATION SECURITY OF STUDENTS IN DAILY LIGHT SPACE 202

URVANTSEV, Artem

METHODOLOGY OF PHYSICAL TRAINING FOR YOUNG SAMBO ATHLETES203

USAkli, Hakan

A COMPARATIVE QUALITATIVE STUDY OF SOCIAL SKILLS TEACHING IN
KOTYHOROSKO'S FAIRY TALES (UKRAINE) AND *BALD BOY'S FAIRY TALES*
(TURKEY).....204

VERETIUK, Polina

GENDER FAIRY-TALE STUDIES: MODERN APPROACHES 205

VERETIUK, Tetiana

VISUALISATION METHODS IN UKRAINIAN LITERATURE LESSONS 206

VERKHODANOV, Serhiy, & GOLENKOVA, Yuliia

Optimizing Strike Performance in Women Boxers: Training Methods for
Accuracy and Speed208

VERKHOVOD, Liliia

MINDFULNESS AS A RESOURCE FOR DEVELOPING SELF-REGULATION
SKILLS IN THE EDUCATIONAL PROCESS DURING WARTIME CONDITIONS
..... 209

VEDIERNIKOVA, Tetiana

THE PROJECT METHOD IN FOREIGN LANGUAGE TEACHING 210

VITCHYNKINA, Kateryna

PROJECT-BASED LEARNING STRATEGIES IN TRAINING FUTURE GRAPHIC
DESIGN PROFESSIONALS.....211

YAVDOSHCYUK, Anastasia

MODERN METHODS OF TEACHING ENGLISH.....212

ZAKHARENKOVA, Tetiana

FOLKLORE: MODERN TRENDS213

ZALISKA, Anna

THE ROLE OF THE *COMMUNICATIVE APPROACH* IN TEACHING ENGLISH IN
PRIMARY SCHOOL 214

ZHANG, Zhengzheng	
ART IN EXTRACURRICULAR EDUCATION INSTITUTIONS IN THE PEOPLE'S REPUBLIC OF CHINA.....	215
ZHORNYK, Anna	
FUTURE PROFESSIONS IN CONDITIONS TECHNOLOGICAL CHANGES	216
ZHUANG, Yan	
DEVELOPMENT OF EDUCATION POLICY IN THE SECONDARY EDUCATION SYSTEM IN CHINA	217
ZHURAKOVSKYI, Vadym	
THE WAYS OF DEVELOPING CIVIC COMPETENCE IN FUTURE UKRAINIAN ARMED FORCES OFFICERS	218
ZNACHKO, Yuliia	
ELEMENTS OF THE INFORMATION CULTURE OF A LAWYER.....	219

NATURAL & MATHEMATICAL SCIENCES SECTION

AVSITIDIISKYI, Mykyta	
APPLICATION OF GRAPH NEURAL NETWORKS FOR REGRESSION ANALYSIS TASKS.....	220
BATYUK, Liliya, & ZHERNOVNYKOVA, Oksana	
CONCEPTS FOR DEVELOPING DIGITAL COMPETENCE OF HIGHER EDUCATION STUDENTS	221
BROSLAVSKA, Halyna	
THE USE OF SIMULATIONS IN THE STUDY OF MATHEMATICS AND PHYSICS IN EDUCATIONAL INSTITUTIONS.....	223
SOBCHENKO, Tetyana, & BUTKEVYCH, Volodymyr	
PRACTICAL AND INTERACTIVE METHODS IN MATHEMATICS TEACHING..	224
CHAIKA, Tetiana	
INNOVATIVE EDUCATIONAL PROGRAMS FOR SOIL FERTILITY RESTORATION IN UKRAINE IN POST-WAR RECONSTRUCTION.....	225
DUDAR, Mykyta, & LAMTIUHOVA, Svitlana	
R-FUNCTIONS METHOD FOR MATHEMATICAL MODELING OF STEADY VISCOUS FLOW AROUND AN ELLIPTICAL CYLINDER	226
KLOZ, Kateryna, & HAIDUS, Andrii	
COMPUTER MODELS AS A MEANS OF CROSS-CURRICULAR INTEGRATION OF EDUCATIONAL MATERIAL	227
KNYSH, Oleksandr	
THE IMPACT OF THE GELU ACTIVATION FUNCTION AND THE ADAM OPTIMIZER ON THE CONVERGENCE OF PHYSICS-INFORMED NEURAL NETWORKS (PINNS) IN HEAT CONDUCTION MODELING	228
KOLIADA, Anastasiia	
APPLYING EUROPEAN EXPERIENCE OF <i>STEAM</i> EDUCATION IN UKRAINIAN INFORMATICS LESSONS	229

BATINA, Nikol, & KONDRATENKO, Oleksandr	
ANALYSIS OF ASPECTS OF POLLUTION OF ENVIRONMENTAL COMPONENTS FROM FROM MEDICAL WASTE DISPOSAL	230
LEVKIN, Dmytro	
RESEARCH ON KEY ASPECTS OF CYBER HYGIENE IN UKRAINE'S INFORMATION SPACE	231
MUKHINA, Tetiana	
MODELING AS A STEM TECHNOLOGY FOR DEVELOPING CREATIVITY IN PRIMARY EDUCATION STUDENTS	233
OLEFIRENKO, Nadiia, & KURHANSKYI, Andrii	
DEVELOPMENT OF A MOBILE APPLICATION FOR TEACHING SCHOOLCHILDREN THE BASICS OF GEOMETRY	234
OSTAPETS, Nataila, PROKOPENKO, Iryna, & TITUNOVA, Valentyna	
MEDIA AND INFORMATION LITERACY: A PATH TO SPIRITUAL GROWTH IN THE INFORMATION SOCIETY	235
PARKHOMENKO, Vladyslav	
USAGE OF METHOD OF TWO-SIDED APPROXIMATIONS FOR FINDING POSITIVE AXISYMMETRIC SOLUTION OF NONLINEAR ELLIPTIC DIFFERENTIAL EQUATION WITH HETEROTONIC NONLINEARITIES	236
POLISHCHUK, Kateryna, & MUKHINA, Tetiana	
VIRTUAL AND AUGMENTED REALITY IN TEACHING NATURAL SCIENCES IN	237
RIZNYCHENKO, Margaryta, & MUKHINA, Tetiana	
THE USE OF ARTIFICIAL INTELLIGENCE IN THE PROCESS OF TEACHING MATHEMATICS IN PRIMARY SCHOOL	238
ROMANENKO, Hryhorii	
OBJECT TRACKING USING UNMANNED AERIAL VEHICLE	239
SHARAI, Kate	
INTELLECTUAL DATA ANALYSIS OF THE RESULTS OF FINAL EXAMS FOR ASSESSMENT THE QUALITY OF SECONDARY EDUCATION	240
TYMOSHCHUK, Oleksandr	
FORMING RADIATION LITERACY OF NATURAL SCIENCE TEACHERS IN THE CONTEXT OF THE DIGITAL EDUCATIONAL ENVIRONMENT	241
VASYLIEV, Oleksii	
IMPROVING SPEAKING SKILLS USING VOICE-BASED AI TOOLS ALONGSIDE GAMING ACTIVITIES	242
VIUNNYK, Sofiia, & YAKUNIN, Anatolii	
GAUSSIAN INTEGERS IN CYBERSECURITY TASKS OF COMPLEX INFRASTRUCTURE FACILITIES	243

ARTISTIC SECTION

KDYROVA, Inesh

MUSICAL TURKOLOGY AND THE KAZAKH SONG TRADITION: FROM
INTONATIONAL ARCHETYPES TO POST-FOLKLORIC TRANSFORMATION 244

KONONENKO, Maryna, & MUKHINA, Tetiana

VISUAL ART AS A MEANS OF FORMING INTERCULTURAL COMPETENCE OF
PRIMARY SCHOOL STUDENTS IN THE EUROPEAN EDUCATIONAL SPACE
..... 245

KOSENKO, Pavlo

USING THE MUESCORE EDITOR FOR TEACHING THE DISCIPLINE
“INSTRUMENTATION” 246

KRAVCHENKO, Kateryna

SOUND ENGINEERING IN THE CONTEXT OF TRIBUTE CONCERTS 248

MYROSHNYCHENKO, Oleksandr, & FEDORENKO, Oleksandr

JAZZ ART IN THE CONTEXT OF THE EURASIAN MUSICAL SPACE 250

OVSIIANNIKOV, Viacheslav

ONLINE AUDIO SERVICES IN TODAY'S MUSIC SPACE..... 252

POSTER SECTION

ABAZIN, Igor

THE PROCESS OF SIMULACRATION IN THE PLOT OF PETER ACROYD'S
NOVEL ‘THE FALL OF TROY’ 254

HUBSKYI, Oleksii

PORTFOLIOS AS A MULTI-PURPOSE TOOL FOR FORMING THE
COMPETENCE OF FUTURE MARKETING SPECIALISTS IN THE UNITED
STATES 255

KOMAR, Yuliia

THE EDUCATIONAL IMPORTANCE OF MODERN CRYPTOGRAPHY 256

KONOVALENKO, Viktoriia

DEVELOPMENT OF AN EMOTIONALLY POSITIVE ATTITUDE TO THE
EDUCATION OF PRIMARY GRADE STUDENTS TO ENSURE THE QUALITY OF
EDUCATION..... 257

KOSTOCHKA, Igor

DIGITAL TOOLS FOR LANGUAGE & LITERATURE EDUCATION IN THE NEW
UKRAINIAN SCHOOL 258

KRAVCHENKO, Marharyta

VISUAL ARTS AND SPEECH THERAPY: THE INFLUENCE OF DRAWING ON
THE DEVELOPMENT OF COHERENT SPEECH IN YOUNGER
SCHOOLCHILDREN 259

KUCHERESHKO, Roman260

INDUSTRIALIZATION RESHAPED TRADITIONAL CRAFTS IN
SLOBOZHANSKYNA, TURNING FAMILY WORKSHOPS INTO MODERN
ENTERPRISES AND REDEFINING THE REGION'S SOCIAL AND ECONOMIC
IDENTITY 260

SNIHUROVA, Iryna

ASPECTS OF DEVELOPMENT OF PROFESSIONAL LANGUAGE AND
COMMUNICATION SKILLS IN FUTURE CYBERSECURITY SPECIALISTS AT
HIGHER EDUCATION INSTITUTIONS.....261

SOLIAR, Viktoriia

INNOVATIVE LANDSCAPE OF UKRAINE'S INSTITUTIONAL ECOSYSTEM.....262

TODOROVA, Kseniia

RISE IN THE AWARENESS OF AVIATION SPHERE STUDENTS ON NOISE
POLLUTION263

HUMANITARIAN SECTION

ABAZINA, Liudmyla

<https://orcid.org/0009-0007-2034-3624>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE HISTORY OF THE EMERGENCE OF SOCIAL PARTNERSHIP AS A PEDAGOGICAL PHENOMENON

Social partnership as a process of cooperation between state and non-governmental organisations to meet local educational needs has a long history. The increase in social partnership practices requires the systematisation of key concepts of this phenomenon and research into the history of its development. O. Bashkir (2024), A. Boyarska-Khomienko (2020), O. Vasilenko (2010), U. Volynets (2014), K. Guturyak (2015), V. Zhukov (2024), V. Krasnomovets (2013), I. Lebedev (2009), I. Petrova (2022), L. Rybalko (2019), O. Savchuk (2012), L. Savchuk (2016), R. Savchuk (2023), O. Sytnik (2009).

The **aim** of this article is to examine the stages of formation of the European Union's education policy, in terms of which the directions of social partnership are defined. We consider it appropriate to substantiate the criteria that reflect gradual changes in the development of social partnership in education, namely: adopted international agreements that lay new legal and organisational foundations for cooperation and determine the direction of social partnership; a change in the vector of goals and priorities in international education policy; institutional changes and the related development of academic mobility programmes; innovations related to socio-economic challenges and globalisation.

The **results** of the study are the identification of seven stages in the development of social partnership in the European educational space.

The first stage (1953–1970) – We consider the European Convention on the Equivalence of Diplomas leading to Admission to Universities of 11 December 1953 No. ETS N 015 (Council of Europe, 1953) to be the foundation of social partnership in education.

The second stage (1971–1986) – the adoption of the Action Programme in Education (Council of the European Union & Ministers of Education meeting within the Council, 1976), which became the basis for the development of European academic cooperation in the field of academic exchanges, recognition of qualifications and further development of educational standards.

The third stage (1987–1991). The beginning of the third stage of the development of social partnership in education dates back to 1987, namely the implementation of the Erasmus+ programme (European Commission, n.d.). Erasmus+ is a programme of international cooperation between the European Union and other countries in the world in the field of education, youth and sport.

The fourth stage (1992–1997). The fourth stage of social partnership development in European education began on 7 February 1992, the day the Maastricht Treaty (European Union, 1992) was signed, which introduced the name European Union and became the basis for cooperation between countries in the field of education and science.

The fifth stage (1998–1999). The fifth stage in the development of social partnership in education began in 1998 with the signing of the Sorbonne Declaration (France, Germany, Italy, & United Kingdom, 1998). The main purpose of signing the Declaration is to harmonise the structure of higher education in Europe. The Declaration emphasises the important role of the oldest universities in shaping the ‘Europe of knowledge’.

The sixth stage (2000–2007). The sixth stage in the development of social partnership in European education is linked to the adoption of a number of documents. The first significant one is the Lisbon Strategy, adopted by the European Council in Lisbon in March 2000. The foundation for the further development of European education policy was the Lifelong Learning Programme 2007–2013 (European Commission, 2007).

The aim of this programme is to provide opportunities for lifelong learning for all citizens, to promote the development of skills, knowledge and competences necessary for employment, personal development and active participation in society. The Bologna Process plays a key role in shaping a competitive European higher education system that can compete at the global level. The main goal of this process is to improve the quality of education, promote social and economic transformation in EU countries, and strengthen the role of universities and educational institutions in the development of society.

The seventh stage (since 2008). This stage can be conditionally called the period of neighbourhood policy in education. The current period of neighbourhood policy is aimed at supporting economic and social development, forming a multicultural dialogue, and developing social partnerships between educational institutions, businesses, public organisations, and local authorities.

Conclusions. Social partnership in education is a key factor in integration, the development of academic mobility, and the formation of competent and active citizens who are able to learn throughout their lives and successfully adapt to the challenges of globalisation.

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ALTANETS, Oleksandra

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INTEGRATING DIGITAL TECHNOLOGIES INTO ENGLISH LANGUAGE TEACHING TO YOUNG LEARNERS

Introduction. The use of modern technologies in the educational process has become an integral component of contemporary education, particularly in foreign language instruction. In primary school, where it is essential to engage children and cultivate stable motivation for learning, technologies can significantly enhance the effectiveness of English language acquisition. Young learners, who generally perceive visual and auditory information well, actively respond to dynamic and interactive forms of instruction that promote deeper involvement in the learning process.

Aim. The aim of this paper is to examine how digital technologies support English language learning in primary school and to identify the ways in which these tools contribute to learners' engagement, language development, and communicative competence.

Results. One of the key directions in the use of technologies is the application of multimedia materials. Videos and audio recordings, animations, and interactive presentations help pupils better comprehend new vocabulary, understand the contextual use of words, and acquire correct pronunciation. Such materials create an “immersion” effect in the language environment, which is crucial for the development of speaking skills. In addition, the use of online resources and platforms such as *LearningApps*, *Wordwall*, *Kahoot*, and *Quizlet* ensures lesson interactivity, game-based competition, and immediate feedback. These tools stimulate learners' interest, enhance their attention, and support the development of self-monitoring skills. Game-based tasks, virtual flashcards, and interactive quizzes diversify learning activities and foster a creative approach to language study. Mobile applications such as *Duolingo* or *Lingokids* enable pupils to independently practise the material at home or during leisure time. This supports the individualisation of learning, as each child can work at their own pace, revisit challenging topics, or repeat the material as many times as necessary. The teacher's role is also essential in selecting appropriate digital tools according to learners' age-related characteristics. The use of an interactive whiteboard, tablets, or a projector enhances the demonstration of material, facilitates group work, and stimulates communication among pupils. These tools promote active participation even among shy or less confident children. At the same time, it is important to maintain a balance between the use of technologies and live communication. Although digital tools greatly diversify the learning process, the primary goal remains the development of communicative competence. Technologies should not become an end in themselves but rather serve as a means of fostering speaking skills, oral and written communication, and listening comprehension.

Conclusion. Thus, the integration of digital technologies into English language teaching in primary school creates new opportunities for implementing a modern, engaging, and effective educational process. When applied purposefully and in harmony with live interaction, digital tools strengthen learners' motivation, support the development of key language skills, and enhance the overall quality of the educational experience.

ARKHIPOVA, Ksenia
SPIESIVTSEVA Iryna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE IMPORTANCE OF MATHEMATICAL LANGUAGE IN THE CLASSROOM

Mathematics is a science that helps people describe, interpret and understand the world through numbers and symbols. In mathematics lessons, the ability to use mathematical language correctly plays an important role.

Purpose. The purpose of this study is to highlight the importance of mathematical language in the process of teaching and learning mathematics. Mathematical language is not only a way of communication but also a key instrument for reasoning and logical thinking. The study aims to show how the development of students' mathematical vocabulary and ability to use symbols correctly contributes to a deeper understanding of mathematical concepts.

Results. One of the most common problems in mathematics education is that students often perform calculations correctly but cannot explain their reasoning. This difficulty arises from a lack of knowledge of the exact mathematical language. To address this problem, teachers should encourage students to describe their steps aloud, discuss problem-solving strategies in pairs or small groups, and write short explanations for their answers.

It is also an effective method to keep a small personal dictionary of mathematical terms and symbols. For example, students can write symbols for pi (π), Euler number (e), infinity (∞), etc. They can write a variety of signs there, such as perpendicularity (\perp) or parallelism (\parallel). In these dictionaries, students can write down brief explanations of how and when these signs or symbols are used. This practice supports memory, improves understanding, and increases accuracy when using mathematical expressions.

In addition, the consistent use of mathematical terminology during classroom discussion and in written assignments helps students' confidence and helps them accurately express complex ideas. When students understand and use mathematical language correctly, they are better able to recognize the connections between concepts, avoid common mistakes, and demonstrate a deeper understanding of the subject.

Conclusions. Mathematical language is the foundation of successful mathematical education. It forms a connection between abstract symbols and real understanding. Therefore, systematic work on the development of students' mathematical language should become an integral part of every mathematics lesson, as it helps build logical reasoning, accuracy, and confidence in expression of mathematical ideas.

THE ROLE OF DIGITAL TECHNOLOGIES IN EDUCATIONAL MANAGEMENT AT CHINESE UNIVERSITIES

In the era of digital transformation, higher education in China is undergoing a profound shift from traditional manual management to intelligent and data-driven governance.

The implementation of national strategies such as “Digital China”, the “Education Informatization 2.0 Action Plan”, and the “Digital Education Development Action Plan (2021–2025)” highlights the central role of digital technologies – big data, artificial intelligence, and blockchain – in improving management efficiency, ensuring transparency, and supporting large-scale, personalized education.

However, challenges such as data fragmentation, privacy risks, insufficient technical integration, and limited digital literacy among staff remain unresolved, requiring systematic study and optimization.

The research focuses on the role and application of digital technologies in the management of Chinese universities. Its purpose is to identify the main mechanisms through which digital technology transforms educational management, analyze existing problems, and propose strategies for enhancing management efficiency and decision-making quality in higher education institutions.

This study employs a combination of literature review, data analysis, and case study approaches. It reviews national policies, academic publications, and institutional reports; analyzes official statistics such as the National Education Informatization Development Report (2024); and examines best practices from leading “Double First-Class” universities to assess implementation effects and challenges.

Digital technology has reshaped the educational management system in Chinese universities through three key mechanisms:

1. **Process Optimization** – automation of administrative procedures has reduced errors and shortened processing time by over 60%, as seen in digital admissions and graduation systems.
2. **Resource Integration** – data platforms now connect academic, research, and student information, breaking down long-standing departmental silos and enhancing inter-departmental collaboration.
3. **Decision Support** – data-driven analytics have improved strategic planning and talent cultivation quality; for example, enrollment adjustments based on employment data have increased graduate employment rates by up to 15%.

Despite these advances, issues such as inconsistent data standards, security vulnerabilities, inadequate system adaptation, and uneven digital literacy still hinder full-scale digital transformation.

Digital technologies significantly enhance the efficiency, transparency, and quality of educational management in Chinese universities. To maximize their potential, the study proposes:

1. Improving data governance through unified standards and integrated data platforms;
2. Strengthening information security via encryption, blockchain, and institutional oversight;
3. Promoting synergy between technology and management through user-centered design and process simplification;
4. Enhancing digital literacy among administrators, teachers, and students through tiered training programs.

These measures will enable Chinese universities to achieve intelligent, collaborative, and sustainable management, supporting the modernization of education and the cultivation of innovative talent.

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**BELETSKA, Maryna
GOLENKOVA, Yuliia**

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODOLOGICAL FEATURES OF DESIGNING A FITNESS PROGRAM USING TRX FOR WOMEN

Introduction. The use of functional training equipment has become an integral part of modern fitness practice. Among these tools, TRX suspension training occupies a special place due to its versatility and ability to engage multiple muscle groups simultaneously. For women, TRX offers an effective way to improve strength, flexibility, balance, and endurance while maintaining a safe and adaptive training process. The suspension system allows exercises to be easily modified, making it accessible for women with different levels of fitness experience. In addition, TRX training contributes to the prevention of hypokinetic disorders, enhances metabolic processes, and supports psychological well-being, which are particularly important aspects of women's health. Its methodological value lies in combining functional preparation with health-oriented outcomes, making it an innovative component of modern fitness programming.

Purpose. The purpose of this study is to analyze and justify the methodological principles of designing fitness programs for women with the use of TRX suspension training.

Results. The methodological analysis indicates that TRX can serve as both a primary and supplementary tool in female fitness training. Its use promotes the activation of deep stabilizing muscles, which contributes to the improvement of posture, joint stability, and functional movement patterns. By combining TRX exercises with traditional fitness methods, trainers can ensure a balanced development of strength, flexibility, and coordination. In addition, TRX programs support gradual progression by adjusting the angle of the body or the range of motion, which makes the training process adaptable to individual needs and goals. Another advantage is the motivational component, as women often perceive TRX sessions as engaging and innovative, which increases adherence to long-term training programs. Furthermore, the application of TRX allows the integration of circuit, interval, and functional training formats that improve both physical preparedness and overall well-being. This flexibility makes it possible to emphasize different aspects of fitness, such as cardiovascular endurance, muscle tone, or core stability, depending on the training objectives. TRX also provides opportunities for group or individual sessions, supporting social interaction and personalized progression within the same methodological framework.

Conclusions. The use of TRX suspension training in women's fitness programs represents an effective methodological approach that enhances functional readiness and overall physical fitness. Its adaptability, variety of exercises, and positive influence on motivation make it a valuable tool for modern fitness practice. Properly structured TRX-based programs can improve health, promote physical development, and support the achievement of individual fitness goals in women.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

BLAZHKO, Olena

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON THE DEVELOPMENT OF LEARNING MOTIVATION IN YOUNGER SCHOOLCHILDREN

Modern primary schools are undergoing profound transformations as a result of the digitisation of education. One of the key areas of reform in primary education is the use of information and communication technologies (ICT), which contribute to improving the quality of the educational process, developing cognitive activity and motivating younger pupils to learn. Within the framework of the New Ukrainian School Concept (2017), digital competence is defined as fundamental for teachers and pupils, and the use of ICT as a means of forming internal motivation to learn.

The issue of developing learning motivation among younger schoolchildren is particularly important in a digital society. As N. Bibik notes, the motivational sphere of a primary school pupil is the «trigger» for learning activities, ensuring successful knowledge acquisition and self-development. At the same time, according to research by G. Kostyuk and V. Molyaka, the leading motives for primary school pupils are curiosity, emotional satisfaction and a sense of achievement. It is ICT that creates the conditions for the realisation of these factors, combining learning, play and research.

Scientists define information and communication technologies as a set of tools, methods and processes for processing, storing, transmitting and using information that enable interactive communication between participants in the educational process. The use of ICT in primary school is implemented through digital platforms (Google Classroom, LearningApps, Wordwall, ClassDojo, Kahoot, Scratch), interactive whiteboards, electronic textbooks, educational videos, and virtual laboratories. Such resources make learning visual, dynamic and emotionally engaging, which is especially important for younger children. For example, at Municipal Institution «Kharkiv Lyceum № 93 Kharkiv City Council», primary school teachers use multimedia presentations, interactive exercises in LearningApps, and animated tasks in Genially to diversify the presentation of educational material. They also participate in mini-projects using the Scratch platform, creating their own interactive stories. Such activities promote the development of initiative, self-esteem and a desire to learn.

An important aspect is the individualisation of learning. Thanks to ICT, teachers can select tasks of varying levels of complexity, and students can work at their own pace. Digital resources also provide feedback, which is a key motivating factor: students see the results immediately, which strengthens their internal motivation.

Therefore, ICT is a powerful tool for developing the learning motivation of younger students. It creates an emotionally engaging, interactive environment in which younger students are active participants in their own learning.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

IVANOV, Vladislav

*Communal institution «Kharkiv Gymnasium № 67 of
the Kharkiv City Council», Ukraine*

IMPROVING THE MODEL OF THE INFORMATION EDUCATIONAL ENVIRONMENT OF PRIMARY SCHOOLS THROUGH DIGITISATION

The digitisation of education is a strategic direction for the modernisation of Ukrainian schools, as defined by the NUS Concept and the National Strategy for Education Development. In the context of blended and distance learning, digital technologies ensure the continuity of the educational process, contribute to improving the quality of education and developing 21st century skills. The creation of an effective model of an information-based educational environment in primary schools is of particular importance.

The aim is to describe opportunities for improving the model of the information educational environment in primary schools through the integration of digital technologies.

Research by contemporary scholars (O. Ovcharuk, O. Kokhanovska and others) shows that the use of digital tools contributes to increasing the cognitive activity of younger schoolchildren, developing critical thinking and information literacy. At the same time, there are problems of unequal access to technology, a lack of quality content, and a need to train specialists to work in a digital environment.

The information educational environment is a system of technical, software and pedagogical tools that ensures interaction between teachers, students and parents, supports learning, communication and analysis of educational results. The main ways to improve it are: introducing LMS platforms (Google Classroom, Moodle) and cloud services; using interactive multimedia tasks and adaptive assessment systems; improving teachers' digital skills through online courses, training, mentoring, and professional communities.

Digitalisation promotes individualised learning, as it allows tasks to be selected according to the level of difficulty, pace and style of the student's work. For example, the use of interactive platforms such as Learning Apps or Classtime provides automatic adjustment of task levels and instant feedback. Student motivation is increased through gamification, multimedia elements, and the ability to work at their own pace. The digital environment makes learning visual, emotionally engaging, and dynamic. Ukrainian experience (Smart Kids, NUSH digital tools) confirms the effectiveness of such approaches: academic performance improves, younger students' interest in learning increases, and teachers are able to quickly track results and improve the learning process.

The digitisation of the primary school's educational environment is key to the modernisation of Ukrainian education. The improved model must be flexible, secure and focused on the development of the student's personality.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

KHARITYUK, Nataliia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE IMPACT OF INTERACTIVE ELECTRONIC RESOURCES ON THE DEVELOPMENT OF CREATIVE THINKING IN YOUNGER SCHOOLCHILDREN

The digitisation of the modern educational space has led to the emergence of new forms and methods of teaching that significantly change the nature of interaction between teachers and students. One of the key tools of the NUS is interactive electronic resources – platforms, programmes, simulations, and educational games that encourage students to actively participate in the learning process. According to research by O. Ovcharuk, the use of digital resources allows for the creation of a dynamic educational environment in which critical and creative thinking is formed as early as primary school age.

The issue of developing creative thinking is one of the main ones in 21 st-century pedagogy. V. Molyak defines creativity as an individual's ability to independently create something new, based on flexibility of thinking, originality, and openness to change. In primary school, play, experimentation and creative exploration are the natural mechanisms for developing creativity. The introduction of interactive electronic resources (IER) into the primary school curriculum is in line with these psychological principles, as such resources combine learning, play and creativity into a single educational environment.

Interactive electronic resources are understood to be digital learning products (*LearningApps, Wordwall, Classtime, Kahoot, Genially, Scratch, Minecraft Education, Google Earth*) that enable active user interaction with content, stimulate cognitive activity and provide instant feedback.

As O. Savchenko notes, interactive learning allows for the implementation of an activity-based approach and helps primary school pupils develop lifelong learning skills.

The use of IER in NUS lessons contributes to the development of creative thinking in younger schoolchildren through: visualisation of educational information, which helps younger schoolchildren create new images and associations; gamification, which increases motivation to learn (e.g. interactive quizzes in Kahoot or online competitions in Classtime); creating digital products (comics, presentations, mini-projects) that develop self-expression; project activities where students independently choose ways to solve problems, as is the case in the Scratch environment.

Interactive electronic resources are an important factor in the development of creative thinking in younger schoolchildren, as they combine the educational and developmental potential of digital technologies. Their use contributes to the individualisation of learning, increases cognitive motivation and stimulates independent creative exploration.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MAZHUGA, Vladimir

Municipal Institution «Kharkiv Lyceum № 168 Kharkiv City Council», Ukraine

USING GOOGLE WORKSPACE FOR EDUCATION CLOUD SERVICES IN COMPUTER SCIENCE EDUCATION

In today's environment of digital transformation in education, the use of cloud technologies is becoming a key component of the development of the educational environment. This is particularly important in the teaching of computer science in primary and secondary schools, where basic skills in working with information systems, critical thinking and digital culture are formed. Google Workspace for Education cloud services (Gmail, Google Docs, Sheets, Slides, Drive, Forms, Meet, Classroom, etc.) enable the creation of an interactive educational environment focused on collaboration, creativity, and student independence.

As O. Ovcharuk notes, modern schools need new pedagogical strategies that ensure the digital competence of students and teachers, the integration of ICT into the learning process, and the formation of 21 st-century skills. According to research by N. Bibik and O. Savchenko, students' motivation to learn increases when the educational process becomes active and interactive. The use of Google Workspace cloud services meets these principles, as they allow for the organisation of distance and blended learning with the possibility of constant feedback.

Cloud technologies refer to models for providing computing resources and software services via the Internet, which enable collaboration, data storage and access from anywhere. In the context of computer science education, Google cloud services are not only a technical tool, but also an educational technology for developing digital literacy, communication and cognitive skills.

Teachers note that cloud services stimulate student motivation because they combine learning with elements of play, creativity, and exploration. For example, teachers in primary and secondary schools use Google Classroom to organise remote lessons and Google Forms for interactive surveys, self-assessment, and knowledge testing. Students create their own presentations in Google Slides, complete group projects in Docs, and conduct research using Google Earth or Jamboard, which promotes cognitive activity and information thinking. An important result is the development of media literacy, the ability to critically evaluate information and work with electronic resources. This is especially relevant in the context of martial law, when distance learning has become an integral part of Ukrainian education.

Thus, Google Workspace for Education cloud services are a powerful tool for modernising computer science education, promoting activity-based, competence-based and personality-oriented approaches.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

SEMENOV, Alexey

Municipal Institution «Kharkiv Lyceum № 168 Kharkiv City Council», Ukraine

CREATIVE DIGITAL TOOLS FOR CREATING EDUCATIONAL CONTENT IN COMPUTER SCIENCE

In today's educational environment, digital technologies are becoming an integral part of a teacher's professional activities. This is especially true for computer science teachers, who not only teach students the basics of digital literacy, but also help them develop the ability to create their own educational products. The digitalisation of education, exacerbated by the challenges of wartime and distance learning, requires teachers to be creative, flexible in their thinking, and able to use innovative digital tools to create high-quality educational content.

According to the Concept of the New Ukrainian School (Ministry of Education and Science of Ukraine, 2017), one of the main tasks of modern primary education is the development of digital competence as a cross-cutting skill that enables students to work with information, analyse, create and disseminate content in a safe environment. As noted by O. Ovcharuk (2021), a teacher's digital literacy consists not only in technical skills, but also in the creative use of digital tools for designing learning content. The researcher emphasises that 'creativity is not an option, but a prerequisite for digital pedagogy in the 21st century.

Creative digital tools are software, platforms, or applications that enable the creation of visual, interactive, or multimedia educational content. According to O. Pinchuk (2020), digital tools serve a dual function: they are a means of presenting information and, at the same time, a means of organising student activities.

In computer science education, these tools perform motivational, developmental, and didactic functions. For example: 1) Canva is used to create infographics, posters, logic diagrams, and educational visualisations. Students can independently prepare mini-projects («Safe Internet», «Algorithm of My Actions»), which develops their design thinking. 2) Genially allows you to create interactive presentations, quizzes, and web quests; teachers can combine theoretical material with game elements, which increases students' interest in the subject. 3) LearningApps and Wordwall help reinforce knowledge through interactive exercises (classification of objects, algorithmisation, logic problems). 4) Scratch is used for visual programming, which helps schoolchildren understand the basics of algorithmic thinking by creating their own animations and mini-games.

Therefore, the use of creative digital tools in computer science education ensures the implementation of activity-based, competence-based and integration-based approaches in modern schools. They develop students' skills in self-expression, critical thinking, collaboration and visual thinking, and give teachers a new digital culture for creating educational content.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

SHAPOVALOVA, Daryna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

USING GAMIFICATION TECHNIQUES TO DEVELOP THE CREATIVE ABILITIES OF YOUNGER SCHOOLCHILDREN DURING LESSONS IN THE NEW UKRAINIAN SCHOOL

Modern primary education is undergoing profound transformations caused by the New Ukrainian School reform and the transition from a knowledge-based to a competence-based paradigm. The central idea of the NUS is learning through activity, in particular through play, which promotes the development of cognitive activity, initiative and creativity in pupils. According to the Ministry of Education and Science of Ukraine, play-based learning is a pedagogical technology that ensures the formation of key competencies in the process of active interaction between the child and the learning environment.

The issue of developing the creative abilities of younger schoolchildren during lessons in the New Ukrainian School is closely linked to the use of gaming technologies as an effective pedagogical tool. Gaming activities ensure the natural activity of younger schoolchildren, creating situations of choice, search and experimentation, which contributes to the formation of creative thinking. Practice shows that the use of game methods in lessons - such as «Creative Laboratory», «Brainstorming», «Create a Story», «Imagine and Prove» - contributes to the development of independent thinking, the ability to generate ideas, and the ability to see several options for solving a problem.

Gaming activities are understood as a purposeful process in which learning tasks are presented in the form of a game, providing motivation, competition and emotional reinforcement. As O. Savchenko notes, gaming methods contribute to a deeper understanding of the material, stimulate attention and develop students' creative activity.

Modern pedagogical practice demonstrates a variety of techniques and forms of game-based learning: didactic games («Find the odd one out», «Guess the word»), role-playing («Journey into a fairy tale», «School television»), intellectual quests, creative projects. In a digital environment, interactive platforms such as LearningApps, Kahoot, and Classtime are effective, combining play and learning, providing instant feedback, and promoting the individualisation of work for younger schoolchildren. An example of Ukrainian experience is the NUSH projects, in which teachers use techniques such as «Educational Theatre», «Mathematical Race», and «Literate Journey» to develop imagination, speech, and critical thinking. Such methods engage primary school pupils in creative interaction, form positive motivation, and promote cooperation.

Playful activities are an important means of developing the creative abilities of younger schoolchildren in the NUS system. The use of playful techniques in lessons helps to increase motivation to learn, creates a positive emotional climate, and develops communication skills and creative abilities.

BELOZOROVA, Natalia

<https://orcid.org/0000-0002-9885-4092>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

TKACHENKO, Yulia

Municipal Institution «Kharkiv Lyceum № 93 Kharkiv City Council», Ukraine

EXPERIENCE OF IMPLEMENTING STEAM EDUCATION IN MODERN PRIMARY SCHOOLS

In the 21st century, education is rapidly transforming under the influence of technological progress, globalisation and the development of digital culture. One of the leading areas of modernisation in contemporary schools is Steam education (science, technology, engineering, art, mathematics), which involves the integration of natural sciences, technical, artistic and mathematical disciplines into a single educational process. As N. Bibik notes, the key task of the New Ukrainian School is to develop competent, creative, technologically literate individuals who are able to apply their knowledge to solve life and professional problems. It is the Steam approach that makes it possible to combine theoretical knowledge with practical activities for younger schoolchildren, developing creativity, non-standard thinking and the ability to collaborate.

In education, the STEAM approach is based on interdisciplinarity, project-based research activities, and practical orientation. According to L. Kovalchuk, Steam is a learning system in which knowledge is acquired through research, experimentation, design, artistic creativity, and reflection.

In primary school, Steam technologies are implemented through educational projects, experiments, modelling, design activities, digital laboratories, etc. For example, as part of the Ukrainian Ministry of Education and Science's nationwide experiment «Scientific Education in Primary School» (2021-2024), teachers use integrated lessons in which students explore natural phenomena, create models using Lego Education, and experiment with the Scratch Junior programme.

The experience of Municipal Institution «Kharkiv Lyceum № 93 Kharkiv City Council» demonstrates that Steam lessons in mathematics, «I discover the world» and art combine learning with creativity. For example, during the City of the Future project, younger schoolchildren create models of an eco-friendly city using the principles of design, ecology, and physics. Such activities promote the development of creativity, logical thinking, and responsibility for a common result. Thanks to digital tools, students can work in teams, performing roles according to their abilities and capabilities (designer, researcher, presenter, etc.). However, practice shows that the effective implementation of Steam education requires: systematic improvement of teachers' qualifications (courses such as «Stem is FEM», «Stem Education for Primary Schools» etc.); the creation of makerspace areas; the development of electronic educational resources; and support for partnerships between schools and universities.

The introduction of Steam education in primary schools shows that this approach contributes to the development of future competencies: creativity, critical thinking, and teamwork. Steam education creates conditions for developing an interest in science and technology among younger schoolchildren.

BERESTOK, Olha

Sumy National Agrarian University, Ukraine

<https://orcid.org/0000-0001-7912-9592>

BLENDED LEARNING AS SOLUTION TO NEGATIVE EFFECTS OF INCORPORATING INFORMATION TECHNOLOGIES IN EDUCATIONAL PROCESS

The purpose of the paper is to define the methods of **Blended Learning** that can affect the learning process.

Research. Digitalization of education is a global and unavoidable trend that not only brings many benefits but also introduces a range of challenges that should not be overlooked. The negative effects of incorporating information technologies (IT) into the educational process stem from the fact that they inevitably limit the external stimuli needed for the learner's brain development. As a result, students miss out on essential experiences in decision-making, communication, and emotional and social intelligence. This leads to fragmented thinking, the spread of digital cognitive decline, geographical illiteracy, difficulties in problem-solving and goal achievement, memory issues, and problems with social interactions.

One effective way to counter these negative effects is through **Blended Learning (BL)**. BL refers to a combination of conventional classroom methods with various elements of e-learning or IT tools, such as videos, computer graphics, audio, and interactive features. To address the negative consequences of IT integration in education, it is beneficial to incorporate methods like:

Debates: An intellectual competition in small groups, which helps learners develop the ability to defend their viewpoints, opinions, and arguments.

Role-Playing: Involves assigning quasi-professional roles to learners and organizing their active participation in solving problems.

Brainstorming: A method of generating a wide range of ideas and solutions, including unconventional or unlikely ones, with no criticism allowed.

Project-Based Learning: Focuses on solving real-world problems.

Conclusion. Blended Learning is a promising approach to organizing education that compensates for the limitations of both traditional and online learning, leveraging the advantages of both and creating a synergistic effect. This is why it is becoming increasingly popular around the world.

BESARAB, Andrii

Municipal Institution "Kharkiv Liceum №5 Kharkiv City Council", Ukraine

COMPUTER TECHNOLOGY FOR LEARNING DURING WAR IN KHARKIV

Ensuring access to education for secondary school students during wartime remains a highly urgent challenge for contemporary Ukraine. This issue is particularly acute in the eastern regions, such as Kharkiv, where the city faces ongoing shelling and direct consequences of the war. Yet, according to the local Education Department, nearly 95,000 schoolchildren are enrolled this academic year and only 17,000 of them will have possibility to attend face-to-face classes three times a week. The rest will learn using computer technology (У Харкові).

The **purpose** of our research is to describe learning opportunities provided with computer technology for secondary school students in Kharkiv.

Results. When it is not possible to organise traditional face-to-face learning in school buildings due to the high level of danger in the city, the solution to this problem is the use of online learning supported by computer technology. Video conferencing on different platforms (Zoom, Meets, Microsoft Teams, and others), which is a modern telecommunication service, became the basis for convenient and more-or-less safe learning and communication with teachers and classmates in real time. Moreover, this method of learning has a number of advantages. For school students, online classes offer clear benefits compared to traditional lessons. They provide safety in dangerous situations, save time otherwise spent on commuting, and allow learning from home. Online platforms also give access to recordings, interactive tasks, and digital resources, helping students better manage their pace and strengthen understanding of subjects. In addition, the opportunity for group learning, which are provided by modern telecommunication services, motivate school students significantly.

Conclusions. The study shows that in wartime conditions, online classes supported by computer technology are an effective alternative to face-to-face learning for secondary school students in Kharkiv. They not only guarantee safety but also provide flexible access to educational resources, promote collaboration, and help maintain continuity of learning despite constant risks and disruptions.

Scientific supervisor: **HOLUBNYCHA, Liudmyla**
Yaroslav Mudryi National Law University, Ukraine

BEZNOS, Yevgeny

<https://orcid.org/0009-0009-7013-7006>

NAGAYEV, Viktor

<https://orcid.org/0000-0002-3130-6112>

KUSKOVA, Svitlana

<https://orcid.org/0000-0002-4725-3537>

State Biotechnological University, Ukraine

TECHNOLOGICAL FOUNDATIONS OF PROFESSIONAL TRAINING OF FOREIGN ECONOMIC ACTIVITY MANAGERS IN THE CONDITIONS OF DIGITAL TRANSFORMATIONS

The purpose of the study is to substantiate the essence and role of technologization of professional training of foreign economic activity managers, as well as to identify effective digital tools that contribute to the formation of an innovatively oriented specialist in the global labor market.

Main results. Digital transformation changes the professional training of foreign economic activity (FEA) managers, requiring them to have new competencies: digital literacy, analytical skills, knowledge of digital automation tools, as well as flexibility and the ability to adapt to constant changes. Professional training of foreign economic activity managers in the digital education system requires a comprehensive approach that includes not only the mastery of traditional knowledge, but also the formation of new competencies in the field of digital technologies.

In the training of future FEA managers, it is advisable to use the following digital tools: Big Data analytics for market research and the formation of foreign trade strategies; blockchain technologies for modeling secure financial transactions; artificial intelligence and machine learning for forecasting demand in international markets; project management systems (Trello, Asana, MS Project) - for developing teamwork skills; interactive platforms and virtual business simulators that allow modeling foreign economic activity processes in real time. Such tools create an environment in which the student receives not only knowledge, but also practical experience in making management decisions in the digital business space.

Modern educational programs for professional training of foreign economic activity managers must adapt to market requirements, integrating digital technologies into the educational process. This involves: developing new courses and practical seminars that combine theoretical knowledge with the use of modern digital tools; collaborating with business representatives to create relevant cases and trainings that reflect the real challenges of digital transformation; constantly updating educational materials to reflect the dynamic development of technologies.

Conclusions. Technological foundations of professional training of foreign economic activity managers are one of the key factors in the formation of competitive human capital of Ukraine in the global digital economy. The integration of digital educational technologies, practice-oriented training and international standards of personnel training creates conditions for the formation of an innovative type of manager capable of ensuring the country's effective participation in global economic processes.

BIRCHENKO, Nataliia

<https://orcid.org/0000-0002-8336-2685>

OSTAPENKO, Roman

<https://orcid.org/0000-0002-5976-5871>

State University of Biotechnology, Ukraine

ACADEMIC INTEGRITY AS THE BASIS FOR PROFESSIONAL DEVELOPMENT AND SCIENTIFIC RELIABILITY

Academic integrity is a commitment to ethical principles that govern teaching and research activities. It is based on six key values: honesty, trust, fairness, respect, responsibility, and courage. Adherence to these principles ensures the legitimacy of academic qualifications, maintains trust in the educational environment, and protects it from violations such as plagiarism, cheating, or data falsification.

The purpose of this analysis is to comprehensively understand academic integrity as a key factor in the formation of scientific credibility, professional ethics, and educational responsibility. Particular attention is paid to identifying the link between adherence to academic principles and the quality of research, as well as the impact of integrity on professional development in the modern educational environment.

The importance of academic integrity for scientific credibility lies in ensuring that research is conducted and reported with honesty, accuracy, and ethical responsibility. Commitment to integrity—from accurate results and proper citation to avoiding plagiarism and data fabrication—maintains public trust and promotes fairness. This fosters an environment where scientific excellence and responsible practices thrive, directly impacting the reliability of published findings. Academic integrity is also fundamental to professional development, shaping values such as honesty, accountability, and ethical behavior that are highly valued in the workplace. Demonstrating integrity during studies helps develop critical thinking, responsibility, and respect for others' work—skills that translate into ethical conduct on the job. Research shows a strong correlation between academic dishonesty and future unethical behavior, which can jeopardize reputation and career prospects. In this context, six key values of academic integrity stand out: honesty, trust, fairness, respect, responsibility, and courage. These ensure sincere work, foster cooperation, unbiased evaluation, and recognition of others' contributions, while encouraging adherence to ethical principles even under pressure. Responsibility and courage are especially vital for sustaining a culture of integrity, where each participant actively prevents misconduct.

Academic integrity is not only an ethical standard but also a practical mechanism for ensuring the reliability of scientific results, the effectiveness of the educational process, and professional reputation. Its key values form the basis for responsible behavior, promote the development of critical thinking, and ensure the sustainability of the academic environment. The ability to adhere to the principles of integrity in learning and research is a determining factor in the formation of a specialist capable of acting ethically, accurately, and responsibly in the modern professional world.

BOCHAROVA, Yulia

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE USE OF VR/AR TECHNOLOGIES FOR SIMULATING CLINICAL CASES IN THE TRAINING OF FUTURE PSYCHOLOGICAL COUNSELORS

The **aim.** of the research is to analyze the effectiveness of using VR/AR technologies for developing key practical competencies (skills of active listening, empathy, diagnostics, and application of therapeutic techniques) in psychology students.

Results. The results of the pilot testing showed that the use of VR simulations has significant advantages. 1) A safe environment for making mistakes: students can practice complex techniques (e.g., working with a client's resistance) without the fear of harming a real person. 2) Controllability and repeatability: unlike real sessions, VR scenarios can be repeated an unlimited number of times, focusing on different aspects of the interaction. 3) Development of empathy: simulations allow students not only to observe but also to "feel" the client's state (e.g., experience a simulation of a panic attack from the client's perspective), which promotes a deeper understanding of their experiences. 4) Objective assessment: modern VR systems can track interaction parameters (gaze direction, reaction time, choice of dialogue options), providing the instructor with objective data for analysis and feedback.

The work is based on the analysis of international experience in implementing VR/AR in psychological education, the method of a pedagogical experiment (testing a VR simulator for counseling a client with an anxiety disorder on a student focus group), as well as survey methods and the analysis of student reports to assess learning effectiveness.

Conclusions. VR/AR technologies are a powerful tool for modernizing psychological education, effectively bridging the gap between theory and practice. They do not replace but rather complement traditional methods, creating a "training ground" for practicing practical skills in realistic yet safe conditions. The scientific novelty of this work lies in the adaptation of international experience to the conditions of the Ukrainian higher education system and in the development of a model for integrating VR simulators into curricula for psychological counseling and clinical psychology.

Language Advisor: **SOLOSHENKO-ZADNIPROVSKA Natalia**
H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

BÖHMER, Anselm

<https://orcid.org/0000-0002-9592-3291>

DILLIG, Marcella

<https://orcid.org/0009-0004-6283-3371>

ISSO, Illie

<https://orcid.org/0000-0002-1597-5789>

ORHAN, Dilara

*Institute of Education Sciences, Section of General Education,
Ludwigsburg University of Education, Germany)*

HARNESSING THE BOT: PROMPT ENGINEERING AS A CATALYST FOR INCLUSIVE AND INTERSUBJECTIVE LEARNING IN HIGHER EDUCATION

Given the pervasive influence of generative artificial intelligence (GenAI) technologies such as ChatGPT, Llama, and DeepSeek, educators are increasingly confronted with novel challenges, particularly in the domains of inclusive and individualized teaching.

Consequently, a salient question for higher education concerns how to optimally support students and scholars in this rapidly evolving and frequently unpredictable technological landscape. In the context of digital education, learning entails a comprehensive consideration of the diverse participants' cultural, social, historical, and material dimensions.

Concurrently, students and educators, reflecting their diverse social and societal backgrounds, engage collaboratively in processes of knowledge creation, creative inquiry, and professional development.

The research initiative *iBot* (i.e., "The Bot & I – Innovation Coaching through AI-supported digital teaching"), established at Ludwigsburg University of Education in Germany, explores the connections between learners in their social and societal diversity in higher education, aiming for collaboration, creation, and critical exploration of novel domains of understanding while using GenAI.

Hence, this project aims to cultivate GenAI-mediated environments for teaching, training, and assessing teacher candidates as they advance through their professionalization process.

In pursuit of this objective, a large language model (LLM) bot is utilized to interact with students alongside various other methodologies proposed within the framework of this project. The challenge of generating appropriate and relevant assessments from the bot regarding scientific accuracy and ethical responsibility remains.

However, the collaborative prompting process has emerged as a fundamental aspect of developing this educational environment to correspond to the principles of inclusive pedagogy responding to learner diversity.

The presentation offers hermeneutically acquired insights into creating effective prompts, emphasizing critical milestones for establishing and maintaining the theoretical framework, enhancing usability, promoting creativity, and critical thinking.

A notable ancillary finding was the modification of human self-reflexivity observed when learners receive feedback from the bot that diverges from their prior expectations.

This insight has directed the research team toward approaches that conceptualize prompt engineering not solely as a technical challenge, but rather as an educational process that fosters understanding and development within the learning group.

Hence, the presentation outlines steps, challenges, and educational outcomes arising from the integration of GenAI technologies in higher education, highlighting practical opportunities for learning among students and educators within an evolving technological environment.

BOLBIT, Yuliia

*Horlivka Institute for Foreign Languages,
SHEI Donbas State Pedagogical University, Ukraine*

DIGITAL TECHNOLOGIES IN TRANSLATION: CLASSIFICATION, FUNCTIONS, AND APPLICATIONS

This study explores the transformative impact of digital technologies on contemporary translation practice, focusing on their classification, functional roles, and practical applications. The purpose of the research is to demonstrate how advancements in artificial intelligence, data-processing systems, and online collaboration platforms are reshaping professional workflows and redefining the role of translators. Translation is increasingly viewed not merely as a linguistic task but as a complex, technology-driven process that requires both language expertise and digital competence, alongside problem-solving and analytical skills.

The findings reveal that digital tools can be categorised into three main groups: reference, auxiliary, and automated systems. Reference tools, including electronic corpora, dictionaries, and specialised databases, enable translators to ensure terminological accuracy and maintain consistency across texts. Auxiliary tools, such as stylistic and orthographic checkers, support the refinement of text quality, improving readability and adherence to language standards. Automated platforms, including computer-assisted translation systems and machine translation engines, increase productivity and streamline large-scale translation projects, while still relying on human oversight to ensure quality and appropriateness. Collectively, these tools provide translators with the capacity to manage complex tasks efficiently, reduce errors, and maintain high-quality output across multiple languages.

Digital technologies are applied across a wide range of domains. In technical and legal translation, they help standardise terminology, ensure compliance with regulatory requirements, and improve the clarity and precision of translated documents. In software localisation, cloud-based platforms enable collaborative translation processes and real-time project management, allowing teams to work effectively across geographical boundaries. In audiovisual translation, including subtitling and dubbing, digital tools assist in synchronising content, maintaining multimodal coherence, and adapting translations to the timing and format constraints of multimedia materials. Translators typically select a combination of tools tailored to specific project requirements, emphasising adaptability, problem-solving, and strategic use of technology over mastery of every available platform.

In conclusion, digital technologies have become an indispensable component of professional translation, integrating cognitive, linguistic, and technical dimensions. They enhance translation quality and efficiency, promote collaborative and innovative workflows, and redefine the translator's role as an intermediary between human creativity and technological innovation. The study highlights the critical importance of developing technological literacy alongside linguistic skills, enabling translators to meet the demands of an increasingly globalised and technology-driven translation industry while maintaining high standards of professional practice.

**BONASSA, Melissa de Matos
TREVISOL, Juliane Regina**

Universidade do Estado da Bahia (UNEB), Campus IV – Jacobina, Brazil

TASKS AND DIGITAL TECHNOLOGIES: THE USE OF TIKTOK FOR LANGUAGE TEACHING AND LEARNING

This report presents the results of a Scientific Initiation research project conducted at the State University of Bahia (UNEB), Campus IV – Jacobina, supported by FAPESB. The study investigated the use of short TikTok videos as a pedagogical resource in English language teaching based on the Task-Based Language Teaching (TBLT) approach (Ellis, 2003; Nunan, 2004; González & Ortega, 2014). It aimed to understand how TikTok has been used in language teaching and how it can be integrated into didactic tasks.

Digital technologies expand possibilities in language teaching, addressing diverse learner profiles and motivations (Hu & Du, 2022). Among young learners, TikTok stands out as a multimodal platform combining image, sound, text, and social interaction, enabling dynamic and interactive practices (Caldeiro-Pedreira & Yot-Domínguez, 2023). This short-video format can enhance engagement and the development of linguistic, digital, and critical skills, aligning learning with students' interests (Rezabala-Pilligua & Rivadeneira-Barreiro, 2023).

From twenty-one searches, eleven articles show that digital learning offers “cognitive, social, and emotional benefits” but faces “cognitive overload and unequal access” (Dantas & Trevisol, 2022; Zhang et al., 2022). Also, Apps and multimodal resources increase motivation and autonomy when used in well-planned pedagogical contexts (Censi & Jesus, 2020; Hu & Du, 2022; Mulyanah et al., 2024), and TikTok can foster engagement, vocabulary retention, and cultural awareness (Abdullah, 2022).

Overall, studies suggest that digital technologies like TikTok can boost learners' interest, motivation, and engagement in English classes, though their effectiveness relies on teacher guidance to ensure meaningful use (Hu & Du, 2022; Mulyanah et al., 2024). Integrating short videos across pre-task, during-task, and post-task phases supports authentic communication, reflection on social language use, and critical digital skills development. When used thoughtfully, TikTok can complement traditional practices and enhance TBLT, but more research is needed on long-term effects, teacher training, and digital inclusion (Caldeiro-Pedreira & Yot-Domínguez, 2023).

BONCHUK, Olha

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INTEGRATION OF ARTIFICIAL INTELLIGENCE INTO TEACHER PRACTICE

The purpose. The modern education system faces constant challenges and changes. In the context of rapid technological development and digitalization, the integration of artificial intelligence (AI) allows us to open up new opportunities, optimize the work of teachers, increase the effectiveness of learning, and adapt to the needs of each student in their pedagogical activities.

The research aims to analyze the possibilities of using AI in teacher activities and assess its impact on the effectiveness of the educational process. The objectives of the analysis are:

- to identify key AI tools that can be integrated into teaching;
- to investigate the impact of using AI on student motivation and learning outcomes;
- to assess the practical tasks and risks of implementing AI in secondary schools.

Results. Among the advantages of artificial intelligence in primary education are:

- 1)** saving time (automating routine work such as assessment, lesson planning, and reporting);
- 2)** improving the quality of educational materials (AI can create creative, modern visualizations for reading, writing, mathematics, science, and other subjects);
- 3)** organizing inclusive and personalized learning (AI can create inclusive classes, recommend special reading materials, and develop personalized visual aids and schedules according to the needs of the student).

The disadvantages include the risk of over-reliance on technology, high implementation costs, ethical issues and data confidentiality, insufficient teacher training, etc.

Conclusions. The integration of artificial intelligence into the practice of teaching is a promising direction for the development of education and at the same time requires a systemic approach. It should also be remembered that AI does not replace the teacher, but becomes a tool for supporting and developing a creative learning environment.

BONDARENKO, Artem

Donetsk State University of Internal Affairs Ukraine, Kropyvnytskyi, Ukraine

MILITARY TERMINOLOGY IN ENGLISH: APPLICATION IN UKRAINIAN CONTEXT

In the context of full-scale war and intensive international cooperation between Ukraine and its Western partners, the issue of military terminology in English has become critical. This topic encompasses not only the translation of words but also the harmonization of concepts, doctrines, standards, and procedures between the Armed Forces of Ukraine (AFU) and the armies of NATO member states.

A distinctive feature of English-Ukrainian military translation and the problems associated with it is that many factors must be taken into account when translating military terms, including ambiguity, difficulties in recognizing terms, and the significant differences between them and common words from a pragmatic perspective. Military terminology often depends on context for its accurate interpretation. Translating these terms out of context can lead to ambiguity or misinterpretation. Additionally, the dynamic nature of military operations means that terminology evolves to adapt to new technologies, tactics, and strategies. For example, in the military sphere, English is rich in abbreviations. For example, the words “AWACS” (Airborne Warning and Control System) and “IADS” (Integrated Air Defense System) describe complex systems and their functions. A significant challenge in this regard is finding an equivalent that is both understandable to the Ukrainian military and technically accurate. (Calquing is often used.) Additionally, the same term can have multiple meanings. The term “intelligence” encompasses a broader range of concepts than the Ukrainian “rozvidka” (reconnaissance), as it encompasses both data collection and analysis, as well as the assessment of potential threats. Similarly, the concept of deployment in Western military doctrines means not only “deployment,” but also the movement of forces and resources to a specific region for a particular purpose. Additionally, a practical aspect is the absence of an equivalent concept. For example, “cluster munitions” is a term used to refer to cluster munitions, for which there is no equivalent in Ukrainian. Another important aspect is the negative connotations associated with specific words. The term “friendly fire” is perceived neutrally in a technical context in English-language texts, but in Ukrainian it evokes negative associations with tragedy or error. An important aspect to consider is the way words take on new meanings or adapt to modern needs, which can lead to the ambiguity of military terms. For example, terms can have different meanings depending on the specific circumstances, which make translating terms into other languages, especially English into Ukrainian, difficult. For example, “Sea Wolf Submarine,” “M1 Abrams,” “AC-130 Spooky” [1, c. 38, 41].

In conclusion, military terminology is a complex linguistic phenomenon characterized by complex multi-component expressions, cultural and social connotations, and dynamic semantics. Military terms often have multiple meanings, which require attention to context, cultural and social nuances, and conceptual models. When translating, the choice of method depends on the purpose and audience, and the use of standardized terminology is necessary to avoid confusion between synonyms.

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BORTOLOTTI, Fernanda Seidel

<https://orcid.org/0000-0002-1974-3440>

Universidade Estadual do Centro-Oeste, Brazil

LANGUAGE DEVELOPMENT AT EARLY CHILDHOOD: THE ORAL COMMUNICATION AND AN INTRODUCTION TO THE WORLD OF WRITING

As an exclusive human resource, language marks the differentiation of human beings from other animals and enables connection with others while simultaneously shaping the self. In this sense, social and cultural exchanges are praised in the process of meaning-making that each individual experiences. In terms of verbal language, a perspective is presented that rejects the transmission of a ready-made language. This movement is both historical and cultural, with the other playing a supporting role. In the case of the teacher, it is their responsibility to plan structured study in order to deepen interactions and promote the mutual and continuous development of society. Regarding writing, knowledge should be introduced according to the needs of those involved in the teaching and learning process, to their own demands. This ideal extends to the teaching of writing, an interest that should be encouraged by and for the surrounding environment, but guided by the desires awakened in the child. According to this perspective, drills and copying exercises are eliminated to foster the cultivation of writing as a daily practice aimed at expanding the zones of development. Moreover, attention is drawn to families from social groups where written language is less present or practically absent, seeking to provide meaning and significance to such populations. In conclusion, every individual is, from its early ages, an active agent in the production of the self and of a shared culture. Play is a key element, however, as the development progresses, reading incorporates new possibilities to understand the world and writing to produce about it. First, it is necessary for the other to read so that interest in reading for its own may be awakened. As children grow, new aspects of others' speech and writing become perceptible, yet the other remains indispensable. There comes a stage of early contact with the written form of one's own name and a wide range of developmental possibilities arising from that knowledge. Long before the objective writing of words, teachers should encourage the students about the contemplation of the world, thereby sparking the desire to record impressions built on his own.

**BOYKO, Artem
GOLENKOVA, Yuliia**

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODOLOGICAL APPROACHES TO IMPROVING REACTION SPEED IN BOXERS

Introduction. Reaction speed is one of the most important components of technical and tactical performance in boxing. The ability to quickly perceive an opponent's action and respond with an adequate motor reaction significantly influences the effectiveness of attack and defense, as well as overall competitive success. Reaction speed depends not only on the athlete's natural predispositions but also on specific training methods, the complexity of technical actions, and psychophysiological readiness. Therefore, the search for effective methodological approaches aimed at its development remains highly relevant in the theory and practice of boxing training.

Purpose. The aim of this study is to substantiate and analyze methodological approaches that contribute to the improvement of reaction speed in boxers of different levels of preparation.

Results. The analysis of scientific and methodological sources, combined with practical observations, made it possible to identify several effective approaches. First, exercises based on situational variability (sparring with changing tasks, unexpected signals, or conditions) enhance athletes' ability to make rapid decisions in non-standard situations. Second, the use of special technical drills with external stimuli (light or sound signals, partner's sudden movements, reaction balls) accelerates sensorimotor responses and develops dynamic attention. Third, the inclusion of interval and plyometric training improves neuromuscular activation, which indirectly contributes to faster reaction speed during combat. Fourth, the application of cognitive-perceptual training tools (video simulations, virtual reality scenarios, tactical games) helps to optimize anticipatory skills and improve the accuracy of responses. Finally, the principle of individualization is crucial: depending on the athlete's qualification, age, and psychophysiological characteristics, exercises must be adapted to ensure optimal load and progression. Experimental data from training practice indicate that after a six-week program involving external stimulus drills, athletes demonstrated an average 12–15% reduction in simple reaction time and a notable improvement in complex reaction tasks. Moreover, boxers reported increased confidence in anticipating opponent actions and maintaining composure under pressure, which translated into higher performance efficiency during sparring.

Conclusions. The development of reaction speed in boxing requires a comprehensive methodological approach that combines technical, physical, and cognitive training. Exercises with variable external stimuli, high-intensity neuromuscular training, and modern perceptual tools demonstrate high efficiency in improving this quality. The integration of these methods into the training process contributes to faster reactions, more effective tactical performance, and greater competitive reliability.

BOZHKO, Yuliia

<https://orcid.org/0000-0002-7235-0670>

Kharkiv National Pedagogical University, Ukraine

YOUTUBE AND TIKTOK AS PLATFORMS FOR LEARNING PHRASAL VERBS THROUGH CONTEXT

Introduction. Phrasal verbs such as *give up*, *look into*, or *bring up* are essential for English fluency but remain difficult for learners due to their idiomatic meanings. Traditional teaching methods often present them without context. Modern video platforms, especially YouTube and TikTok, provide authentic and engaging content where phrasal verbs appear in real communicative situations.

Aim. The aim of this study is to analyze how YouTube and TikTok can be used as effective platforms for teaching phrasal verbs through contextual input and to compare their respective strengths and limitations.

Results. Recent research in second language acquisition underscores that learners benefit from input that is multimodal – combining visual, auditory, and contextual cues – to facilitate comprehension and retention (Feijoo & Anglada, 2024). Building on this, Pérez (2020) emphasizes the importance of multimodal input – visual, auditory, and contextual – which supports vocabulary acquisition in second language learning (Pérez, 2020). Gilmore (2007) also highlights the role of authentic materials in developing communicative competence.

- **YouTube** provides in-depth, structured lessons embedding phrasal verbs in stories, dialogues, and real-life contexts. For example, “*50 Important Phrasal Verbs in English*” uses storytelling to contextualize the verbs [4].
- **TikTok** offers short, focused microlearning sessions and interactive features such as *Duet*, which encourage active learner participation. Research at Institut Elkatarie shows that students using TikTok improved vocabulary by 22.9% compared to 8.2% in a control group (Alfitri et al., 2024). However, the platform's brevity and algorithmic personalization may limit depth and distract learners (Boeker & Urman, 2022).

Conclusions. YouTube and TikTok complement one another in teaching phrasal verbs. YouTube provides depth and authenticity, while TikTok boosts motivation, engagement, and creativity. A blended approach – YouTube for foundational learning and TikTok for reinforcement – offers the most effective strategy for mastering phrasal verbs.

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BREDIKHINA, Mariya

Donetsk State University of Internal Affairs Ukraine, Ukraine

MODERN APPROACHES TO INTERNATIONAL EXCHANGE OF EXPERIENCE IN EUROPEAN STUDIES IN THE DIGITAL AGE

In today's globalised educational landscape, digital technologies have emerged as essential tools for advancing European Studies, offering new ways to integrate curricula, share knowledge, and foster an international academic community. The availability of online platforms allows educational activities to continue even when physical mobility is limited, which is particularly relevant in situations such as pandemics, political instability, economic crises, or localized social challenges. Digital tools and distance learning resources enable students and educators from diverse countries to collaborate on analyzing information, engage in discussions on academic topics, and integrate insights from multiple disciplines, thereby fostering a truly international educational environment.

A notable example of international collaboration in European Studies is the Erasmus+ Virtual Exchanges program, which enables students to participate in virtual academic and cultural activities. This program helps students develop critical analytical skills, promotes intercultural understanding, and encourages effective collaboration in online settings (Erasmus+ Virtual Exchange..., 2024). Initiatives like those implemented by Leiden University, the University of Amsterdam, and other European institutions demonstrate how digital platforms can facilitate joint academic projects that merge knowledge across disciplines while preparing students for international professional contexts. Such programs not only enhance academic development but also enrich students' social and cultural perspectives, equipping them with the practical skills and competencies required to operate confidently in a global digital environment.

Digital platforms also play a key role in professional development and knowledge exchange by supporting conferences, seminars, and workshops that connect participants from multiple countries in real-time. These events promote interactive engagement, facilitate discussions on innovative teaching methods, and enable educators to develop new competencies. For instance, the EUPRIO Conference 2025 held in Lisbon highlighted how online platforms can bring together specialists from different academic fields within a shared scientific space, facilitating the creation of professional networks and collaborative research projects (EUPRIO Conference, 2025). Such experiences demonstrate that integrating digital technologies into academic processes helps overcome geographical, temporal, and linguistic barriers that have traditionally constrained international cooperation.

Another critical aspect of advancing European Studies is the development of joint research programs that unite students and educators from different countries to collaboratively address pressing educational and scientific challenges. Programs such as the ENGAGE.EU Joint Programme in Digital Transformation allow students to select courses that focus on digital tools, strategies for integrating knowledge, and ethical issues in the digital environment. These initiatives encourage innovative teaching practices and promote teamwork in international groups, enhancing both the quality of education and students' readiness for professional engagement in global digital

settings. With more than 25 participating universities and over 500 students and educators involved annually, ENGAGE.EU demonstrates the substantial potential for large-scale international collaboration (ENGAGE.EU..., 2023).

At the same time, specific challenges affect the effectiveness of international cooperation in European Studies. These include unequal access to digital resources, varying levels of technical proficiency among participants, and inconsistencies across educational platforms. Addressing these issues requires the development of unified methodological approaches, enhanced training for educators and students, and standardization of digital resources and platforms, ensuring that all participants can engage equally in the learning process.

In conclusion, international cooperation and the strategic use of digital technologies are essential for enhancing the quality of European Studies, developing digital competencies among students and educators, and fostering a resilient international academic community. Distance learning programs, digital conferences, and joint research initiatives enable institutions to overcome geographical, technical, and cultural barriers, integrate theoretical knowledge with practical skills, and prepare students to operate effectively in a global digital environment.

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**BRIUKHOVYCH, Mariia
GULICH, Olena**

<https://orcid.org/0000-0002-3846-1916>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

HOW TO MOTIVATE STUDENTS TO LEARN: THE KEY TO EFFECTIVE EDUCATION

In modern education, student motivation is one of the most important components of academic success. Without it, even the best teaching methods may fail to bring results. Motivation not only influences how well students absorb information but also shapes their attitude toward lifelong learning. Understanding what drives students and how to support that drive is essential for every educator.

Purpose. To explore the factors that influence student motivation, determine the teacher’s role in this process, and identify effective ways to increase interest in learning.

Results. There are two types of motivation: internal (interest in knowledge, self-development) and external (grades, praise, support from parents and teachers). Internal motivation is considered more sustainable.

The teacher plays a crucial role in shaping motivation by using modern methods such as projects, games, group work, and multimedia technologies.

Connecting educational material to real-life situations helps students better understand and remember information.

A supportive and success-oriented environment, attention to individual characteristics of each student, and gradual development of self-organization skills all contribute to increased motivation. When students feel that their efforts are recognized and valued, they are more likely to stay engaged and put in consistent effort.

Additionally, creating opportunities for students to make choices in their learning process helps build a sense of responsibility.

Conclusions. Motivation to learn depends on both the student and the teacher. When learning brings interest and enjoyment, it becomes a real need. Motivated students learn more effectively, achieve goals faster, and create a positive, active classroom atmosphere.

Teachers who focus on developing internal motivation foster learners who are curious, independent, and resilient.

Ultimately, a motivated student is not just successful in school but is also better prepared for challenges beyond the classroom.

BUDUS, Olga

Kharkiv National University of Internal Affairs, Ukraine

THE IMPACT OF TECHNOLOGY ON THE DEVELOPMENT OF INTERCULTURAL COMMUNICATION IN THE CONTEXT OF EUROPEAN STUDIES

The modern world is characterized by a high degree of globalization, where technology is a key factor in intercultural integration and interaction. The European Education Area is actively implementing digital solutions that expand opportunities for learning, scientific research, and intercultural communication. In this context, European studies are becoming an important platform for analyzing the impact of technology on the formation of shared values, cultural dialogue, and collaboration. The relevance of this topic is driven by the need to understand how digital tools are changing traditional approaches to education and communication.

The main objective is to examine the impact of modern technologies on the development of intercultural communication within the framework of European studies. To achieve this objective, the following tasks are envisaged: to identify the role of digital platforms and resources in teaching; to analyze examples of their use in European educational programs; to identify the positive and negative consequences of the technologization of communication processes; and to outline possibilities for further development in this field.

The analysis showed that digital technologies have significantly transformed the educational process and intercultural interaction. The use of online platforms (Zoom, Teams, Moodle, Coursera) provides access to educational resources and creates new opportunities for academic mobility. Social networks and virtual communities have become platforms for cultural dialogue, knowledge exchange, and collaborative projects. A positive outcome is the development of students' foreign language proficiency, tolerance, and awareness of integration. At the same time, challenges were identified in the use of automatic translators, such as language and cultural barriers, the risk of spreading stereotypes, and the isolation of information in closed digital environments. This demonstrates the need for a comprehensive approach to the application of technologies in intercultural education.

Technologies play a key role in fostering intercultural communication, creating a space for the integration of cultures and education systems across Europe. They provide broader access to information, foster academic mobility, and contribute to the formation of a European identity and the development of critical thinking. However, technologies cannot completely replace lively cultural communication, and therefore their use must be balanced, aiming to integrate digital tools harmoniously with traditional educational practices. The further development of European studies requires a systematic analysis of the impact of digitalization and the development of a strategy that considers both its benefits and potential risks.

**BUT, Anastasiia
MUKHINA, Tetiana**

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

MOBILE APPLICATIONS AS A TOOL FOR DEVELOPING DIGITAL LITERACY IN PRIMARY SCHOOL STUDENTS

In today's information society, digital technologies have become an integral part of everyday life. From an early age, children actively interact with gadgets such as smartphones, tablets, and computers, which serve not only as means of entertainment but also as effective tools for exploring the world. In this context, the development of digital literacy – the ability to use modern digital technologies safely, consciously, and effectively – becomes particularly important. It is advisable to begin this process in primary school, when the foundations of learning and a child's worldview are being formed.

One of the most effective means of developing digital skills in younger students is the use of mobile applications in the educational process. These applications combine educational functions, gaming elements, and opportunities for interactive engagement, making the learning process interesting, accessible, and comprehensible for students. Through mobile technologies, primary school pupils not only acquire new knowledge but also develop logical thinking, attention, memory, communication skills, and creativity.

An important advantage of mobile applications is that they stimulate cognitive activity in younger students, promote independence, and help develop self-control skills. Students can work at their own pace, review material at a convenient time, receive instant feedback, and monitor their progress. This creates positive motivation for learning and increases self-confidence.

Among the mobile applications that effectively contribute to the development of digital literacy in primary school students are Kahoot!, Quizizz, ABCmouse, Duolingo Kids, ScratchJr, and CodeSpark Academy. Such programs provide opportunities for interactive learning: children complete tasks, create their own mini-projects, compete with classmates, and earn points, badges, or rewards. The game-based format helps them master the material more effectively without overload and maintain their interest in learning.

In addition, mobile applications play an important role in fostering safe online behavior. Through educational games and interactive tasks, younger students learn how to protect personal information, distinguish between reliable and false information, and avoid inappropriate content. This form of game-based learning helps children naturally absorb the rules of digital safety.

Teachers play a key role in developing digital literacy by teaching students to use technologies safely and ethically and by encouraging them to engage with educational resources.

Thus, mobile applications are a powerful means of developing digital literacy among primary school students. They make learning engaging, modern, and effective, foster a responsible attitude toward the digital world, and prepare children for life in a society where technology plays a leading role.

CHALA, Yuliia

<https://orcid.org/0000-0002-7436-7783>

National Technical University "Kharkiv polytechnic institute", Ukraine

PSYCHOLOGICAL REQUIREMENTS FOR UNIVERSITY LECTURERS IN THE CONTEXT OF A NEW STAGE OF EDUCATIONAL DIGITALIZATION

Introduction. The rapid advancement of digital technologies has transformed higher education, redefining the role of the university lecturer. The shift toward hybrid and fully online formats demands not only technological competence but also new psychological capacities. Lecturers are expected to maintain academic quality, engagement, and emotional connection with students in virtual environments that often reduce nonverbal cues and increase cognitive load.

Aim. The aim of this study is to identify and describe key psychological requirements that enable university lecturers to function effectively within the current stage of educational digitalization.

Results. Analysis of recent research and observational data highlights several key psychological competencies essential for effective university teaching in the digital era. **Digital adaptability** involves not only the ability to use new technologies but also the flexibility to integrate them meaningfully into teaching practice. It reflects openness to experimentation, tolerance for technical difficulties, and ongoing digital literacy development. Equally important is **emotional resilience**, which allows lecturers to maintain psychological stability amid constant technological and institutional change. Resilient educators can manage stress, recover from setbacks, and preserve motivation despite uncertainty.

Another critical factor is **empathic communication**, which remains central to student engagement and well-being, especially when nonverbal cues are limited in online formats. Together with **self-regulation and time management**, empathy supports both student connection and educator well-being, helping to prevent burnout and emotional fatigue. Finally, the **growth mindset** – a belief in continuous learning and self-improvement – encourages innovation and positive adaptation to emerging technologies. Collectively, these competencies define the psychological readiness of modern lecturers and should be supported through institutional policies and professional development initiatives aimed at promoting resilience, adaptability, and sustainable teaching practices in the context of ongoing digitalization.

Conclusions. In the era of accelerated digitalization, the effectiveness of university teaching depends not only on technological proficiency or subject expertise but equally on the lecturer's **psychological readiness** to operate in dynamic and uncertain environments. The transition to hybrid and online education has intensified cognitive load, emotional strain, and the need for continuous self-regulation. Therefore, adaptability, emotional resilience, and empathy have become critical for sustaining motivation and maintaining the human dimension of teaching in digital contexts. Lecturers who cultivate these competencies are better able to navigate technological challenges, preserve a sense of professional purpose, and build meaningful connections with students across digital platforms.

**CHECHOTKIN, Igor
PONOMAROVA, Nataliia**

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

CONDITIONS FOR IMPLEMENTING THE PROJECT METHOD FOR FORMING STUDENTS' LEARNING MOTIVATION

Motivation is a complex and multifaceted phenomenon that remains a key subject of research in pedagogy and psychology. Motivation is not only the key to academic success but also to the formation of a harmonious and purposeful personality, ready for the challenges of the modern world. Motivation for learning is formed in conditions that combine an individualized approach, emotional support, the meaningful richness of educational material, and opportunities for self-expression. From this perspective, the project method has powerful possibilities in the educational process.

The purpose of the article: to establish the conditions for using the project method to form students' learning motivation.

Motivation for learning is a multifactorial phenomenon that depends on the educational system, the organization of the educational process, the characteristics of the student, the characteristics of the teacher, and the specifics of the educational subject. Taking these factors into account and optimizing them can significantly increase student motivation and contribute to their successful learning. The project method is one of the most effective pedagogical technologies - Project activity is a multidimensional and flexible tool in modern education. Project activity allows students to work on tasks that are interesting and meaningful to them. Selecting a project topic that aligns with personal interests fosters greater student involvement and motivation to learn. Working on projects contributes to the development of key competencies, including critical thinking, problem-solving skills, communication skills, and self-organization. The project method enables you to integrate knowledge from various subjects, contributing to the formation of a holistic view of the world around you and fostering the development of systemic thinking. Projects often have a practical focus, which allows students to see the real results of their work. This, in turn, increases their motivation and satisfaction with the learning process. The project method allows you to take into account the individual characteristics of students, their interests and abilities, which contributes to more effective learning of the material.

The organization of project technology using the project method requires compliance with certain special requirements that ensure the effectiveness of this method for the formation of motivation for learning in schoolchildren: general methodological requirements (the presence of a personally significant educational problem for students; modelling of the research nature of the activity); psychological and pedagogical requirements (independence and creativity of students; pedagogical support for project activities); technological requirements (integration of digital resources into all stages of project activities; use of digital project portfolios; public digital protection). Compliance with these requirements ensures the successful implementation of project technology, the preparation of students to solve real problems of the modern world, and the formation of sustainable motivation for learning in them.

CHERNEGA, Ivan

<https://orcid.org/0009-0001-5312-0570>

Kharkiv National University of Internal Affairs, Ukraine

ACADEMIC MOBILITY AND DISTANCE TECHNOLOGIES: NEW OPPORTUNITIES FOR EUROPEAN STUDIES

Academic mobility has traditionally been an important component of European studies, allowing students and teachers to gain experience in a different cultural and educational environment. Exchange programs, particularly Erasmus+, have become a symbol of European integration in education. However, modern technologies are increasingly changing the perception of mobility, opening up new avenues for academic collaboration. Today, online learning makes it possible to attend lectures at European universities without physically moving, a role that plays a crucial role, especially during times of crisis or travel restrictions. Consequently, European studies are gaining a global dimension as students from different countries can participate simultaneously in the educational process, creating the effect known as "virtual mobility." Distance learning technologies provide rapid access to scholarly resources: electronic libraries and databases are becoming essential tools for conducting research and developing interdisciplinary approaches in European studies. This promotes equal access to knowledge and makes European studies more inclusive, regardless of country of residence or socioeconomic circumstances.

Modern academic mobility is increasingly hybrid, combining physical travel with virtual learning formats. Students can first gain experience in distance learning and then supplement it with live mobility, reducing financial and organizational barriers and enabling a wider range of participants. Distance learning technologies also broaden the range of educational programs by providing access to specializations not available at national universities. This is particularly valuable for studying European studies in countries outside the EU, as it allows Europe to strengthen its global role in education. A significant consequence of digitalization is the development of intercultural communication. Online groups bring together representatives of different cultures, creating an environment of tolerance, mutual respect, and understanding. Students gain practical experience in the intercultural dialogue that is an integral part of European studies. Therefore, academic mobility and distance learning technologies do not oppose each other, but rather reinforce each other, creating a new form of integrated education.

Despite the many advantages, challenges also exist: digital inequality between countries and social groups, language barriers, and technical difficulties. This requires support at the European education policy level. The European Union, particularly under its "Digital Education Action Plan," is developing a number of initiatives to overcome these limitations.

CHERNIHA, Yaroslav

Kharkiv National University of Internal Affairs, Ukraine

EDUCATION OF THE FUTURE: EUROPEAN STUDIES IN THE WORLD OF DIGITAL TECHNOLOGIES

European studies are one of the most relevant fields of education today, as they combine the study of political, economic, socio-cultural and technological processes taking place on the continent. In times of globalization and digital transformation, the role of technology in education is becoming decisive. The educational process is no longer limited to the audience - it goes into the digital space, embracing students and teachers from all over the world. Studying Europe through the prism of modern technologies allows for a deeper understanding of the dynamics of integration processes, cultural interaction and innovative trends in education.

The aim of this text is to reveal the importance of European studies in the modern educational environment and to show how technology is influencing learning and teaching. Particular attention is paid to digital tools, online education, and new approaches that are shaping the future of education in Europe.

European Studies is an interdisciplinary field that encompasses politics, law, economics, history, culture, and languages of European countries. Traditionally, teaching in this field involved lectures, seminars, and academic discussions. However, today, technology is fundamentally changing teaching methods. The digitalization of education has made it possible to create interactive learning environments where students can participate in virtual conferences, simulations of political processes, international projects, and joint research. Online platforms such as Moodle, Coursera, EdX, and others allow students from different European countries to unite, contributing to the formation of a common academic space. Teaching European Studies in the digital age involves the use of multimedia resources – video lectures, interactive maps, podcasts, and virtual tours of historical cities in Europe. This helps to make learning more visual, dynamic, and accessible. Significant attention is also paid to academic mobility. Modern technologies allow students to study abroad even remotely, which is especially relevant in the context of global challenges. Thus, digitalization makes European education more flexible and accessible.

Thus, the combination of European studies and modern technologies creates a new quality of education. Digital tools open up unlimited opportunities for students to learn, exchange experiences and develop professionally. Teaching becomes more flexible, interactive and future-oriented. European studies in the world of technology is not only an educational direction, but also a symbol of modern education, which is based on knowledge, innovation and common European values. They contribute to the formation of a new generation of specialists who are able to think globally, act responsibly and create a common European future.

CHERNONKOV, Yaroslav

<https://orcid.org/0000-0001-6598-1581>

Donetsk State University of Internal Affairs, Kropyvnytskyi, Ukraine

INNOVATIVE DIGITAL PRACTICES IN LANGUAGE EDUCATION: FROM THEORY TO EUROPEAN CLASSROOM

The digital transformation of education in Europe is accelerating: EU institutions and national systems are developing policies and practices aimed at making learning more inclusive, flexible, and efficient. One of the key areas of change is foreign language teaching, particularly English, where digital tools, from adaptive systems to AI-driven platforms, enable personalization, interactivity, and scalability (Digital Education Action Plan, 2021–2027). These innovations address the challenges of diverse learners and mass education, but they raise questions about content quality, pedagogical validity, and ethical risks (European Commission, 2021–2027).

1. Adaptive Systems and Personalized Learning

AI-based adaptive learning systems tailor educational pathways to individual needs by analyzing learner responses, pacing, and typical mistakes, then providing tasks that match their profile. Such systems significantly improve learners' motivation and performance compared to static materials (He et al., 2024).

2. Conversational Agents and Real-Time Communication Practice

Chatbots and AI-driven conversation agents ensure continuous communicative practice with immediate feedback and authentic linguistic situations. For teachers, they provide a tool for organizing additional practice beyond the classroom and for students – safe environments to experiment with pronunciation, register, and style (Zhu & Wang, 2025).

3. Automatic Assessment and Formative Feedback

AI technologies for the automatic evaluation of writing and pronunciation enable immediate formative feedback, supporting self-correction and accelerating learning. However, these systems complement rather than replace teachers, particularly in complex communicative tasks (Doğan & Talan, 2025).

4. AI and Automated Content Development

Generative AI is increasingly used for creating, adapting, and localizing course material. It reduces development time and enables scaling of multilingual educational content. However, the generated material still requires pedagogical validation and editorial control (The Verge, 2025).

5. Ethical Challenges and Gender Bias in AI

AI systems may reproduce social biases. Research has revealed the presence of gender stereotypes in machine translation and large language (Ghosh & Caliskan, 2023; Huang, 2024). Such patterns affect educational content and student perception, hence bias auditing and model debiasing are essential (UNESCO, 2024).

6. European Policy and Implementation Context

The Digital Education Action Plan (2021–2027) emphasizes digital infrastructure, teacher digital competence, inclusivity, and ethics in AI-driven education. For language teachers, this means professional development in technology integration and the pedagogically sound implementation of technology (European Commission, 2021–2027).

7. Practical Recommendations

1. Pilot and evaluate tools before mass adoption.
2. Train teachers in digital literacy and AI methodology.
3. Audit for bias and ensure fairness.
4. Combine automated and expert evaluation.

Innovative digital practices redefine language education, enhancing personalization, scalability, and inclusivity. However, their success depends on pedagogical integration, ethical oversight, and teacher preparedness. The European model of digital education aims to strike a balance between innovation and quality assurance, ensuring that technology serves, rather than dictates, pedagogy.

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CHERVONYI, Sergii

<https://orcid.org/0009-0006-3764-9120>

NAGAYEV, Viktor

<https://orcid.org/0000-0002-3130-6112>

State Biotechnological University, Ukraine

FORMATION OF MANAGEMENT COMPETENCE OF TANK UNIT COMMANDERS IN THE PROCESS OF PROFESSIONAL TRAINING: TECHNOLOGICAL ASPECT

The purpose of the study is to model didactic mechanisms for the formation of management competence of tank unit commanders in the system of technological support of their professional training.

Main results. The study examines the managerial competence of a tank unit commander as a systemic formation that represents a synergistic combination of components of the professional development of an officer of the Armed Forces of Ukraine, including business, leadership, psychological, personal, and creative qualities. The process of professional training of commanders in the system of technological support for the formation of managerial competencies is analyzed: planning, organization, motivation, control, regulation of educational and creative activities of cadets. Didactic means of forming a creative educational environment under the conditions of implementing the methodology of simulations of operational actions of cadets in making managerial decisions are considered. Methodological stages of the formation of managerial competence are studied: 1) conceptual (substantiation of the system of methodological approaches, which are the theoretical basis of pedagogical technology); 2) motivational (influence on the motivational behavior of the cadet's personality); 3) content (formation of a practice-oriented curriculum that corresponds to the competence characteristics of a specialist); 4) procedural (technological process of achieving an educational result based on the application of didactic methods and forms and means of management); 5) diagnostic (assessment and analysis of the quality of achieving educational results according to appropriate criteria).

For the effective implementation of this methodology, a pedagogical model of practice-oriented training has been developed, which structures didactic methods according to the goals and content of the managerial competence of tank unit commanders; determines adaptive organizational forms of managerial interaction according to the relevant criteria; justifies the technological principles of pedagogical interaction in the "teacher-student" system; creates pedagogical conditions for the activation of interactive interaction of cadets in the process of forming their managerial skills.

Conclusions. The technological process of forming the managerial competence of tank unit commanders is determined by the following pedagogical conditions: activation of the motivational component of candidates; introduction of simulation models for practicing leadership qualities; introduction of didactic means of interactive interaction; development of self-management skills through educational and creative activities of cadets.

CHETVERYK, Victor

<https://orcid.org/0000-0002-2137-2095>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE ROLE OF GENERATIVE AI IN DEVELOPING PERSONALIZED MICROLEARNING MODULES FOR LANGUAGE LEARNER

Introduction. Microlearning in language education provides brief, focused lessons that learners can engage with at any time. Generative AI (including *ChatGPT*, *Anthropic’s Claude*, *Google Gemini*, and *Microsoft Copilot*) can dynamically create personalized content on demand. For example, *Gemini* powers *Little Language Lessons*, a collection of short, AI-generated exercises that provide context-specific vocabulary, slang, and phrases. AI-driven platforms can generate microlearning modules that respond to each learner’s progress and needs, enabling study at one’s own pace. As a result, generative AI has become a versatile tool for supporting language practice at all proficiency levels.

Aim. This paper briefly outlines how generative AI tools can contribute to the development of personalized microlearning modules for language learners.

Results. Generative AI systems can produce rich microlearning content adapted for individual learners. *ChatGPT*, for instance, supports more than a hundred languages and can simulate conversational practice in the target language, helping learners improve speaking skills even without a human partner. It can also generate vocabulary lists, grammar explanations, and quizzes or flashcards based on learners’ needs. These capabilities allow lessons to adapt automatically: the AI adjusts the difficulty and topic to match learners’ levels and goals. Similarly, *Google’s Gemini* is used in experiments such as *Tiny Lesson* and *Slang Hang*, which provide focused phrase lessons and authentic dialogues in short bursts. *Claude* is noted for offering detailed, conversational explanations similar to those of a personal tutor. *Microsoft Copilot* likewise supports language practice: users can chat in their target language and request word explanations or sentence corrections instantly. In all cases, these AI tools enable flexible practice by curating content to individual goals and providing immediate feedback, which boosts motivation and retention. Importantly, generative AI also helps reduce language anxiety by providing a safe, non-judgmental space for practice, which lowers the affective filter and increases willingness to communicate (Gulich & Chetveryk, 2025). Additionally, such systems can adjust the emotional and cognitive load of tasks, supporting learner motivation and sustained engagement.

Conclusion. Generative AI is emerging as a powerful enabler of personalized language microlearning. By dynamically generating tailored dialogues, exercises, and feedback, these tools help learners at all levels study anytime and anywhere. Importantly, they complement rather than replace traditional instruction by helping learners build habits, stay engaged, and integrate learning into everyday life. As this overview shows, *ChatGPT*, *Claude*, *Gemini*, *Copilot*, and similar systems can significantly enhance engagement and efficiency in language learning by offering adaptive, on-demand micro-lessons.

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CRUZ, Poliana
TREVISOL, Juliane

<https://orcid.org/0000-0001-6847-2221>
UNEB, Brazil

TASKS AND DIGITAL TECHNOLOGIES: INVESTIGATING THE USE OF DIGITAL RESOURCES WITH MUSIC FOR FOREIGN LANGUAGE LEARNING

Introduction. The present study presents the final results of the Scientific Initiation research project (IC), funded by the Scientific Initiation Program (PICIN), carried out between 2024 and 2025 at the State University of Bahia (UNEB), Campus IV – Jacobina, State of Bahia – Brazil.

Aim. The objective of this investigation was to analyze the use of music as a pedagogical resource in tasks mediated by digital technologies in English language teaching, based on the Task-Based Language Teaching (TBLT) approach.

Results. To this end, a systematic literature review (Petticrew & Roberts, 2006) was conducted, covering a ten-year period (2014–2024), using the CAPES Journal Portal and descriptors such as “music AND English language learning” and “music AND EFL learning.”

In general, the results indicate that music significantly contributes to the development of linguistic skills such as vocabulary, pronunciation, grammar, and listening comprehension, in addition to fostering affective aspects such as motivation, self-esteem, and anxiety reduction.

It was also observed that music stimulates cognitive skills and brings learners closer to diverse cultural contexts.

Despite its benefits, there are still challenges related to the lack of time, pedagogical resources, and technological infrastructure.

Conclusion. It is concluded that music is a valuable pedagogical tool for English language teaching, whose effectiveness depends on proper planning, teacher mediation, and the appropriate use of digital technologies.

**DEGTIAROVA, Albina
MUKHINA, Tetiana**

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

INTEGRATION OF DIGITAL TECHNOLOGIES IN PRIMARY SCHOOL: EUROPEAN EXPERIENCE AND UKRAINIAN PERSPECTIVES

In the modern world, digitalization is significantly transforming the educational space. Primary school faces the challenge not merely of introducing technologies but of making them a tool for developing students' critical thinking, creativity, and emotional intelligence. As Vasyl Sukhomlynsky wrote, “Childhood is not preparation for future life, but real, bright, and unique life.” Therefore, digital technologies should be harmoniously combined with the humanistic values of education.

European countries demonstrate a systematic approach to digitalization. According to P. Sahlberg, in Finland, technologies support the individual pace of learning and the development of independence among younger students. In Germany, they are integrated through interdisciplinary projects. The EU defines digital competence as one of the key skills in the DigComp framework, emphasizing critical thinking and the ethical use of information.

In Ukraine, the implementation of digital technologies takes place within the framework of the New Ukrainian School concept, which is based on partnership and a competence-oriented approach. As Liliya Hrynevych aptly notes, “We should not simply teach children to use technologies, but help them understand how these technologies are changing the world.” Sofia Rusova emphasized that education must evolve alongside the cultural progress of the nation—words that remain relevant today when technologies should serve personal development.

European experience shows that the most effective model is one where digital tools are integrated into all learning processes—from communication to creative projects. In France, students create digital stories, while in Estonia, they use individualized electronic resources. In Ukraine, interactive platforms such as LearningApps, Wordwall, and ClassDojo, as well as blended learning, are gaining popularity. As Ukrainian scholars O. Pometun, N. Morze, and O. Ovcharuk note, successful digitalization depends not on technology itself but on the teacher's pedagogical mastery.

Thus, the digitalization of primary education is not a matter of technical modernization but a deep rethinking of the essence of learning—where the primary school student remains at the center, with their emotions, interests, and abilities. The Ukrainian school, relying on European values, must unite humanity and technology so that the teacher becomes not a computer operator but a true mentor and inspirer of young learners.

DIDENKO, Roman

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PHYSICS AND DIGITAL TECHNOLOGIES IN SECONDARY EDUCATION

In the 21st century, digitalization has become a key factor in the transformation of education. Teaching Physics – a science that explores the laws of nature – requires not only theoretical understanding but also hands-on experience. In the context of limited material and technical resources in schools, modern digital technologies open up new possibilities for visualizing complex processes, organizing experimental activities, and developing students' critical thinking.

Purpose. To analyse how modern digital technologies are changing teaching methods in secondary school Physics and to identify effective digital tools for organizing productive student learning.

Results. An analysis of pedagogical practices and modern educational approaches shows that integrating digital tools such as: Physics simulation platforms (PhET, Algodoo), virtual laboratories, interactive platforms (Google Classroom, Moodle, Kahoot, Wordwall), augmented reality (AR elements in lessons), significantly increases students' interest in the subject, promotes deeper understanding, and fosters the development of key competencies.

The use of digital technologies allows for the implementation of personalized learning, access to resources at any time, and consistent feedback between teachers and students. Learners become more engaged in the educational process, with increased autonomy and motivation to explore.

Moreover, digital environments encourage collaboration through shared projects and real-time communication tools, helping to build teamwork and communication skills. Gamification elements integrated into digital platforms can also enhance student engagement and make learning more enjoyable.

Importantly, these technologies make it possible to bridge the gap between theory and practice, especially in schools lacking physical lab equipment, by providing safe and repeatable virtual experimentation environments.

Conclusions. Digital technologies are not just an additional resource – they are an essential component of modern Physics education. When used effectively, they make lessons more visual, interactive, and impactful. Successful implementation depends on teacher readiness to work with digital tools and institutional support. The integration of ICT in Physics teaching aligns with European trends in education and contributes to the formation of a competent, technologically literate younger generation.

Furthermore, digital tools support inclusive education by providing differentiated learning opportunities for students with diverse needs and abilities. As technology continues to evolve, continuous professional development for educators will be crucial to ensure the sustainable and meaningful integration of digital innovations into the learning process.

DIDUK, Inna

<https://orcid.org/0000-0002-8485-4278>

RULA, Natalia

*Communal Higher Educational Establishment of Kyiv Regional Council
«Pavlo Chubynsky Academy of Arts», Ukraine*

VOLODYMYR VERNADSKY'S PLACE IN THE MODERN UKRAINIAN INTELLIGENTSIA

The relevance stems from the need to restore Volodymyr Vernadsky's name to the pantheon of modern Ukrainian figures. It is crucial to examine his contribution not only to world science but also to the formation of national consciousness and Ukrainian scientific development. His worldview serves as a cornerstone of Ukrainian identity, demonstrating how profound national consciousness can integrate with scientific thinking. His identity was not an ethnic declaration, but a deep cultural and national affiliation.

The research aims to analyze the worldview orientations of V. Vernadsky to ascertain his role in shaping the modern Ukrainian intelligentsia.

The formation of V. Vernadsky's national consciousness, which had deep Cossack roots, was influenced by the Ukrainian language and literature. A turning point in his awareness was his father's painful reaction to the Ems Ukaz of 1876, which banned the Ukrainian language. The scholar actively supported the Ukrainian revival, read the journal «Osnova», and considered it a happiness to participate in it. The culmination of his activity was his active involvement in the establishment of Ukrainian state institutions in 1918, including the founding of the Ukrainian Academy of Sciences and the National Library. Thus, his Ukrainian identity was not an ethnic declaration, but a deep cultural and national affiliation aimed at forming an educated citizen for the new state.

V. Vernadsky's ideas regarding Ukrainian identity are profound, humanistic, and scientifically substantiated. In 1915, Vernadsky wrote the seminal work, «The Ukrainian Question and Russian Public Opinion», which remained in manuscript until 1988. He firmly asserted that Ukrainian self-consciousness is distinct from that of other nations, rooted in unique psychological characteristics and cultural tendencies. Vernadsky highlights a unique Ukrainian mentality and worldview, emphasizing the role of Galicia in preserving this identity. He argues that the national consciousness of Ukrainians naturally gravitates towards the democratic values of Western Europe. In his view, the literary Ukrainian language, developed on a folk basis, became the crucial foundation for national consciousness and revival. Vernadsky concluded that, without a political foundation like the Kozachchyna and Hetmanate, language and literature became the essential means of preserving Ukraine. He criticized the Stolypin reforms and characterized russian-Ukrainian relations as russia's attempt to absorb a «foreign political body». The scholar noted that russia's attempts to transform the Ukrainian people into mere ethnographic material were and would remain unsuccessful. Vernadsky believed the Ukrainian desire to have their own law-based state is natural and destined for success.

Thus, his work is thus a powerful manifesto that illuminates the ideas of Ukrainian independence for future generations.

DMYTRIACHA, Roman
VOSTROKNUTOV, Leonid

<https://orcid.org/0000-0003-0896-1466>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MODERN APPROACHES TO THE DEVELOPMENT OF GENERAL PHYSICAL PREPAREDNESS IN ELITE BOXING

In contemporary professional boxing, the demands on athletes' physical and functional preparedness are steadily increasing. The high pace of bouts, the considerable number of rounds, and the fierce competition on the international stage require professional boxers not only to possess a high level of specialized technical and tactical mastery but also to demonstrate optimally developed parameters of general physical fitness. This serves as the foundation for the development of speed-strength qualities, endurance, coordination, and resilience to physical loads, which directly affect both competitive performance and the preservation of athletes' health.

Objective. To determine the specific features and modern approaches to the organization and improvement of general physical preparedness of professional boxers, taking into account the specifics of their competitive and training activities.

Results. The analysis of modern scientific and methodological literature, as well as the training practice of professional boxing, indicates a transformation of approaches to the organization of general physical preparedness. Traditional methods (strength and running exercises) are gradually being integrated with functional training, interval loads, and complex methods that reproduce the dynamics of competitive activity. Particular attention is given to the development of speed and strength endurance, coordination abilities, and the capacity to maintain high intensity throughout the bout. The use of elements of crossfit, circuit training, and unconventional equipment has proven effective, as it provides a multidimensional impact on the functional systems of the body. At the same time, the principle of load individualization remains highly relevant, considering weight category, fighting style, and the level of athletes' functional readiness. An important component is the integration of recovery technologies, which enhance adaptive capacity and reduce the risk of injuries. Altogether, these approaches demonstrate a transition of general physical preparedness in professional boxing to a qualitatively new level, where it is regarded as a strategic foundation for achieving high athletic performance.

Conclusion. Thus, modern approaches to the organization of general physical preparedness in professional boxing involve the comprehensive development of athletes' functional capabilities based on individualized programs and the integration of recovery technologies. This allows not only for an increase in competitive efficiency but also ensures the long-term athletic capacity of professional boxers.

DOBROVOLSKA, Svitlana

<https://orcid.org/0000-0002-2389-4890>

Lviv State University of Life Safety, Ukraine

ARTIFICIAL INTELLIGENCE AS A FACTOR IN THE MODERNIZATION OF THE TRANSLATION INDUSTRY

Purpose. The study aims to analyze the role of artificial intelligence technologies as a key factor in the transformation of the translation industry in the context of globalization. The focus is on studying the impact of AI systems on communication processes between representatives of various linguistic and cultural communities. The goal is to determine the potential of intelligent translation platforms to ensure the rapid processing of documentation and marketing content for transnational corporations, as well as to evaluate the effectiveness of methodological approaches, including statistical and neural network machine translation.

Results. Artificial intelligence-based translation platforms demonstrate the use of specialized algorithms for the interlingual transfer of text materials. It has been established that software solutions can implement various methodological approaches: statistical machine translation uses statistical models to identify the optimal translation equivalent, while neural network machine translation uses artificial neural networks to determine the most appropriate translation based on accumulated patterns. It has been found that the use of artificial intelligence in translation practice serves as an effective tool for improving the accuracy of content transmission due to the machine system's ability to memorize translation constructions and identify equivalent correspondences. Automating labor-intensive operations and routine tasks enables organizations to free up employee time and improve operational efficiency. AI plays an essential role in eliminating language barriers by processing written and spoken text, which helps establish communication links and expand linguistic inclusivity. At the same time, certain ethical issues have been identified: insufficient transparency of artificial intelligence tools, a tendency to produce inaccurate results and discriminatory conclusions, and the presence of built-in systematic biases.

Conclusions. The potential impact of artificial intelligence technologies in translation on future communication processes is characterized by its extraordinary scale. AI-based translation technology will be integrated into everyday devices such as laptops and smartphones, enabling real-time communication regardless of language. The impact on the corporate sector is significant: as businesses expand globally, AI translation allows companies to interact more effectively with customers in real time. The use of artificial intelligence in translation involves a collaborative approach between AI systems and human translators, ensuring successful transformation of the translation industry.

DOBRUNOV, Oleksii

<https://orcid.org/0000-0002-9481-4245>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PEDAGOGICAL TOOLKIT FOR DEVELOPING STUDENTS' SOCIAL SKILLS

Modern education focuses not only on the development and acquisition of subject knowledge but primarily on the formation of key 21st-century skills - communication, collaboration, critical thinking, social and civic responsibility - that is, on the development of social competences. Their formation ensures successful interaction, tolerance, and responsibility in various areas of activity. The development of social competences is defined as a key educational objective in the OECD (2023), where social and emotional skills are identified as components of holistic competence alongside cognitive and practical abilities, emphasizing the importance of social skills for well-being and civic engagement. In this context, it is highly relevant to design and apply a pedagogical toolkit for developing students' social skills, which ensures not only the acquisition of knowledge but also the enhancement of students' social abilities through practical interaction, reflection, and teamwork.

The purpose of this study is to outline the structure and potential of the pedagogical toolkit for developing students' social skills, which facilitates the support and advancement of learners' social abilities in the educational process.

Results. The issue of developing students' social competence has been widely examined in academic research. A pedagogical toolkit for developing students' social skills should ensure interaction, communication, mutual support, discussion, and self-assessment within collaborative learning contexts. This toolkit may include the following components: digital learning environments, that enable students to engage in collaborative activities in the form of games or projects; board and role-playing games; STEAM projects, where teamwork, role distribution, and collective decision-making are practiced; reflective practices, such as success journals, teamwork maps, and discussion sessions held during or after tasks. Their main goal is to create a positive and natural learning environment in which students, through practice and collaboration, develop essential social skills in an active, hands-on way.

Conclusion. Thus, the pedagogical toolkit for developing students' social skills is a key factor in implementing the competence-based approach in education. Its systematic use promotes not only the development of communication skills but also the formation of values such as mutual respect, cooperation, and social responsibility.

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DULKAI, Andrii

Kharkiv National University of Internal Affairs, Ukraine

BLENDED AND VIRTUAL MOBILITY IN EUROPEAN HIGHER EDUCATION

Traditional student and faculty exchanges are increasingly being complemented by virtual and blended learning models. Blended mobility combines face-to-face study abroad with remote online courses. Virtual mobility involves participating in international study programs without physical travel. Such formats make European education more accessible to students from different countries.

The intention of the research is to determine the role of blended and virtual mobility in the development of European higher education and to analyse their advantages.

Virtual mobility allows you to participate in international courses without leaving your home country. This paves the way for inclusivity and broader participation in the European educational landscape. Blended mobility has its own distinct advantages. Students gain the experience of studying abroad, but a significant portion of the program is completed remotely. This reduces accommodation and transportation costs. At the same time, participants have the opportunity to immerse themselves in an intercultural environment. Virtual mobility is gaining particular importance in times of globalization and digital transformation. It facilitates joint courses, seminars, and projects between universities in different countries. Participants learn to work in international teams through online platforms. This provides digital skills that are crucial for future professional activities.

The COVID-19 pandemic significantly accelerated the development of virtual mobility. Many universities were forced to switch to an online format, but this later evolved into a new opportunity. The experience of distance learning has proven beneficial for future international collaboration models. Blended and virtual mobility have now become integral parts of educational strategies. It's important to note that these formats contribute to the development of intercultural competencies. Students interact with peers from different countries and explore different educational and cultural contexts. This fosters tolerance, critical thinking, and flexibility in decision-making. International collaboration fosters a sense of belonging to the European academic community.

Of course, there are challenges. Not all students have the same access to quality internet and modern technologies. There are sometimes difficulties in recognizing credits earned during virtual programs. However, thanks to the combined efforts of universities, these issues are gradually being resolved.

Therefore, Blended and virtual mobility are changing the traditional understanding of mobility. They combine the flexibility of digital learning with the benefits of international collaboration. These formats are making European higher education more innovative and inclusive. Even more integrated programs and partnerships between universities are expected in the future.

FEDINA, Diana

Kharkiv National University of Internal Affairs, Ukraine

INCLUSIVE EDUCATION AND DIGITAL EQUALITY IN EUROPE

Inclusive education is one of the main components of modern European education policy. It is based on the principle of equal access to education for all, regardless of physical, social or economic differences. In the 21st century, when digital technologies have become an integral part of life, the issue of digital equality acquires particular importance. After all, it is digital inclusion that provides the opportunity for every pupil or student to fully participate in the educational process. European countries are actively implementing policies aimed at reducing the digital divide between different social groups. This is not only a technical, but also a social problem that requires an integrated approach. Thus, inclusive education and digital equality are considered as interrelated elements of the European strategy for the sustainable development of education.

The research goal is to analyse the main approaches to ensuring inclusive education in Europe through the lens of digital equality. The task is to identify key initiatives, policies and technological tools that contribute to overcoming educational inequality.

The European Union pays significant attention to creating conditions for accessible education for all citizens. The Erasmus+ program includes projects aimed at improving the digital competences of teachers and students with special educational needs. Also important is the Digital Education Action Plan (2021-2027), which provides for the development of an inclusive educational environment in all EU Member States. One of the key challenges is access to digital devices and the Internet. In some regions of Europe, there is still a significant difference between urban and rural schools. To overcome this gap, EU countries are investing in programs to expand digital infrastructure, provide educational institutions with modern technologies and train teaching staff. An important component of inclusive education is support for students with special needs. The use of technologies such as adaptive educational platforms, speech synthesis, special interfaces for people with visual or hearing impairments promotes equal opportunities for all participants in the educational process. For example, Finland and Denmark are actively implementing digital resources that allow children with developmental disabilities to learn together with their peers. In addition, digital equality encompasses the aspect of digital literacy. Insufficient digital skills can lead to new forms of social inequality. European education systems are gradually introducing mandatory digital competence courses to ensure an equal start for all students.

Thus, inclusive education in Europe is not only about ensuring physical access to learning, but also about creating digital conditions in which every person can realize their potential.

**FEDORCHENKO, Anastasiia
MUKHINA, Tetiana**

<https://orcid.org/0000-0002-1758-882X>

Berdyansk State Pedagogical University, Ukraine

INTEGRATING DIGITAL TECHNOLOGIES IN PRIMARY EDUCATION: ENHANCING LEARNING AND ENGAGEMENT IN YOUNG LEARNERS

Modern primary schools are actively integrating digital technologies, which helps increase students' engagement and improve learning outcomes. Interactive whiteboards and tablets enable pupils to interact with educational materials, participate in interactive exercises, and acquire knowledge more effectively. Popular tools for such interactive activities include *Classroomscreen*, *Ziteboard*, *NoteBookCast*, *MIRO*, and *Twiddla*.

Educational programs and applications designed specifically for primary school play a particularly important role. They include interactive games, learning tasks, and video materials that promote the development of key competencies of primary school learners and foster positive motivation for learning. Among such programs are «I Learn – I Don't Wait», Khan Academy Kids, Minecraft Education Edition, and DoodleMaths.

Online learning platforms, such as *Google Classroom*, *MOODLE*, *HUMAN*, and *Unified School*, make it possible to organize distance learning, conduct assessments, share educational materials, and ensure continuity of the educational process. Virtual and augmented reality technologies open opportunities for exciting learning experiments and excursions that are difficult to conduct in a traditional classroom. For example, students can take a virtual museum tour or engage in an interactive space exploration activity.

The integration of coding and robotics into the learning process contributes to the development of logical thinking, creativity, and problem-solving skills. For this purpose, primary schools use software products such as *Kodable*, *Code.org*, *Piktomir*, *Lightbot*, *CodeMonkey*, *Scratch*, *CeeBot*, and *CodeCombat*.

The advantages of implementing digital technologies in primary education lie in increasing students' motivation, personalizing the learning process, and developing digital skills that are essential for successful learning in today's information society. Interactivity, the possibility of an individual approach, and access to diverse learning resources make the educational process more effective and engaging for young learners.

Therefore, the integration of digital technologies into primary school is an effective means of enhancing learners' engagement and improving the efficiency of the educational process. The use of interactive whiteboards, educational applications, online platforms, virtual and augmented reality technologies, as well as elements of coding and robotics, promotes cognitive activity, the formation of digital competencies, and the development of critical thinking. Thus, the systematic implementation of digital resources creates conditions for personalized, interactive, and modern learning that meets the needs of the New Ukrainian School and the demands of the modern information society.

FOMENKO, Tetiana

<https://orcid.org/0000-0002-3048-7097>

Sumy National Agrarian University, Ukraine

FOSTERING STUDENTS' SOFT SKILLS VIA ONLINE FOREIGN LANGUAGE LEARNING

According to modern requirements, in addition to professional competencies (hard skills), students need to develop so-called soft skills, that include the ability to communicate effectively, teamwork, leadership, time management, critical thinking, emotional intelligence, problem-solving, and adaptability. The paper is *aimed* to study the features of the development of HEIs students' soft skills in the process of teaching English.

Training students in a particular situation of martial law has crucial peculiarities. The complexity of the access to education, the emotional exhaustion of students, and the increased demand for psychological support indicate the need for a comprehensive approach to language learning that goes beyond purely academic goals. In crisis situations, when some students live in front-line areas, other students are abroad, or some of them face psychological barriers, it becomes necessary to adapt educational content to the emotional and physical needs of students. Currently the educational process at Sumy National Agrarian University (Sumy, Ukraine) is carried out via distance mode: lectures are held online on Zoom or Google Meet platforms. In this context, it is important to combine flexible distance learning strategies, digital platforms, and active engagement techniques that allow for the creation of a learning environment with a powerful motivational and supportive component.

In the process of teaching a foreign language, favorable conditions are created for the development of soft skills using interactive methods (small group discussions, role-playing, and business games). In extracurricular work, an effective measure for developing soft skills is participation in English Speaking Club meetings, where students have the opportunity to practice English in an informal and friendly atmosphere. Native speakers from the USA, Great Britain, and Nigeria take part in these meeting as well.

Speaking Club meetings differ from standard lectures. The meetings are aimed at active communication and discussion of various topics. The instructor acts as a presenter, setting the direction of the topic with the disclosure of new, useful vocabulary and involving all participants in the discussion. By participating in Speaking Club and communicating with native speakers, students have the opportunity to practice the skills of spontaneous monologue/dialogue speech, and to activate their existing lexical and grammatical stock. Students also watch short videos and then engage in discussion and exchange of thoughts and emotions, which activates and helps consolidate accumulated knowledge and expressions.

An informal atmosphere facilitates overcoming emotional complications associated with the embarrassment of students to speak on camera and make language errors, strengthens students' engagement and motivation, increases confidence when expressing one's thoughts, and creates interpersonal interaction.

FROLOVA, Olena

<https://orcid.org/0000-0002-1510-2902>

Kherson State Maritime Academy, Ukraine

ARTIFICIAL INTELLIGENCE AS AN INTEGRATIVE TOOL IN ESP LANGUAGE EDUCATION

Aim. The aim of the present research is to analyze the application of Artificial Intelligence (AI) as an integrative tool in English for Specific Purposes (ESP) language education, focusing on its potential to enhance teaching practices and learning outcomes.

Results. Drawing from practical experience, AI can support ESP language education through interactive tasks and adaptive technologies. The specific functions of AI and possible ways it can be integrated into ESP Language education are presented as follows.

Enhancing Listening Skills through Tailoring Audio Materials with Text-to-Speech Technologies. Developing listening skills in ESP is one of the key components of language education. This is why language teachers always require a substantial number of high-quality audio recordings that contain up-to-date information, sound natural (with different accents, speech levels), and align with the learning objectives of each lesson. By using Text-to-Speech AI technologies (such as Google Text-to-Speech, ElevenLabs, and Play AI), teachers can develop and tailor their own audio recordings, thus providing a more personalized, learner-centered approach.

Promoting Effective Writing. AI-driven tools (such as Grammarly, LanguageTool, and ProWritingAid) can assist language teachers in guiding students throughout the writing process – from generating initial ideas to describing details and producing the final written text. AI writing assistants correct spelling and grammatical mistakes by conducting in-depth error analysis, suggesting variants for improvements, and offering supplementary resources for further training. Besides, they facilitate self-correction and self-learning.

Boosting Speaking Fluency. Speaking fluency can be increased through repetition and the use of automation tools (such as Google Speech-to-Text, ELSA Speak, and YouGlish), as these AI-driven technologies help promote automaticity in language production and reduce hesitation in students' spontaneous speech. Additionally, increasingly popular AI chatbots can simulate genuine conversational scenarios, which allows trainees to practice speaking in various contexts. These tools encourage students to self-correct and develop more accurate spoken language.

Conclusions. Today, AI has been recognized as an integrative tool in ESP language education, which addresses various challenges in students' language skills development. AI tools assist language teachers by fostering ESP competency in students through personalized, adaptive, and interactive practice. If proper application of suitable AI technologies is provided, trainees have a high chance of becoming confident communicators. Still, it is essential to acknowledge that AI only serves as a valuable aid to the learning and teaching process. By maintaining a reasonable balance between traditional teacher-led education and AI technology, students can reach the planned learning outcomes successfully.

GULICH, Olena

<https://orcid.org/0000-0002-3846-1916>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PSYCHOLOGICAL CHALLENGES IN LEARNING ENGLISH: ONLINE VS OFFLINE FORMATS

Modern education is rapidly evolving under the influence of digital technologies, and distance learning has become a common alternative to traditional formats. This is especially relevant in the context of foreign language learning. However, each format brings its own advantages and challenges – especially in terms of students' psychological comfort. Understanding the psychological barriers associated with each format can help improve the effectiveness of the learning process.

Purpose. To analyse psychological barriers that arise during both distance and traditional (offline) English language learning, to explore their nature, and to propose ways of overcoming them.

Results. Distance learning is more often associated with feelings of isolation, decreased motivation, difficulties with self-discipline, and anxiety related to technical issues. There is also an increase in stress due to the lack of immediate feedback and live interaction.

In traditional (offline) learning, the most common psychological barriers include shyness, fear of speaking in front of others, and fear of making mistakes in the presence of peers or teachers.

In both formats, students often experience low self-esteem, language anxiety, and fear of not understanding or being misunderstood.

The causes of these barriers can be both individual (personal traits, past learning experiences) and situational (class format, teaching style).

Effective ways to overcome these difficulties include creating a supportive learning environment, using interactive methods, personalizing tasks, and building students' confidence through positive reinforcement.

Conclusions. Each learning format has its own psychological challenges that affect the success of English language acquisition. Understanding the nature of these difficulties allows educators to adapt their teaching strategies to create an emotionally safe and encouraging environment for learners.

Combining the strengths of both formats in a blended learning model can be an effective solution to overcoming most barriers and improving the overall efficiency of language education.

GULICH, Igor

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

STRUCTURE AND CONTENT OF TRAINING CAMPS FOR ARCHERS AT THE STAGE OF BASIC PREPARATION

The basic preparation stage is decisive in long-term athlete development, establishing the foundation of physical fitness, technical skill, and psychological stability for archers. Rational organization of training camps at this stage is a key factor for effective preparation and sustainable progression.

The **purpose** of this study was to analyze and optimize the structure of training camps for archers, focusing on physical, technical, and psychological components.

Methods included observing 28 archers (ages 12–15) during two-week camps, analyzing documentation, and monitoring heart rate and control tests. The training followed a three-cycle microstructure: adaptation, intensive development, and stabilization, incorporating GPP, SPP, technical, and theoretical-psychological sessions.

Results showed optimal time allocation: 40–45% SPP, 30% technical-tactical drills, 20% GPP, and 5–10% theoretical/psychological prep. Technical work focused on stable shooting form, coordination, and precision. Exercises with elastic resistance and balance platforms improved postural stability and shooting endurance.

In the second cycle, loads increased by 15–20%, mainly through higher shooting volumes (up to 250 arrows/session) and situational drills. Psychological training utilized concentration and visualization. By the end, shooting accuracy improved by 8.6%, while balance and shoulder endurance improved by 12–14%.

Conclusions confirm that properly structured training camps are essential. Integrating physical, technical, and psychological elements accelerates motor learning and improves shooting stability. A systematic camp model, featuring phased load progression and daily technical analysis, forms a solid foundation for further specialization and long-term athletic success in archery.

Additionally, the study emphasized the importance of individualized load management based on athletes' functional readiness and recovery indicators. Regular feedback sessions and video analysis helped refine shooting technique and posture correction. Incorporating recovery activities such as stretching, massage, and active rest days contributed to better adaptation and reduced injury risk. Theoretical lessons on goal setting and competition strategy enhanced motivation and self-regulation skills. Coaches noted improved team cohesion and communication, which positively influenced overall performance. These findings highlight that a holistic, scientifically grounded approach to training camp organization maximizes both immediate and long-term developmental outcomes for young archers.

GUTSAN, Tetiana

<https://orcid.org/0000-0001-6233-301X>

GOLENKOVA, Yuliia

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODOLOGICAL APPROACHES TO ENHANCING COORDINATION ABILITIES IN YOUNG GYMNASTS THROUGH CLASSICAL CHOREOGRAPHY

Introduction. Coordination is one of the key motor qualities necessary for the successful performance of gymnastic elements. The development of coordination skills in beginner-level gymnasts lays the foundation for technical mastery, injury prevention, and overall motor development. Classical choreography, including ballet-based exercises, provides a system of movements that enhances balance, rhythm, spatial awareness, and body control. The integration of choreographic techniques into gymnastic training allows athletes to improve movement precision, posture, and fluidity, which are essential for further progress in the sport.

Purpose. The purpose of this study is to analyze the influence of classical choreography exercises on the development of coordination abilities in gymnasts of the initial training stage.

Results. The application of classical choreography tools in training sessions positively affects coordination development in beginner gymnasts. Choreographic exercises enhance the sense of rhythm, refine motor control, and promote the synchronization of complex movements. Incorporating dance-based sequences into gymnastic practice supports the activation of stabilizing muscles, improves balance, and contributes to spatial orientation. Furthermore, the combination of choreographic patterns with traditional gymnastic exercises increases movement accuracy and prepares young athletes for more complex technical elements. The interactive and artistic nature of choreography also stimulates motivation, concentration, and engagement, which are crucial for consistent training in the early stages of athletic development. In addition, the regular use of classical choreography fosters the development of anticipatory motor skills, improves the coordination of upper and lower limbs, and enhances overall body awareness. It creates a holistic environment where physical, cognitive, and aesthetic components are integrated, allowing young gymnasts to perform movements with greater fluidity, control, and expressiveness. The method encourages gradual mastery of complex sequences, which forms a strong foundation for future technical advancement and creative expression in gymnastics.

Conclusions. The integration of classical choreography into the training of beginner-level gymnasts is an effective methodological approach for developing coordination skills. It enhances motor control, balance, and rhythm, while also promoting psychological engagement and movement awareness. Systematic use of choreographic exercises provides a solid foundation for further technical and athletic development, making it an essential component of comprehensive gymnastic preparation.

HÄBLER, Camilla

Østfold University College, Norway

EXPLORING LITERARY AND SUSTAINABILITY COMPETENCE: TEACHER- GUIDED LITERARY CONVERSATIONS IN PRIMARY SCHOOL

The study is based on an action research project (Tiller, 2020) in which a literature teaching programme for Year 5 pupils was developed and evaluated in collaboration with teacher educators and primary school teachers. The programme draws on the Sustainability Library, a Norwegian adaptation of the UN's Sustainable Development Goals Book Club (UN Association of Norway, 2021). The pupils read Ingeborg Arvola's *Buffy By er talentfull. En selvbiografi* (*Buffy By is Talented. An Autobiography*, 2018), which is linked to the UN's sustainability goal number 1 (SDG 1) - no poverty. The action research project consisted of three cycles of planning, implementation, and evaluation, each cycle involving a reading stop where literary conversations between teachers and pupil groups were recorded. The empirical material comprises six transcribed conversations, all conducted within a didactic framework focused on the SDG 1 – no poverty.

The study demonstrates how the pupils' literary competence was expressed through literary conversations. At the same time, it explores what the teacher-led literary conversations can reveal about the potential of a children's novel as a didactic resource in work with social sustainability. In the conclusion, the study aims to establish a connection between literary competence and sustainability competence. I draw on theories of literary competence (Nikojavela, 2010) and literary conversations (Aase, 2005; Alexander, 2008), which help illuminate how pupils engage with texts through personal experience and guided interpretation.

Preliminary findings show that the pupils participate actively in the conversations. They possess knowledge about literature, and this knowledge contributes to their interpretation and understanding of the book. The pupils do not always manage to articulate explicitly what they think or how they experience the book, but through questions, explanations, and exchanges of meaning, their knowledge becomes apparent. As in other studies, this study shows that pupils at this stage are dependent on a confident teacher who can support them in reading and discussing the book (Håland & Hoel, 2016; Ottesen & Tysvær, 2020), in order for them to express their literary competence.

Understanding the literary competence and experiences of empirical readers is important in a didactic context. This type of study can provide insight into the quality of existing literature teaching and form a basis for how literature teaching might be further developed. In addition, empirical research on pupils' literary experiences can provide a foundation for legitimising literature teaching in schools.

HÄBLER, Camilla

Østfold University College, Norway

THE POTENTIAL FOR ENGAGEMENT IN READING CHALLENGING LITERARY TEXTS – TEACHERS' INTERPRETATIONS

Problem-focused teaching and deep learning in education is highlighted as central to the development of pupils' learning in school, particularly regarding the so-called 21st Century skills (cf. Ananiadou & Claro, 2009). Johansen (2015), Sønneland (2019), and Gourvennec (2017) drew attention to problem-oriented literature teaching, as they investigated how pupils in primary and secondary schools read and discussed demanding texts written by, for example, Franz Kafka and Raymond Carver. The texts were presented to the pupils as open academic problems.

When Sønneland (2019) asked lower secondary pupils to discuss challenging texts without prior information or detailed instructions, an unexpected response emerged: rather than feeling discouraged, the pupils became highly engaged. One classroom “exploded” with activity (Sønneland, 2019, p. 78). Presenting literary texts as meaningful problems proved to foster pupil engagement and participation (cf. Johansen, 2015; Sønneland, 2019). These studies raise important questions about text selection in literature teaching, and whether educators should dare to offer pupils literary texts that resist easy interpretation.

This study contributes to this discussion, but with a focus on how teachers respond when reading a text staged as an academic problem-solving task, and where the literary text presents challenges in both form and content. In line with Sønneland (2019), I provided a didactic framework in which the literary text was presented as an open academic problem. Concretely, this meant that I read a literary text aloud before asking the teachers to write down their reflections: What is the text about?

The data material consists of 40 reflective texts written by teachers. These reflections provide a basis for problematising questions related to how readers approach literary texts that are assumed to disrupt their expectations (Popper, 1999) in various ways—by resisting simple solutions or clear answers (Heath, 1982), and by challenging their understanding by not offering an immediate, coherent interpretation.

Based on the findings, the study seeks to contribute to the discussion on problem orientation, exploration, and deep learning in literature teaching. Might it be that literary work in schools is particularly well suited to problem orientation, since it is in the nature of the subject to approach literary texts with an openness to their indeterminacy? The study also raises the question of whether literary texts that require intellectual effort can serve as a basis for academic engagement.

HÄBLER, Camilla

Østfold University College, Norway

**WE ARE EACH OTHER’S WORLD – REFLECTIONS ON COMMUNITY IN
H. C. ANDERSEN’S “THE UGLY DUCKLING” (1844)**

Representations of community and exclusion permeate literary history, from Ibsen’s drama through Hamsun, Sandemose, and Vesaas to Shakar and Tiller. Literature explores various forms of exclusion, belonging, and community, highlighting both the challenges of living together and the importance of succeeding in doing so.

In this study, which combines a textual-analytical and a didactic approach, I read Andersen’s fairy tale “The Ugly Duckling” (1844) as a story of exclusion and loneliness, but also as a narrative of community in the making. Concepts such as solidarity, interaction, and identification serve as central analytical tools. The analysis is framed didactically by outlining how thematic threads in the fairy tale can be linked to interdisciplinary topics such as public health and life skills, and democracy and citizenship, both of which are defined in the overarching part of the Norwegian national curriculum (Ministry of Education and Research, 2017), and both of which concern the individual’s relationship to self and others.

Theoretical interlocutors in the study include Martha Nussbaum’s (2013, 2016) political philosophy, which supports inclusion and equality and offers a theoretical foundation for understanding citizenship, as well as her reflections on the role of emotions as a basis for moral action in public life. In addition, Mikhail Bakhtin’s (1999, 2000) theories on the dialogic nature of human beings are drawn upon, understood as the idea that we are social creatures who must interact with one another.

By reading literary texts that address questions of inclusion and exclusion, community and alienation, we can create space for discussing the experience of belonging. Furthermore, understanding the processes that promote, or hinder community can make us more aware of everyday actions and how these contribute to shaping communities. Recognising that communities are formed and developed through our actions gives us both the opportunity and the responsibility to build them together.

HALAIBIDA, Oksana

<https://orcid.org/0000-0002-3622-9857>

MARCHYSHYNA, Alla

ODCID <https://orcid.org/0000-0003-0430-176X>

Kamianets-Podilskyi Ivan Ohiienko National University, Ukraine

COGNITIVE-COMMUNICATIVE APPROACH TO LANGUAGE LEARNING AND TEACHING

Communicative approach to language learning was introduced by American and English scholars and the concept of communicative competence was developed by D. Hymes, T. Lillis, W. Littlewood, S. Nikolaieva, I. Chorna and others. According to D. Hymes, linguistic competence is not enough for effective communication, it is necessary to consider sociocultural context. Thus, foreign language learning focuses not only on students' ability to produce grammatically correct sentences but also on development of their capacity to communicate.

Contemporary scholars (A. Chamot, J. O'Malley, O. Vovk) suggest the application of wider cognitive-communicative approach in language learning which emphasizes involvement of mental process in acquiring a foreign language.

The aim of the research is to elicit requirements and techniques for integration of cognitive-communicative approach in language learning and development of students' metacognitive skills.

Modern communicative language learning is based on real life communication when students master a wide scope of up to date vocabulary, read meaningful authentic texts, learn active grammar structures (which are used in different communicative situations), participate in interactive activities (group discussions, role playing, problem solving tasks, etc.). Learners acquire not only lexical and grammatical but also discourse and sociolinguistic competence (the usage of language in different communicative situations and contexts). But learning is a mental process and for better results in language acquisition it is not less important for educators to understand how learners perceive, process and store information so that they could better develop their memory, inferencing and summarizing strategies. Integration of cognitive approach to communicative language learning not only encourages language usage in real context but also develops learners' awareness of learning process and meaningful understanding of language functioning. This understanding is based on interaction and critical thinking which is manifested in guided observation of grammar structures and discovery of grammar rule (indicative grammar learning), conscious use of grammar structure and reflection on which element works best in this or that communicative situation. For this purpose, it is effective to use in the teaching process CCQs (concept checking questions) to guide the students' understanding of the meaning of new words or grammatical elements and conceptualize information; and eliciting questions to assist self-discovery, activate knowledge and make information more memorable. These activities involve cognitive operations of analysis, synthesis, generalization, etc.

Conclusion. Integration of cognitive-communicative paradigm in foreign language learning provides meaningful mastering of foreign language, development of metacognitive skills and critical thinking.

HAUG, Sarah

Pädagogische Hochschule Ludwigsburg, Germany

ENRICH NOT REPLACE

Aim: This paper explores the field of European Studies with a focus on learning and teaching in the world of modern technologies. The aim is to examine how digital tools and artificial intelligence can enrich language and intercultural education within the European context, especially in Germany. As a future teacher, my personal motivation plays an important role in this study. I chose the teaching profession because I enjoy working with children, supporting their learning, and making a positive change in their lives. Teaching allows me to combine creativity, empathy, and knowledge to build a safe and caring space where children can learn with confidence and joy.

Through my studies in Germany and my last internship, I have experienced how technology can be used to improve classroom learning. Although my internship period is only half a year, it has offered valuable insights into the German education system, where traditional teaching methods are increasingly complemented by digital tools. In times like these, when teachers face high expectations and often have very limited time, it becomes even more important to use time-saving tools wisely. In my daily work, I used ChatGPT or a similar german regional tool called BWGPT to create images, stories, and reading comprehension activities for primary school learners. By using these tools, I was also able to differentiate better for more children and their special needs – for example, for students who have other first languages or need extra visual and linguistic support. These materials help students visualize content, stay motivated, and better understand lessons. Digital tools can save preparation time and support teachers in creating inclusive, engaging, and age-appropriate learning environments. It is very important though to always check the results that digital tools or AI systems like ChatGPT produce, because they can still make mistakes. Technology can be a great support in preparing lessons or finding creative ideas, but it can never replace a real teacher. A teacher understands the students personally, knows their emotions, strengths, and challenges – something no program can truly do.

Result: That is why it is essential to stay educated, think critically, and use such tools wisely. When used carefully, ChatGPT can be a very good way to *complement* and *enrich* the lesson, especially if the teacher already knows what they want to teach and has clear goals. In this way, technology becomes a helpful partner, but the heart of good teaching will always be the teacher and their connection with the students.

Conclusion: My experiences in Germany confirm that technology should not replace the teacher but rather empower them to connect with students in more meaningful ways. By choosing the teaching profession, I hope to help each children learn, grow, and feel safe - and to contribute to an educational culture that values both innovation and human connection within the broader European context. AI helps me to meet the needs of every child and to support each student more individually.

This abstract is written as a task by Prof. Ilona Kostikova.

HLUSHCHENKO, Maksym
KRAVCHUK, Tetiana

H.S. Skovoroda Kharkiv National Pedagogical University

**SPECIFIC FEATURES OF STRENGTH FITNESS EXERCISE SELECTION FOR
THE GENERAL PHYSICAL PREPARATION OF FEMALE ATHLETES IN
AEROBIC GYMNASTICS**

Purpose The purpose of the study is to identify the key requirements for selecting strength fitness exercises aimed at organizing the general physical preparation of female athletes engaged in aerobic gymnastics.

Results Strength fitness exercises can serve as an effective means of general physical preparation for athletes specializing in aerobic gymnastics; however, their selection must follow several methodological requirements. One of the main conditions for their use is the correspondence of the exercises to the goals of the specific period and stage of the training cycle. The most appropriate time for their implementation is during the preparatory or transition periods of the annual macrocycle. Exercises should be feasible and appropriate for the athletes' age and fitness level. When applying strength exercises, it is essential to maintain a balance between strength and flexibility; therefore, flexibility exercises should be included at the end of each strength complex.

The planning of sessions incorporating strength fitness exercises should comply with the principle of gradual load progression. Initially, it is advisable to use exercises that do not require excessive muscle strain. For example, callanetics – a system of static-dynamic exercises that may include elements of yoga, ballet, and Pilates – can be used. The key principle of this type of strength fitness is the slow execution of exercises, maintaining positions, performing numerous small repetitions, and creating muscle tension without jerks. These exercises are aimed at strengthening deep muscles, improving posture, and developing flexibility.

At the next stage, athletes can be introduced to more dynamic sets of basic strength exercises, such as variations of planks, push-ups, squats, lunges, and exercises for the abdominal and back muscles. Initially, they can be performed using the classical interval training method with rest intervals of 30–60 seconds, and after several weeks – according to the Tabata protocol (a form of HIIT). The essence of this method lies in performing each exercise at a fast pace for 20 seconds, followed by 10 seconds of rest. Throughout training, the coach must monitor the athletes' technique and teach them self-control when performing strength fitness exercises independently.

Conclusions. When selecting strength fitness exercises to improve the general physical preparedness of athletes in aerobic gymnastics, it is necessary to follow several key requirements. The proposed exercises should be accessible, appropriate to the athletes' level, and include different modes of muscle work. They should be monitored by both the coach and the athletes themselves and correspond to the specific goals of each training period and stage. To ensure safe progression, the principle of gradual load increase must be strictly observed.

HOLENKOV, Anton

<https://orcid.org/0000-0002-7854-4492>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

**CHARACTERISTICS OF THE STAGES OF THE TECHNOLOGY
FOR PREPARING FUTURE PHYSICAL EDUCATION TEACHERS
FOR ANIMATION AND LEISURE ACTIVITIES**

The professional training of future physical education teachers in contemporary higher education increasingly requires the integration of innovative approaches aimed at expanding their functional responsibilities. In addition to ensuring students' physical development, teachers are expected to organize meaningful leisure and recreational activities that contribute to personal growth, cultural enrichment, and social adaptation. The preparation for animation and leisure activity, therefore, represents a significant component of professional competence, which requires a systematic pedagogical technology grounded in motivational, theoretical, practical, creative, and reflexive dimensions.

Purpose. The objective of the present study is to substantiate and describe the stages of the technology designed to prepare future physical education teachers for effective animation and leisure activity, highlighting their structural integrity and functional interrelation.

Results. The proposed technology of preparation unfolds through several successive stages. The motivational-value stage focuses on the development of professional motivation, awareness of the pedagogical and social significance of animation activity, and the cultivation of an orientation toward creativity and self-expression. At the informational-theoretical stage, students acquire knowledge of the conceptual foundations, principles, and methods of organizing leisure activities for different age and social groups, while also becoming acquainted with innovative recreational practices. The practical-activity stage is aimed at the formation of organizational, communicative, and managerial skills, as well as the ability to model, implement, and evaluate leisure programs. During this stage, students engage in real-life animation projects, which ensures the acquisition of practical experience and the consolidation of professional skills. The creative-innovative stage provides conditions for the independent design and implementation of original scenarios and programs, the application of modern technologies. Finally, the reflexive-evaluative stage emphasizes the analysis of professional achievements, self-assessment of competencies, and the development of an individual trajectory of further professional and personal growth within the framework of lifelong learning.

Conclusion. The described technology constitutes a coherent and logically structured system for the preparation of future physical education teachers for animation and leisure activity. Its staged implementation contributes to the formation of professional readiness, stimulates creativity, and ensures the ability to adapt to the dynamic requirements of the educational and recreational sphere. Consequently, this approach strengthens the professional identity of future teachers, promotes continuous self-improvement, and corresponds to the demands of modern educational standards and the socio-cultural needs of society.

HOLZWARTH, Jan

Pedagogical University Ludwigsburg, Germany

THIS IS WHY I WANT TO BECOME A PHYSICAL EDUCATION TEACHER

Nowadays, technology has a tight grip on nearly every aspect of our daily lives. Much of what we do happens remotely – conversations are typed rather than spoken, and back pain has become a shared experience. At times, it feels as if we're already living in some kind of simulation, where so-called learning institutions consist of one chatbot answering questions posed by another.

Even art and music are increasingly taken over by AI and other technologies, making the use of instruments or pencils feel redundant. I know this description may sound dramatic, but I want to emphasize how strongly I believe that we, as human beings, are physical and organic first. We should spend at least as much time moving our bodies as we do sitting in front of screens. Over the past 15 years, with the global rise of technology use, I've personally witnessed a clear decline in physical ability and sports participation among young people.

This development has serious consequences, many of which are already visible. Sports clubs in smaller villages are on the brink of extinction due to a lack of new members. BMI levels are rising, mental health among children is declining, and many people in their early 30s already suffer from back, neck, or shoulder pain because they spend 90% of their day sitting. The need for change is obvious. The human body needs movement - it needs to be challenged. Blood must flow, and our eyes need a break from screens. In my opinion, the most effective way to make a long-term difference is to plant motivation in the minds of the youngest members of our communities.

I believe there's a sport for everyone, and I want to help young people build a fundamental understanding of their bodies and the importance of movement, so they can find joy in being active and discover their own path to a healthier body and mind. Of course, I know it's impossible to force anyone to enjoy being physically active - but we can metaphorically offer them so many shoes until one fits.

To make this vision a reality, we need many good sports teachers – and I believe I can be one of them. I still have much to learn and experience, but I have the ambition and ability to be part of a positive change toward a healthier, happier future.

HONCHAROVA, Olha

<https://orcid.org/0000-0002-7760-1600>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INTEGRATING GAMIFICATION AND PROJECT-BASED LEARNING TO TEACH PROFESSION-ORIENTED SPEAKING SKILLS

Purpose. The development of profession-oriented speaking skills is a crucial component in the language education of master’s students at pedagogical universities, particularly those with advanced English proficiency preparing for future teaching careers. This study explores the integration of gamification and project-based learning (PBL) as a dual-strategy approach to enhance professional communication competencies in English.

The primary **purpose** of the study was to design, implement, and evaluate a blended methodology that combines the motivational benefits of gamification with the authenticity and depth of PBL. This approach was applied in an advanced English course for master’s students in a pedagogical university, focusing on scenarios relevant to educational and academic professions: conference presentations, teacher training, staff meetings, workshop facilitation, and professional dialogues.

Results. Gamification elements such as points, role-based challenges, badges, and team leaderboards were embedded within a series of speaking-focused projects. These projects required students to complete real-life tasks (e.g., planning and delivering a teacher training session or presenting school-to-school or school-to-community collaborative projects in a mock staff meeting / contest board), fostering collaboration, critical thinking, and linguistic precision. The results, based on observation, performance assessments, and learner feedback, indicated a notable increase in students’ engagement, task ownership, and use of professional language.

Learners reported feeling more confident in public speaking and professional interactions, attributing this to the structured, goal-oriented, and interactive nature of the tasks. The findings suggest that integrating gamification with PBL provides an effective framework for developing profession-oriented speaking skills in highly proficient learners. This combined method supports not only language acquisition but also the formation of professional identity and pedagogical competence – key outcomes for future educators.

Conclusions. The study concludes by recommending practical guidelines for implementing this approach in similar higher education contexts and outlines directions for further research in teacher training and language pedagogy.

HORDIIENKO, Oksana

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE THEME OF WAR IN CONTEMPORARY UKRAINIAN LITERATURE

Introduction. In contemporary Ukrainian literature, the theme of war (the military theme) holds a central place. This is connected with the socio-political events that have taken place in Ukrainian society since 2013 (the Revolution of Dignity in 2013–2014, the Anti-Terrorist Operation/Joint Forces Operation or hybrid war of 2014–2022, and the Russian-Ukrainian war since 24 February 2022). However, this theme was important for Ukrainian literature long before the twentieth century. We may recall, for example, the novellas-fairy tales by Marko Vovchok *Karmeliuk* and *The Captive*, the fairy tale by Ivan Nechui-Levytskyi *The Cossacks*, or the poems by Borys Hrinchenko *The Traitor*, *The White Captive*, *Ataman Muzyka*, and others. In the twentieth century, together with works written for adults, texts for younger readers also appeared (for example, B. Lepkyi's *Myshka*; M. Pryhara's *A Boy Lived*; V. Blyznets' *The Dugout*, *The Silent One*; Vsevolod Nestayko's *It Happened in Kyiv*, etc.).

Aim. The aim of this study is to group literary works on the theme of war based on the features of their plot conflicts.

Results. Based on an analysis of plot structures, it is possible to distinguish the following groups of texts:

1. Maidan prose, which shows the rejection of the myth about the “bloodless” Orange Revolution, models ideological and mental divisions within the state, and reflects on the unrealized goals and lost illusions of the 2004 Maidan (for example, L. Kostenko's novel *Notes of a Ukrainian Madman*). It also highlights the de-infantilization of a generation formed in an infantile society (I. Tsilyk's *Red Traces on Black*).
2. Realistic-naturalistic prose, in which events are portrayed realistically or naturalistically to strengthen Ukrainian collective consciousness in the context of information and hybrid warfare (the prose of A. Tsaplienko).
3. Patriotic prose, which reinterprets the most controversial episodes of national history (V. Shkliar's *Black Sun*).
4. Ontological-national prose, which models the ontological choice of an ordinary person, representing the broader choice of the entire nation (S. Zhadan's *The Boarding School*).
5. Philosophical-existential prose, which depicts the “growing up” of civil society as it begins to question and seek explanations for the cyclical nature of national history and the causes and consequences of recurring wars (V. Rafeyenko's *Long Times*).

Conclusions. In works on the military theme, writers explore the concept of war not only for society as a whole but also on a personal level. They consider the impact of war on human lives and examine psychological and moral-ethical problems that arise during wartime. A common feature in all these works is the understanding of war as absolute evil that brings suffering to the Ukrainian people.

HRONA, Natalia

<https://orcid.org/0000-0003-2578-2865>

Communal Establishment «I. Franko Pryluky College of Humanities and Pedagogy» of the Chernihiv Regional Council, National University «Chernihiv Collegium» named after T. H. Shevchenko, Ukraine

DIGITAL TRANSFORMATION OF LANGUAGE EDUCATION: INTEGRATION OF ARTIFICIAL INTELLIGENCE IN SPECIALIST TRAINING

Introduction. The modern educational landscape is undergoing fundamental changes due to the implementation of new technologies, particularly artificial intelligence (AI). While the emergence of such tools creates new opportunities, it also presents a number of challenges for educators. Instead of viewing these technologies as a threat, it is crucial to integrate them as a key element for improving and transforming the educational process.

The objective of this study is to analyze the potential and challenges of using AI-based tools in the teaching of philological disciplines.

Results. AI-powered tools provide the ability to create learning programs that account for the individual needs, knowledge levels, and learning styles of each student. The integration of AI into the educational process helps students develop key digital competencies. We used chatbots to visualize complex grammatical concepts, specifically the function words, which allowed students not only to see them but also to critically analyze the logic behind the AI's visualization.

Conclusions. The implementation of artificial intelligence in language education is an inevitable and highly promising step. AI can become a powerful tool for personalizing learning, developing digital skills, and increasing student motivation. However, it is extremely important for the instructor to act as a facilitator in this process, one who controls and critically evaluates the results of the AI's work.

HRYNCHENKO, Ihor

<https://orcid.org/0000-0001-7469-5819>

ZMIEVSKYI, Vadym

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE IMPACT OF CONCENTRATED AND DISTRIBUTED ALLOCATION OF COORDINATION TRAINING MEANS ON THE DEVELOPMENT OF MOTOR ABILITIES IN YOUNG HANDBALL PLAYERS AGED 11-13 YEARS

Relevance. Contemporary handball demands high levels of dynamism and intensity from athletes, thereby elevating the significance of coordination abilities as an integrated complex that facilitates control over motor acts. These abilities enable the rapid acquisition of new actions and adaptation to unpredictable situations. In handball, performance success is contingent upon the development of a 'sense of time', 'sense of space', and 'sense of muscular effort'. Inadequate cultivation of these qualities impedes technical mastery and the expression of other physical capabilities.

Existing research addresses general coordination training for young athletes. However, the optimisation of methodological approaches for handball players aged 11–13 remains insufficiently investigated. The 2003 curriculum delineates only broad directions. There is a paucity of detailed, experimentally validated methodologies that account for age-related peculiarities, the dynamics of various coordination ability components, and the efficacy of different training load regimes, particularly concentrated and distributed ones. Consequently, there exists an objective imperative for the development and comparative evaluation of innovative coordination training approaches aimed at enhancing the playing efficiency of young handball players.

Aim. To theoretically substantiate and experimentally ascertain the effectiveness of diverse approaches to the allocation of coordination training means for young handball players aged 11–13 at the basic preparation stage.

Methods and Participants. The study employed a comprehensive set of methods: literature analysis, pedagogical observation, experiment, testing, expert assessment of technical actions, and mathematical statistics (Wilcoxon criterion).

Setting: Comprehensive Children's and Youth Sports School No. 1 of Kharkiv City Council. **Participants:** 16 handball players in their third year of training (aged 11–13 years). A control group (CG, n=8) and an experimental group (EG, n=8) were formed through random sampling, considering age.

Approaches:

- **Concentrated (CG):** Selective focus on one component of abilities per session (15–30 minutes at the start of the main part).
- **Distributed (EG):** Combination of exercises with varied focus within a single session and microcycle.

Duration: 5 months. **Testing:** Conducted at the beginning and end, comprising 14 tests for physical fitness, coordination, and technique (30m sprint, ball dribbling, jumps, throws, etc.). **Expert assessment:** Based on a 5-point scale (catching, holding, passing the ball).

Exercises were based on the principles of specificity (Platonov, 2017), novelty, and alternation (Volkov, 2002; Sergienko, 2016). Balls of different weights/sizes were used, with actions performed using dominant/non-dominant hands.

Table 1

Comparison of Concentrated and Distributed Approaches to the Development of Coordination Abilities in Young Handball Players

Component of Abilities	Concentrated Approach (CG)	Distributed Approach (EG)
Sense of Rhythm	Focused within a single session	Combined within a microcycle
Dynamic Balance	Selective, 20–30 min	Distributed, 5–10 min per session
Reaction Speed	Fragmentary	Integrated with other components
Spatial Orientation	Isolated	Comprehensive

Results. In the control group (CG), statistically significant improvements ($p < 0.05$) were recorded in 5 tests: 30m ball dribbling (+14.08%), 3x10m shuttle run (+4.26%), lateral jumps (+9.92–10.94%), and 7m throws (+10.81%). Expert assessment: Ball catching improved from 2.5 to 3.4 points; holding from 2.5 to 3.3 points; passing from 2.7 to 3.7 points.

In the experimental group (EG), significant improvements ($p < 0.05$) were observed in 10 tests: 30m backward sprint (+13.92%), ball dribbling (+12.86%), T-test (+8.18%), standing long jumps (+16.89–22.73%), backward jump (+15.70%), right lateral jump (+13.28%), 7m throws (+24.29%), and target passing (+16.41%).

Expert assessment: Ball catching improved from 2.7 to 4.6 points; holding from 2.5 to 4.4 points; passing from 2.4 to 4.5 points.

The distributed approach yielded greater improvements in complex tests, confirming better transfer of abilities to game-specific actions.

Conclusions. Both approaches enhance coordination, but the distributed method is more effective, yielding significant improvements in motor memory, sensitivity, and stability. This facilitates better execution of fundamental handball techniques. It is recommended to implement the distributed approach in children’s and youth sports schools to enhance game efficiency.

HRYNCHENKO, Oksana

H. S. Skovoroda Kharkiv National Pedagogical University

THE INFLUENCE OF PILATES EXERCISES ON BALANCE DEVELOPMENT IN 8-10-YEAR-OLD GYMNASTS AT THE STAGE OF SPECIALIZED BASIC TRAINING

Developing balance is one of the key tasks in artistic gymnastics training, especially at the stage of specialized basic training. It is at this age that the foundations of stable body control are formed, which is a necessary condition for the high-quality performance of elements. Improving balance is directly related to the development of coordination skills, body stability and effective neuromuscular interaction. The search for new training methods and techniques has led to the integration of Pilates elements into the training system for gymnasts.

The aim of the study is to develop and test the effectiveness of a Pilates-based program to improve balance in 8-10-year-old gymnasts engaged in rhythmic gymnastics at the stage of specialized basic training.

Results. Sixteen female athletes took part in the study and were divided into control (CG) and experimental (EG) groups of 8 participants each. The experiment lasted 9 weeks. The experimental group followed a Pilates program focused on balance development, core stability, coordination, flexibility, and muscle control. Testing was conducted before and after the program. The Romberg test (static balance) and the "Snake" test (dynamic balance) were used.

Table 1

Balance indicators before and after the experiment

Test	Group	Before (mean \pm SD)	After (mean \pm SD)	Increase (%)
Romberg test (s)	CG	14,5 \pm 3,0	15,1 \pm 3,2	+4,1
	EG	14,2 \pm 3,1	22,6 \pm 2,8	+59,1
Snake test (s)	CG	10,2 \pm 2,3	9,9 \pm 2,1	-2,9
	EG	10,4 \pm 2,5	7,2 \pm 1,9	-30,8

The experimental group showed a significant improvement in both static and dynamic balance ($p < 0.01$), while the control group showed no statistically significant changes. This confirms the effectiveness of the implemented Pilates program in enhancing balance function.

Conclusions. The use of Pilates exercises in training improves postural control and neuromuscular coordination, reduces the risk of injury, and enhances the execution of technical elements in rhythmic gymnastics. The method is recommended for use in the early stages of sports specialization.

HURKINA, Olena

V. N. Karazin Kharkiv National University

CRITICAL THINKING IN THE SYSTEM OF TRAINING FUTURE TEACHERS

Preparing future teachers is one of the most important responsibilities of the education system. In the 21st century, the role of a teacher goes beyond simply transmitting knowledge. Therefore, a system aimed at preparing future teachers must be based on a set of principles that will foster the development of competent and responsible professionals. This is the foundation for a system capable of preparing teachers to address the multifaceted challenges of modern educational institutions.

Teacher training must go beyond technical skills and empower future educators to critically analyze existing educational structures. Teachers must identify areas for improvement, question accepted and established norms, and work to replace or improve them. By addressing inevitable but important issues such as inclusivity, equity, and cultural diversity, teachers can completely transform the education system.

Another important aspect is the integration of reflective practice into professional habits. This allows future teachers to analyze their previous experiences, rationally evaluate their teaching methods, and continuously improve. Through reflection and interaction with colleagues, future teachers learn to think critically and draw logical conclusions about their pedagogical decisions.

In today's world, teachers must be prepared to consider students' individuality and use technology effectively. This includes respecting and accommodating cultural differences and creating an equitable learning environment. Technological competence, which goes beyond the simple use of digital tools, must also encompass creative, diverse uses of technology to enhance learning.

Finally, the teacher education system must be built on the principles of continuous learning and adaptation to new conditions and contexts. Education is a constantly evolving field, influenced by many aspects: social, technological, and even political. Therefore, teacher education must instill in teachers a desire for continuous inquiry and professional growth. This includes skills in critical analysis and self-assessment so that teachers can respond to ever-new challenges.

In conclusion, the teacher education system must develop critical thinking and motivate active participation in educational reform. Future teachers must not only master the art of presenting content but also understand its broader impact on students and the world at large. Taking all of the above ideas into account, teacher education can prepare educators who inspire, innovate, and make a meaningful contribution to the development of both education and society.

HUSEINOV, Rustam
GOLENKOVA, Yuliia

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE ROLE OF INTERVAL TRAINING USING SPECIALIZED EQUIPMENT IN THE MODERN TRAINING OF HIGHLY SKILLED BOXERS

In modern high-performance boxing, endurance is considered one of the leading factors of sports performance. The high pace of the fight, the need to maintain technical and tactical stability over many rounds, and rapid recovery between rounds require athletes to have an optimal level of aerobic and anaerobic performance. Traditional methods of developing endurance are gradually being supplemented by innovative approaches, among which interval training with the use of specialized equipment occupies a leading place. This not only provides increased functional capabilities, but also creates conditions for variability and individualization of the training process.

Objective. To determine the effectiveness of interval training using specialized equipment as a means of developing endurance in highly skilled boxers.

Results. The study found that the use of interval training programs in combination with the use of modern equipment contributes to a significant increase in the level of endurance of highly skilled boxers. The use of cardio machines (treadmills, bicycle ergometers, rowing machines) in a variable intensity mode allowed for the purposeful development of aerobic capabilities and increased efficiency of the cardiovascular system. The use of specialized equipment of a strength and functional nature (medicine balls, ropes, skipping ropes, jumping platforms, adjustable resistance trainers) made it possible to improve anaerobic endurance, speed-strength qualities and coordination. Experimental observations have shown that interval training in the format of "high intensity - short rest" ensures the adaptation of athletes to extreme competitive loads, reduces fatigue in the late rounds and contributes to the maintenance of stable technical and tactical activity. Boxers who systematically performed interval exercises using equipment showed an increase in overall performance, improved recovery speed between rounds, and a higher level of psychological readiness for intense exercise.

Additionally, it was found that the use of interval programs in combination with equipment variation helps to increase the motivation of athletes to the training process, reduce the monotony of classes and increase their efficiency. The use of interactive technologies (for example, smart simulators with load control) provides accurate monitoring of the functional state of boxers and allows for more reasonable individualization of training programs. This indicates the prospects for integrating modern technical means into the physical training system of high-class athletes.

Conclusion. Interval training with the use of specialized equipment is an effective means of developing endurance in highly skilled boxers. Their use allows you to combine the targeted development of the body's functional capabilities with the improvement of special training, which increases the effectiveness of competitive activity and contributes to the achievement of consistently high sports results.

IVANYSHYN, Nataliia

<https://orcid.org/0000-0003-3297-9367>

Lviv State University of Life Safety, Ukraine

CHALLENGES FOR TRANSLATORS IN THE AGE OF ICT

Introduction. The rapid development of artificial intelligence (AI) and digital technologies (ICT) is transforming the translation profession. While machine translation and AI tools provide new opportunities, they also reshape the set of competencies and put new threats for future translators. Training translators in this context demands an interdisciplinary approach that combines linguistic, technological, and ethical aspects. In the framework of Ukraine's cooperation with international institutions such as the European Union Civil Protection Mechanism (UCPM), EFSCA, NATO, and United Nations agencies, State Emergency Service (SES) interpreters are increasingly expected to combine strong linguistic expertise with digital literacy. AI may facilitate terminology management, real-time captioning, and remote interpreting platforms, but interpreters must ensure accuracy, cultural sensitivity, and ethical standards in multicultural settings.

The aim of this paper is to identify and analyze the key competencies and challenges that translators and interpreters need in the era of ICT. Special attention is given to the interdisciplinary requirements combining linguistic expertise, digital literacy, ethical standards, and cybersecurity awareness.

As a result, we can highlight new skills required for interpreters:

Digital competence: mastering AI-assisted translation platforms, remote interpreting technologies, and speech-to-text tools.

Critical evaluation: the ability to assess and correct AI-generated output, ensuring terminological accuracy in specialized fields such as civil protection, humanitarian aid, medicine, demining, and occupational safety.

Intercultural and ethical awareness: safeguarding neutrality, confidentiality, and cultural adequacy in communication facilitated by AI.

Technological integration and cybersecurity awareness: ability to work with VR-based training environments, cloud technologies, and terminology management apps, while also addressing risks of data leaks, cybersecurity threats, and misuse of confidential information in digital interpreting contexts.

Overall, the skills of translators in the age of ICT must combine linguistic expertise with technological literacy, domain-specific knowledge, ethical awareness, and cybersecurity skills. Translation training should therefore adapt its methodology to prepare students for these interdisciplinary challenges.

JESUS, Ediclecio

<https://orcid.org/0009-0003-9490-0404>

NUNES, Rodrigo

<https://orcid.org/0000-0002-7518-3847>

Universidade do Estado da Bahia – Campus IV, Brazil

DIGITAL MEDIA AND COLLABORATIVE TOOLS: RESOURCES FOR ENGLISH LANGUAGE LEARNING

With the advancement of technology, more and more tools have been developed to facilitate various areas, and nowadays, with the popularization of artificial intelligence (AI), it is not different. With these advancements, the difficulty of identifying which of these technologies can be used in an English language teaching/learning context also increases. This research, which is still under development, aims to identify these technologies and catalog them in a chart/table.

Sangkala and Mardonovna (2024) state that the educational landscape has transformed significantly with the rapid evolution of technologies. Thus, the use of AI has brought a change in personalized and adaptive learning experiences, so that by using these tools, teachers can enhance the learning process by complementing their methods. AI can also simulate real-world linguistic interactions, contributing to language learning.

Considering the information presented, two searches were conducted in the Google Scholar repository to identify some tools. The first search, conducted on October 8, 2024, used the search terms, in quotes, "AI-based Educational Tools," and applied some of the site's own filters: language in Portuguese or English, peer-reviewed articles, and publication date from 2014 to 2024. The second search, conducted on December 22, 2024, used the search terms "'Digital Media' AND 'English Language Teaching,'" and applied some of the site's own filters: language in Portuguese or English, peer-reviewed articles, and publication date from 2019 to 2024. After applying exclusion and inclusion criteria, both searches resulted in 11 articles each. The tools found within these articles were tested for their inclusion in a chart/table.

The results identified the existence of the implementation of some AIs in educational contexts, and some ethical recommendations for their use were also noted. With these results, it was possible to test some AIs to create a chart/table. Furthermore, a concern for the ethical and secure implementation of AI in education was perceived, which can also be reflected in English language teaching/learning.

KABUS, Natalia

<https://orcid.org/0000-0003-3665-8501>

PAVLOVSKA, Liudmyla

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

FACTOR STRUCTURE OF CITIZENS' RESILIENCE UNDER MARTIAL LAW

In conditions of military aggression, developed psychological immunity and resilience allow citizens to maintain efficiency, despite the challenges and life in conditions of constant stress. Traumatic events of war deplete internal resources and the human psyche. At the same time, it is important not only to survive, but also to maintain internal balance, where the ability to manage stress is the basis of maintaining mental health, both for civilians and military personnel.

The purpose of the publication is to highlight the factor structure of citizens' resilience in conditions of martial law.

Results. The conducted scientific research shows that psychological immunity is an integrated system of cognitive, motivational, and behavioral resources of the individual, which ensures the individual's ability to resist stress, using flexible, constructive coping strategies. Resilience reflects the stability of the personality, its ability to recover after stress. We believe that psychological immunity is the basis of resilience, and a high level of resilience is observed in people with strong psychological immunity.

In order to determine the factor structure of the resilience of citizens under martial law, we used the following methods: Psychological Immunity Questionnaire by K. Bona (adapted by T. Khomulenko, I. Kyslova, I. Bubyry); Resilience Questionnaire by Judith Johnson (which allows to investigate the levels of social support, emotion management and overcoming difficult situations) and (Brief Resilient Coping Scale, BRCS). 130 residents of communities living in Kharkiv and the Kharkiv region of different ages and genders participated in the empirical study.

Using exploratory factor analysis, we identified 3 factors (explaining 56.75% of the variance) in the factor structure of the personality of "resilient" citizens. The structure of the first factor (factor weight 3,93, 26, 21% of the explained variance) includes orientation towards achieving goals, a sense of control, social creativity, self-efficacy, and social monitoring. This allows us to define the factor as "Effectiveness of goal achievement through control, social creativity, and involvement". The second factor (2.371755, 15.81%) is represented by indicators of self-control of irrationality and emotional self-control, as well as self-control of impulsivity, associated with the factor negatively, which fills it with the opposite meaning. We defined this factor as "Developed emotional and cognitive self-control". The third factor is defined as "Maintaining personal integrity and self-development" (2,21; 14.73%).

Conclusions. Taking into account hidden (latent) factors that determine the resilience of citizens in martial law conditions will contribute to a better understanding of ways to increase the resilience of the individual in times of crisis.

KACHALO, Anastasiia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

LEARNING ENGLISH THROUGH GAMES: TYPES AND METHODS OF APPLICATION

Introduction. Game-based learning plays an important role in primary English language teaching, as it matches the age needs of young learners, creates a positive classroom atmosphere, and increases motivation. Games help pupils learn vocabulary and grammar naturally, support active participation, and develop communication skills.

Aim. The aim of this paper is to describe the main types of games used in primary English teaching and to show how they can support the development of pupils' language, cognitive, and social skills.

Results. Different types of games can be used to improve English learning in primary school:

- **Alphabet and spelling games** help expand general knowledge, train memory, and teach pupils to work with new words.

Examples: Five Cards, Who Is the Fastest?, Do You Know the First Letter?

- **Phonetic games** improve pronunciation and help children recognise English sounds.

Examples: Listen to the Sounds, Catch the Sound, Chain Game

- **Grammar games** support learning basic grammar rules from the beginning.

Examples: Memory Game, What Can You Do?, Have You...?

- **Vocabulary games** activate speech, help learners use new words in real-life situations, and develop quick language reactions.

Examples: Yes/No Game, In the Shop, What Is Missing?, Bring Me Quickly

- **Reading games** help children develop early reading skills, understand simple texts, and build sentence structure.

Examples: Be Attentive, Read Flash Cards, Put the Words in a Sentence

- **Listening games** train pupils to understand spoken English, recognise intonation and rhythm, and follow instructions.

Examples: Which Team Is the Best?, Listen and Find Pictures, Do It!

- **Action and song-based games** combine movement, music, and repetition. They are short, easy to remember, and useful for practising both new and familiar material.

Examples: Looby-Loo, The Farmer in the Dell, If You're Happy

Conclusion. Game-based activities are an effective tool for developing young learners' language skills as well as their cognitive abilities (attention, memory, thinking) and social skills (cooperation, communication). The variety of game types allows teachers to support pupils' overall development and make English lessons more engaging, motivating, and productive.

KALASHNYK, Oksana

Kharkiv State Academy of Design and Arts, Ukraine

MICROLEARNING IN COURSES OF UKRAINIAN FOR PROFESSIONAL PURPOSES

Introduction. *Microlearning* is a modern educational technology that presents material in short, clearly structured segments. *Microlearning* focuses each lesson on one concept or skill. This approach, widely used in distance education, offers clear structure, quick updates of knowledge, and convenience for learners with limited study time.

Aim. The aim of the article is to review the potential of *microlearning* in teaching Ukrainian for professional purposes, to define its principles, advantages, and the role of digital technologies, including artificial intelligence (AI).

Results. Modern professionals need ongoing development of communicative skills, but traditional courses are often too intensive. Microlearning addresses this by presenting content in small portions that gradually build knowledge. Digital platforms offer short modules focused on one practical topic. Teachers note that 3–7-minute videos, presentations, or interactive tasks help keep attention and organise new material. In courses of Ukrainian for professional purposes, this approach supports quick learning of professional vocabulary and typical speech patterns, especially for learners who study while working.

Microlearning is the delivery of small content units that complement any form of instruction. Its main advantages are improved attention, flexibility, mobility, and the ability to personalise learning. Research shows that small learning segments increase effectiveness and long-term retention. In language education, this is especially useful: working daily with 5–10 new words helps learners build a large vocabulary within a year.

In several countries, microlearning is integrated into professional and language training, where courses combine classroom instruction with independent micro-modules. This allows teachers to consider different levels of learners' preparation and optimise study time (Веретюк & Четверик, 2025).

AI enhances microlearning by adding personalisation and adaptability. It analyses learners' progress, selects suitable content and pace, generates tasks, and provides instant feedback. AI tools also support material development by creating lesson plans, adapting texts, and explaining language topics. Together, microlearning and AI form a flexible model that supports both individual and group learning.

Conclusions. *Microlearning* in courses of Ukrainian for professional purposes has strong potential because it divides content into short thematic modules with clear goals. It supports concentration, flexibility, and the opportunity to study at a convenient time. The use of AI increases the effectiveness of this model by ensuring adaptability, personalisation, and fast content creation. The integration of microlearning and AI is a promising direction for the development of professionally oriented language courses, responding to the needs of modern specialists and the trends of lifelong learning.

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KALUGIN, Illia

<https://orcid.org/0009-0002-9883-4187>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

ORGANIZATION OF UNIVERSITY STUDENTS' ACADEMIC MOBILITY

Academic mobility is students' temporary moving to another higher education institution within the same country or abroad to study, do an internship, learn a foreign language or conduct research. It is a key component of higher education that offers students the chance to gain new skills, experience, enhance their foreign language proficiency, expand their social and cultural horizons, and gain new competencies.

The organization of students' academic mobility in higher education involves international agreements, official documents, and a student application process that typically includes an official letter from the home university, a learning agreement, proof of language proficiency, and academic records. Key programs like Erasmus+ facilitate this by funding international study, ensuring results are recognized, and providing a framework for cross-border cooperation between universities.

The examples of programs and systems which participate in organisation of university students' academic mobility are: Erasmus+ (a European program that supports student and staff mobility for study or traineeship periods abroad), Fulbright Program (a U.S. program that promotes international educational and cultural exchange), DAAD (German Academic Exchange Service that facilitates academic and scientific exchange between Germany and other countries) etc.

There are certain benefits and objectives of university students' academic mobility. They are:

- students' academic and personal development (students gain knowledge, develop communication and critical thinking skills, and experience different cultures);
- recognition of credits (mobility results are recognized, and credit systems like the European Credit Transfer and Accumulation System (ECTS) facilitate this recognition);
- institutional development (the exchange of knowledge and best practices strengthens higher education institutions and systems);
- language and cultural skills (academic mobility helps to improve foreign language proficiency and intercultural communication skills);
- personal growth (mobility provides opportunities for personal development and helps students gain a new perspective on their own education system);
- career advancement (academic mobility can enhance student's academic and professional profile by offering experience in a different educational system and international environment).

KASHENA, Alona

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

USING INTERACTIVE TECHNOLOGIES IN FOREIGN LANGUAGE TEACHING

The **aim** of this paper is to determine the impact of interactive technologies on the effectiveness of foreign language teaching and to examine how interactive methods contribute to the development of students' speaking skills.

Results. Interactive learning is highly effective because it ensures that the learning process takes place under conditions of constant and active interaction among all participants, including the teacher. The modern methodologists classify interactive technologies as follows:

- **Interactive technologies of cooperative learning.** These include *pair work*, *small-group work*, the *Carousel technique*, *Rotating trios*, the *Fishbowl method*, and the *Think–Pair–Share* strategy.
- **Interactive technologies of collective-group learning**, which involve simultaneous joint work of the whole class. This group includes *Learning through teaching*, the *Jigsaw technique*, *Incomplete sentences*, *Decision tree*, the *Microphone activity*, *Brainstorming*, and other similar methods.
- **Technologies of situational modeling**, which involve learning through games and simulated situations. These include *simulation games*, *role-playing activities*, and other forms of imitation-based learning.
- **Technologies for processing discussion issues.** Discussions support the development of cognitive activity and critical thinking. This group includes the *PRESS method*, *Take a position*, *Change your position*, *Debate*, and *Opinion line*.

The use of interactive technologies effectively stimulates cooperation among students, as all interactive methods involve meaningful communication. Applying such techniques in English lessons diversifies the learning process, strengthens language competence, and supports the development of communication skills, imagination, and critical thinking.

For example, in primary school English lessons, teachers can use the *Incomplete sentences* method. The teacher selects a topic, provides an unfinished sentence, and students complete it. This approach is especially useful in Grades 1–2 when learning *have/has got*, as in the sentences “*I have...*” or “*She has...*,” helping reinforce the grammatical pattern.

Situational modeling techniques are also valuable. One example is the *Pack a Bag* game, which involves the whole class. The teacher creates a situation such as “*Let’s help Pinocchio get ready for school!*”, and students place items in a bag while naming them in English: “*This is a book*”. They then add a short description, for example, “*This is an English book*”. Such activities encourage coherent speech and help consolidate vocabulary in an engaging, interactive context.

Conclusions. Thus, interactive technologies help activate students' language abilities and increase their motivation. They include a variety of methods that support more effective learning and make the educational process interesting, dynamic, and student-centered. These technologies not only enhance language proficiency but also contribute to the development of essential cognitive and communicative skills.

KASHYRINA, Iryna

<https://orcid.org/0000-0002-7103-0595>

POTSIUPAN, Alina

National University 'Zaporizhzhya Polytechnic', Ukraine

TEACHING PHRASEOLOGICAL UNITS: TRANSLATOR METHODOLOGY

Translator training is one of the key issues within the domain of Translation Studies. By viewing language as socio-cultural phenomenon we respect the Cultural Turn in Translation Studies as well as the emergent properties of the networks of cultural conceptualizations represented in a distributed fashion across the cultural conceptual network which highlights itself in the process of revitalizing cultural pragmatics during intercultural communication. The model, presented by Farzad Sharifian in 2011, represents how the cultural conceptualisations are distributed and what are they, being the event, role, image, proposition, and emotion schemas. Against the globalized geopolitical canvas we refer to phraseological units as being the 'archeological sites' (in terms of Sharifian, 2011) that irradiate cultural knowledge unpacked when translation is on. The point is, how to manage pieces of cultural knowledge those 'sites' contain in the era of artificial storage mediums. The controversial issue lies in the very terminology reflecting both the static and dynamic nature of these artificial systems, moreover, the ambivalence is in the very core of the issue as it goes here about the human-machine or machine-machine mediation as well as about Source Text, the translator, and the Target Text mediation. Hence, we argue that the Artificial Intelligence is not only the mediator in the hermeneutic circle of translation where the polylogue of voices is heard: those not only of authors, translators, and target readers, but also of languages and cultures, but can also be applied to the translator training when it is up to enriching our understanding of the mechanisms behind axiological cultural dimension of phraseological units.

Emergent cultural knowledge that phraseological units bear does not appear to be on the surface but misleads by its bogus clearness of the semantics. Thus, the necessity to use the Artificial Intelligence as the systemic tool for the so-called itinerary of the process of transplanting the cultural knowledge seed to the receiving cultural ground, if to refer to the metaphor, conjured up by Susan Bassnett and Andre Lefevere. Here cultural knowledge management includes planning, coordination, and development, as Hanna Risku put it in 2010.

While we are talking about the AI mediation input, the idea of negotiating translation, expressed by Umberto Eco in 2004, is worth mentioning, according to which we teach translators to follow the three-stage process, from rewording to translating substance to perfect language which allows to arrive with a conclusion that the Artificial Intelligence is the tool to go beyond the words in teaching a translator to reach the destination of the Walter Benjamins pure language.

KAZACHINER, Olena

<https://orcid.org/0000-0003-4842-3857>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

USING FAIRY TALE AT DIFFERENT STAGES OF THE CONSULTATION PROCESS

Introduction. Fairytale therapy in family counselling is a method that uses fairy tales to solve family problems, improve understanding, and develop skills. It allows you to work with emotional and behavioural difficulties in a safe and creative environment.

When choosing a fairy tale for consultation, it is important to consider the age and characteristics of the child and the nature of the fairy tale. It is recommended to choose age-appropriate fairy tales with a simple plot and understandable characters, for example, folk tales. Depending on the purpose of the consultation, you can choose fairy tales with different themes and plots, including magical, everyday tales about animals, or tales with psychological subtext.

Purpose. The purpose of the study is to reveal the features of the use of fairy tale therapy during psychological consultations and at different stages of the consultation process.

Results. Fairy tales can be used at different stages of a consultation for different purposes. They can be an introduction to a problem, a means of research, a tool for finding a solution, or a way to close the work. At the beginning of a consultation, a fairy tale can help to establish contact with the client, create an atmosphere of trust, and gently tune in to the topic. In the middle of the process, a fairy tale can be used to explore hidden resources, uncover hidden motives, and understand the dynamics of a situation. At the end, a fairy tale can help to consolidate results, to offer new perspectives, and to inspire positive change.

The directions of fairy tale therapy application in family counselling are: work with child-parent relationships, improvement of marital relations, resolution of family crises.

There are some ways of conducting a consultation using a fairy tale: 1. Choosing a fairy tale: taking into account the client's interests, a variety of fairy tales, plot and characters; 3. Discussion of the fairy tale: simple questions, questions aimed at reflection, questions aimed at self-analysis, development of a continuation of the fairy tale, identification of problems; 4. Using the fairy tale as a tool: finding solutions, developing skills, therapeutic effect.

Conclusions. All of the above allows us to conclude that fairy tale therapy in family counselling is a method that uses fairy tales to solve family problems, improve mutual understanding, and develop skills. It allows you to work with emotional and behavioural difficulties in a safe and creative environment. The features of the use of fairy tale therapy during psychological consultations and at different stages of the consultation process are revealed.

KHRABAN, Tetiana

<https://orcid.org/0000-0001-51695170>

Military Institute of Telecommunications and Information Technology, Ukraine

CHALLENGES AND PROSPECTS FOR TEACHING ENGLISH IN CONTINUING EDUCATION

In the contemporary era of globalization, the acquisition of foreign languages has emerged as a pivotal element in the professional development, social mobility, and cultural integration of individuals. The notion of lifelong learning is emerging as a predominant paradigm in the 21st century, while the English language is recognized as a pivotal competence for career advancement and active engagement in global society. The present study **aims** to examine the characteristics of teaching English to adults within the framework of lifelong learning. It also seeks to identify pedagogical and organizational challenges, and to substantiate innovative approaches that can foster the development of both professional and social competencies in adult learners.

Results and Discussion. Adult education constitutes a pivotal element of ongoing development. Its distinguishing characteristic from conventional learning models is the deliberate selection and inherent motivation of learners, which stem from their real-life and occupational experiences, thereby ensuring the practical implementation of knowledge. The needs of adults exhibit dynamism, encompassing professional development, social adaptation, self-realization, and participation in community life. Consequently, the system of lifelong learning must embody flexibility, accessibility, and a practical orientation. Teaching English is a multifaceted endeavor, characterized by a variety of challenges. Among these challenges are the limited time at educators' disposal, learners' varying levels of English proficiency, communicative barriers, and the shortcomings of traditional teaching materials. It is imperative to adopt a comprehensive approach that integrates contemporary technologies with interactive methodologies. Innovative solutions involve the use of adaptive platforms, modular structures, gamification, as well as interactive techniques such as role-plays, projects, and simulations. Digitalization facilitates learning by rendering it more accessible and flexible. The implementation of innovations necessitates a strategy that incorporates digital technologies, active teaching methods, professional development of educators, socio-cultural adaptation of programs, support systems, and partnerships with the professional community. This approach fosters continuous development skills and enhances the competitiveness of adult learners.

Conclusion. Adult education, as a pivotal domain of lifelong learning, exerts a direct and substantial influence on both professional and personal growth. Learner diversity presents organizational challenges; however, it also stimulates pedagogical innovation. The utilization of flexible formats, digital resources, and adaptive methods facilitates the overcoming of temporal and psychological barriers, thereby unlocking the potential of adult learners.

KHYZHA, Ivan

<https://orcid.org/0000-0002-3566-4267>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MYTH AND REALITY IN POST-MAO NARRATIVES

Chinese literature of the post-Mao Zedong era demonstrates a dynamic interplay between myth and reality. Authors turned to allegory, folklore, and magical realism to explore silenced experiences and to restore continuity with cultural traditions. This narrative strategy has allowed writers to rethink the national past and provide a critical perspective on the present. At the same time, it highlights the diversity of narrative approaches that reflect rural, ethnic, and urban dimensions of Chinese cultural identity.

The aim of this study is to examine how post-Mao authors such as Mo Yan, Alai, and Wang Anyi employ mythological elements and narrative experimentation to reflect historical trauma, to reshape cultural memory, and to engage readers in reinterpreting collective identity.

Results. The following comparative research shows that the integration of myth and reality in post-Mao literature enables multiple functions and strategies:

First, Mo Yan employs mythological imagery and magical realism to merge folklore with historical trauma. In *“Red Sorghum”*, folk songs and ritual symbolism coexist with memories of violence, while in *“Big Breasts and Wide Hips”* mythological exaggeration both glorifies and critiques national survival.

Secondly, Alai incorporates Tibetan legends into depictions of clan rivalry, feudal decline, and modernization. In *“Red Poppies”*, myth becomes a parallel history resisting official erasure, while in *“Empty Mountain”* the landscape itself takes on mythical qualities, embodying memory and cultural resilience.

Thirdly, Wang Anyi reimagines the urban experience through myth. In *“The Song of Everlasting Sorrow”*, Shanghai is transformed into a mythic space of nostalgia and collective memory, showing that myth is not confined to rural or ethnic contexts but extends to modern urban life.

Together, these examples illustrate that myth is not merely ornamental but an essential narrative tool. It functions as a medium of memory, identity, and cultural critique, enabling Chinese literature to address silenced histories while revitalizing traditional forms.

Conclusions. Post-Mao literature demonstrates that myth is not a retreat into fantasy but a method of revealing deeper truths. Through hybrid forms, Chinese writers reconstruct historical narratives and cultural identities that resist official simplifications. By juxtaposing Mo Yan’s rural epic vision, Alai’s ethnic myth-making, and Wang Anyi’s urban mythologies, it becomes clear that myth and reality are not opposites but complementary forces. This interplay defines a major trend in contemporary Chinese literature, situating it within global discussions on memory, identity, and narrative innovation.

KHYZHNIAK, Hanna

<https://orcid.org/0009-0002-2272-2656>

*Municipal Institution «Kharkiv Lyceum No.99
of the Kharkiv City Council», Ukraine*

**THE DEVELOPMENT OF STUDENTS' CRITICAL THINKING IN THE AGE OF
MEDIA INFLUENCE: PRELIMINARY RESULTS OF THE STUDY «DEMOCRACY,
TOLERANCE, MEDIA AND CIVIC RESPONSIBILITY THROUGH THE EYES OF
YOUTH AND TEACHERS»**

In today's digital society, media plays a central role in shaping students' values and perceptions. Its language often combines emotion and persuasion, influencing judgment and behavior. Therefore, developing critical thinking is essential for media literacy and responsible citizenship. Exploring how teachers interact with media helps design effective strategies for fostering these skills in schools.

Purpose The study aims to examine teachers' attitudes toward the influence of media on students' critical thinking and to identify tendencies for comparison with students' views (ages 13–17) at later stages. It is part of a broader project titled *«Democracy, Tolerance, Media, and Civic Responsibility through the Eyes of Youth and Teachers.»*

Results At this stage, 20 teachers from Kharkiv and the Kharkiv region participated in the survey (85% female, 15% male). Most are aged 30–60. 100% of the respondents work in general secondary schools. Media use is high: 75% follow news daily, mainly through social media and online sources (each 45%). However, 70% distrust social networks, preferring family, TV/radio, and internet resources (40% each) as more reliable. Regarding information verification, 60% always check facts, while 40% do so occasionally. All respondents have encountered misinformation or manipulative language. Most (80%) feel only “partly confident” in distinguishing facts from manipulation.

Teachers believe students lack strong critical media awareness (80% «partly», 5% «need training»). The majority support introducing special lessons in media literacy for both students (70%) and teachers (62.5%).

Conclusions Preliminary findings indicate that teachers perceive the influence of media as significant and often manipulative. They support integrating media literacy and critical thinking training into both teacher education and school curricula. The continuation of this comparative study—with inclusion of students as a respondent group—will provide deeper insight into generational differences in media perception and help design evidence-based educational strategies aligned with European values of democracy, tolerance, and civic responsibility.

KIPROVA, Valentyna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

**“THE GETHSEMANE GARDEN” BY IVAN BAHRIANYI:
THE REPRESENTATION OF RESISTANCE TO THE TOTALITARIAN REGIME**

Introduction. Ivan Bahrianyi is one of the most prominent writers of twentieth-century Ukrainian literature. He held a strong civic and political stance and openly criticised the Soviet regime. His works have been examined by many scholars, including L. Lutsiv, Yu. Lobodovskyi, I. Koshelivets, T. Mykhida, M. Spodarets, N. Shapovalenko, O. Shaposhnykova, and others.

Aim. The aim of this study is to analyse Ivan Bahrianyi's novel *The Gethsemane Garden* through the lens of resistance to the totalitarian regime.

Results. In *The Gethsemane Garden*, Bahrianyi relied on his personal experience as a political prisoner. All surnames of NKVD officers, prison staff, and inmates mentioned in the novel are real.

The narrative is built on the myth of the system's vulnerability and its supposed need for constant protection. Violence becomes the primary instrument used by the system to “cleanse” the rear of “enemies” and to create “Soviet loyalty” among the population. The connection between crime and punishment is destroyed, as the prison functions not as a corrective institution but as a mechanism for breaking a person. The investigators' main purpose is to destroy the prisoner's moral strength and demonstrate, by any means, that human life has no value.

The characters in the novel fall into two groups:

- those loyal to the regime – servants of the system who are granted the right to use psychological and physical violence against “enemies of the people”;
- those who resist the regime.

In the value system of the protagonist, Andrii Chumak, the concept of family occupies a central place. It is represented through biblical imagery such as Judas, Cain, the Garden of Gethsemane, and Jesus Christ. Family becomes a sacred idea and acquires special significance as a contrast to Soviet ideology. The novel also highlights Andrii's deep emotional reliance on his brothers. The image of his beloved, Kateryna, fits into the framework of family values and becomes both a trial for him and a source of salvation from death.

The prison cell in *The Gethsemane Garden* becomes a microcosm of the Soviet totalitarian system, reflecting the relationship between the system and the individual. Bahrianyi employs the technique of the “inverted world,” where criminals and judges switch roles. This inversion gives the “foreign” space features of the “own” space and vice versa. The “foreign” (hostile) space is one that belongs to the Soviet system or is controlled by it. The “own” space is the one farthest and safest from its influence. Other examples of “foreign” space in the novel include the city of Kharkiv and the prison train.

Conclusions. In *The Gethsemane Garden*, Ivan Bahrianyi debunks the Soviet myth and offers a model of resistance to the system through the figure of a humanist fighter – someone ready to kill and die for his homeland and loved ones. The writer speaks to future generations, to the youth who will still have to struggle for independence.

KIRIIACHENKO, Iryna

<https://orcid.org/0009-0004-7966-5669>

V. N. Karazin Kharkiv National University, Ukraine

DEVELOPMENT AND FORMATION OF THE PRESCHOOL EDUCATION SYSTEM IN CHINA

The paper outlines the main stages in the development of preschool education in China, tracing its evolution from family-centered upbringing in ancient times to a modern, state-regulated educational system. The study emphasizes the influence of social and political changes on educational reforms and highlights the relevance of China's experience for improving preschool education in Ukraine.

Preschool education is a key element in shaping children's intellectual and moral development. In China, this field reflects centuries of cultural and philosophical tradition, deeply linked to national identity and modernization. Today, China's preschool education reforms offer valuable insights into achieving quality, accessibility, and sustainability in early education.

Chinese preschool education evolved through several key stages:

1. Ancient Period (before the 19th century): Education began within families, emphasizing moral and behavioral upbringing based on Confucian values.
2. Early Modernization (1903–1949): The Qing and Republican reforms introduced kindergartens (蒙养院, 幼稚园) and pedagogical innovation by educators such as Tao Xingzhi and Chen Heqin, who promoted activity-based and inclusive learning.
3. People's Republic of China (since 1949): Preschool education became an integral part of the socialist education system. The 1952 Kindergarten Regulations and later reforms in the 1980s–1990s strengthened institutional governance and holistic child development.
4. Contemporary Period (since 2000): The government prioritized preschool expansion, equity, and modernization. Policies such as the "2010 State Council Opinions" and the "2012 Guidelines for Learning and Development of Children Aged 3-6" established national standards and quality control mechanisms.

Today's Chinese preschool education system includes public and private kindergartens, community-based centers, and integrated early childhood programs. The focus has shifted toward innovation, inclusivity, and digitalization, including the integration of artificial intelligence in early learning.

The Chinese experience demonstrates a consistent national effort to balance tradition and innovation in preschool education. Its model of combining state policy, pedagogical theory, and social responsibility provides practical guidance for improving early childhood education systems in other countries, including Ukraine.

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KOCHYN, Vladyslav

<https://orcid.org/0009-0007-8809-5604>

Kharkiv National University of Internal Affairs, Ukraine,

DEVELOPING DIGITAL LITERACY FOR FUTURE LAW ENFORCEMENT OFFICERS IN THE CONTEXT OF CYBERPEDAGOGICAL APPROACHES

Modern security challenges require law enforcement officers to have not only a high level of physical and legal training, but also well-developed digital literacy. The development of information technologies, the spread of cybercrime and digital risks highlight the need to introduce new approaches to the professional training of police officers. One such approach is cyber pedagogy, which combines pedagogical methods and modern information technologies to create a new educational environment for training law enforcement officers.

Digital literacy is a key component of professional competence for police officers. It includes the ability to work with electronic databases, recognise cyber threats, use electronic evidence and apply digital security measures. Modern law enforcement is impossible without the use of technology to investigate crimes, analyse information and interact with citizens. Digital literacy is integrated into the professional education system for future police officers as a mandatory element. It covers cyber hygiene skills, working with big data, conducting cyber investigations, and the ethical use of technology. Cyber pedagogy allows for the creation of individual educational trajectories, taking into account the level of training of each cadet, which contributes to the effective development of professional competencies.

Cyber pedagogy provides for the updating of teaching methods through the use of online courses, training sessions, simulators, and digital platforms. This creates conditions for interactive learning and the development of critical thinking and analytical skills in future police officers. Virtual environments allow for the simulation of real-life situations, which helps to develop practical skills for responding to cyber incidents. The use of VR and AR technologies makes it possible to recreate criminal scenarios in a safe digital environment. This allows cadets to practise algorithms of actions in complex conditions without risk to life.

The advantages of cyberpedagogical approaches combine traditional training methods with innovative digital technologies, ensuring the comprehensive development of law enforcement officers. This contributes to the formation of innovative thinking, a responsible attitude towards digital resources, and a high level of information culture. As a result, police officer training becomes more flexible, modern, and oriented towards the needs of the information society.

Therefore, developing the digital literacy and professional skills of law enforcement officers in the context of cyberpedagogical approaches is a strategic task for modern education at the Ministry of Internal Affairs. Cyberpedagogy integrates pedagogy, information technology and law, creating effective conditions for training a new generation of police officers.

KOLESNYK, Natalia

Kharkiv National University of Internal Affairs, Ukraine

ONLINE LEARNING PLATFORMS AND CROSS-CULTURAL EXCHANGE IN EUROPEAN STUDIES

Online platforms play an important role in disseminating knowledge and facilitating academic mobility in the modern European education landscape. They create new opportunities for students, teachers, and researchers striving for intercultural dialogue. Thanks to online environments, European studies are becoming accessible regardless of geographic location. This is particularly important for students from non-EU countries interested in European integration and values. Online platforms provide quick access to up-to-date information, educational materials, and interactive lessons. They create a space for collaboration, discussing problems, and finding solutions. Among the most commonly used tools are specialized platforms such as Moodle, Coursera, edX, and Erasmus Virtual Exchange. These tools allow students from different countries to participate in collaborative projects.

The aim of the study is to determine the role of online learning platforms in promoting intercultural exchange and improving the quality of European studies and to reveal the possibilities of their future use in building students' digital and global competences.

Intercultural exchange within European studies fosters interpersonal skills and global competence. Students have the opportunity to explore European values, history, politics, and culture through direct collaboration with international colleagues. Online discussions foster understanding of differences and finding common ground, creating favorable conditions for the development of tolerance, mutual respect, and cultural empathy. Teachers also benefit from the use of online platforms because they can implement innovative pedagogical methods. Interactive lectures, virtual seminars, and collaborative research projects make learning more dynamic. Participants learn to collaborate in a digital environment that reflects the realities of modern professional life. Therefore, online platforms serve not only an educational but also a social function. In particular, the integration of digital technologies with academic mobility programs like Erasmus+ is crucial. Even if students cannot travel abroad, they gain access to virtual learning and intercultural communication. Online learning and intercultural exchange are becoming part of the globalization of education. European universities are increasingly collaborating on common courses and programs, strengthening Europe's position as a leader in educational innovation.

Online platforms are opening new horizons in the field of European studies. They contribute to integration, cultural dialogue, and the formation of a generation with a high level of digital and intercultural competence. European education in the digital age is based on the principles of openness, accessibility, and collaboration, making it a powerful tool for shaping a shared future.

KOLYAKA, Oleksandra

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODS FOR DEVELOPING CRITICAL THINKING IN ENGLISH LANGUAGE LEARNING

The development of critical thinking in English language learning is driven by modern educational trends aimed at equipping students with skills for analysis, evaluation, and independent problem-solving. In today's information society, merely knowing the language is insufficient – students must also be able to critically process information received from various channels, distinguish essential facts from secondary details, draw conclusions, and express their opinions with clear and reasoned arguments. This ability helps learners become more confident users of the language and more responsible participants in the information space.

Research on the development of critical thinking in English language learning has been conducted by scholars such as D. Halpern, R. Ennis, R. Paul, L. Elder, and J. Dewey, among others. Their works highlight the importance of developing thinking skills as part of language education. National researchers have also examined various aspects of critical thinking development in foreign language learning, including O. Savchenko, V. Sukhomlynskyi, L. Pirozhenko, N. Holub, and S. Zolotareva. These scholars have made significant contributions to pedagogical approaches to critical thinking, both in terms of direct implementation methods and in creating conditions that foster analytical and reflective skills throughout the learning process. Their findings emphasize the need for a supportive environment in which students are encouraged to question, explore, and justify their viewpoints.

Critical thinking is the highest form of cognitive activity, involving the ability to analyze, evaluate, and compare information, make well-founded conclusions, and make independent decisions. In language learning, these skills help students interpret texts more effectively, understand implied meanings, and respond to complex communicative situations. For effective critical thinking development in English language learning, it is necessary to combine traditional methods (discussions, grammar and vocabulary exercises) with modern approaches (debates, projects, role-playing games, and digital technology integration). Such a combination allows learners to apply language knowledge in meaningful contexts and practice reasoning skills in real-life situations.

It is also important to implement interactive methods that promote analytical thinking, such as group work, pair discussions, and debates. These activities encourage cooperation, open-mindedness, and the exchange of different viewpoints, which further support the development of reflective and evaluative skills. Engaging parents in the learning process is equally significant, as family support fosters a child's critical approach to learning and independent thinking. Parents can help create an atmosphere of curiosity at home, where children feel comfortable asking questions and searching for their own solutions.

Thus, the development of critical thinking in English language learning is a process that requires a comprehensive and well-planned approach. It involves the integration of various teaching methods and continuous support from teachers and parents. This process forms the foundation for children's ability to independently interpret and evaluate knowledge, which, in turn, facilitates their successful integration into the modern information space and prepares them for lifelong learning.

KOMAR, Iryna

<https://orcid.org/0000-0002-3778-2051>

*Mykolaiv Law Vocational College of the
National University "Odesa Law Academy", Ukraine*

THE ROLE OF A FOREIGN LANGUAGE IN VOLUNTEER ACTIVITIES

Today, volunteer work is an important part of Ukrainian life under martial law. Assistance in various areas of life is provided by many international partners. Therefore, studying and improving one's knowledge of foreign languages acquires new significance.

Aim. A foreign language as a means of effective communication in volunteer activities.

Results. Currently, there is a growing demand for people with a high level of proficiency in foreign languages. Volunteer work involves not only understanding the needs and requests of various population groups but also establishing communication with international partners, donors, foreign volunteers, and organizations. Direct communication enables quick processing of requests, clarification of specific situations and personal stories, documentation and reporting, solving logistical issues, and more, making assistance more effective. Knowledge of a foreign language also saves time—there is no need to find an interpreter or rely on translation tools, which may affect the quality and speed of communication.

It is important to remember that language is a tool for broadening one's worldview. While learning a language, one absorbs knowledge about the way of life, traditions, customs, and beliefs of a particular nation. Understanding these aspects helps prepare for communication and negotiations and resolve work-related matters. The ability to conduct informal conversations beyond work-related topics demonstrates interest in partners—their plans, goals, interests, and opportunities—which fosters a positive working atmosphere and builds strong professional and friendly relationships. Proficiency in a foreign language at a high level allows understanding of contextual meanings, emotions, and nonverbal cues, contributing to empathy and deeper connections.

Working in volunteer organizations also provides an opportunity to improve language skills. Given the multifaceted nature of volunteer work, it is important not only to know the grammar of a foreign language but also to master specialized terminology. This broadens one's horizons and provides new knowledge in various fields and technologies. Participation in negotiations or training sessions as a translator or legal advisor enhances speaking skills, the ability to work under stress, and comprehension of foreign speech with different accents. The acquired knowledge later becomes an advantage in professional activities—conducting language courses, working in international organizations, humanitarian missions, and more.

Conclusions. A foreign language in volunteer work is an effective means of communication that increases the efficiency of humanitarian organizations and accelerates the provision of necessary assistance.

**KONONENKO, Dmytro
KRAVCHUK, Tetiana**

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

STEP PLATFORM AS AN EFFECTIVE TOOL FOR DEVELOPING SPEED AND STRENGTH ABILITIES IN SPORTS AEROBICS

Sports aerobics is a relatively young sport that is actively developing in Ukraine and worldwide. During competitions, athletes perform a large number of complex elements, acrobatic exercises, and dance movements. The elements regulated by competition rules require a high level of development of all physical abilities, especially speed and strength. Specialists and coaches in sports aerobics are constantly searching for methods and tools that could help improve these abilities. In our opinion, exercises using a step platform can be an effective means of developing speed and strength abilities.

Purpose of the study – to reveal the potential of using a step platform to develop the speed and strength abilities of athletes specializing in sports aerobics.

Results. In modern conditions, the step platform is widely used in physical education and in the training of athletes from various sports. Exercises with step platforms are also included in the competitive program of sports aerobics (aero-step). As an auxiliary training tool in sports aerobics, the step platform is most often used to develop aerobic endurance and strengthen the leg muscles. This is facilitated by the specificity of the exercises that can be performed with the platform, particularly various types of stepping up and down at different tempos. However, in our opinion, when used properly, the step platform can also contribute effectively to the development of speed and strength training for athletes of different skill levels and qualifications.

We believe that all exercises aimed at developing speed and strength abilities using a step platform can be divided into three groups:

- 1.** Low-impact exercises (without jumps or hops) – stepping up or repeatedly lifting onto the platform with one leg, while the other leg assumes various positions.
- 2.** Exercises with light jumps – alternating support of one or the other leg on the platform in different combinations (without fully jumping onto the platform).
- 3.** Jump exercises – jumping onto the platform using one or both legs (landing can also be performed on one or both legs). When performing the third group of exercises, athletes may also jump down from the platform followed by a jump immediately after landing (plyometric exercises), which further enhances the development of speed and strength abilities.

All these groups of exercises can be made more challenging by adding extra resistance or modifying the preparatory phase of the movement (e.g., starting from a squat or deep squat position).

Conclusions. The step platform can be an effective tool for developing speed and strength abilities in sports aerobics, provided that the nature of the exercises corresponds to the objectives of strengthening the leg muscles, training the ability to contract muscles quickly during take-off and landing, and increasing the frequency of loaded movements.

KOROBENIK, Vitalii

<https://orcid.org/0000-0001-6030-1305>

MASLOV, Maksym

H.S. Skovoroda Kharkiv National Pedagogical University, Kharkiv, Ukraine

USE OF A COMPREHENSIVE APPROACH IN DEVELOPING SPEED-POWER ABILITIES OF YOUNG MIDDLE-DISTANCE RUNNERS

Introduction. Middle-distance running (from 800 to 3000 meters) is one of the most challenging types of athletics, as it requires a harmonious combination of speed, speed-strength abilities, and various manifestations of endurance. Additionally, for young athletes, this discipline holds educational significance, as it contributes to the development of moral and volitional abilities, purposefulness, and discipline. The development of speed-strength skills is one of the leading factors in improving sports results in middle-distance running. The effectiveness of the starting acceleration, running speed over the distance, and finishing ability depends on the optimal level of development of this quality.

Purpose of the study. To identify effective means and methods of a comprehensive approach to the development of speed-strength abilities of young middle-distance runners, taking into account the age and physical capabilities of athletes.

Research methods. Analysis of literary sources, pedagogical observation, testing of speed and speed-strength indicators (long jump from a standing position, 30 m running, jumping up, squats in 30 s), and methods of mathematical statistics.

Research results. The effectiveness of developing speed-strength abilities in young runners depends on the optimal combination of general and special training exercises. Among them are running with accelerations (60 m), repeated running for 30 m, jumping exercises (multiple jumps, jumping over barriers), exercises with your own body weight (squats, lunges), and exercises with weights (dumbbells, 3-5 kg, stuffed balls, 2-4 kg). The use of a comprehensive approach contributed to the increase in speed-strength indicators: long jump from a place, from 195 ± 8 cm to 214 ± 9 cm, running 30 m on the move, from 4.55 ± 0.12 s to 4.32 ± 0.10 s, and the number of jumps in 30 s, from 32 to 38 times.

Conclusions. The speed-strength abilities of young runners need to be developed comprehensively, including exercises of a running, strength, and endurance nature in training, utilizing a wide range of game and competitive methods. The use of speed-force loads must be approached with great care.

The study's results can be widely applied in the practical work of coaches and teachers in children's and youth schools.

KOROTIN, Anatolii

Kharkiv National University of Internal Affairs, Ukraine

THE BEST PRACTICES OF DIGITAL INCLUSION IN EUROPEAN EDUCATIONAL SYSTEM

In modern society, digital inclusion is a key factor in ensuring equal access to education. European countries place great emphasis on developing inclusive digital environments that address the needs of diverse population groups, particularly those with special educational needs, immigrants, representatives of national minorities, and socially vulnerable groups. The importance of this issue stems from the need to find and implement innovative solutions that bridge the digital divide and create an educational environment accessible to all without exception.

The aim is to examine digital inclusion processes in European education systems and to analyze examples of best practices that contribute to equal opportunities in education. The study aims to define the essence of the concept of "digital inclusion," identify key aspects of European Union policy in this area, examine examples of effective education projects and programs, and identify potential opportunities for their dissemination in a broader international context.

The analysis revealed that digital inclusion is realized in Europe through a number of educational strategies and practices. These include the creation of adaptive e-learning platforms that address the needs of students with visual, hearing, or motor impairments; the development of multilingual educational resources for the integration of immigrants; and the organization of specialized training programs for teachers on inclusive digital education. Best practice examples include Erasmus+ initiatives, the European Commission's Digital Education Action Plan projects, and the Nordic countries' national education strategies aimed at removing barriers to accessing digital resources. Open online courses also make a significant contribution by providing learning opportunities regardless of social status or place of residence. However, there are also challenges: inadequate technical infrastructure in some regions, digital inequality across different age groups, and the need for systematic teacher training to work with inclusive technologies.

Digital inclusion is a key component of modern European education policy, which aims to create equal opportunities for all participants in the educational process. Best practices across European countries demonstrate that the use of adaptive technologies, open platforms, and multilingual resources can significantly reduce educational inequalities. However, to achieve sustainable results, collaboration between government institutions, educational institutions, and public organizations must be strengthened. Digital inclusion not only ensures accessibility of information but also contributes to the formation of European values of equality, solidarity, and integration in a global digital society.

KOSTETSKA, Halyna

*Lviv Regional Council Communal Institution
"Regional Scientific Lyceum", Ukraine*

FLIPPED CLASSROOM AS AN INNOVATIVE STRATEGY IN FOREIGN LANGUAGE TEACHING

Introduction. Innovative approaches to education increasingly integrate digital tools and transform the structure of interaction between teachers and students. The flipped classroom model is one such example of pedagogical transformation. Its application in foreign language lessons enables the combination of students' independent work with instructional materials and communicative, activity-based interaction during class.

Aim. The main aim of the study is to identify the advantages and challenges that arise when implementing the flipped classroom model in teaching foreign languages to high school students.

Results. The research confirms that the use of the flipped classroom approach significantly increases students' engagement in foreign language learning and ensures a more individualized learning process. Studying new material at home allows learners to acquire content at their own pace, revisit complex elements, and prepare for active participation in classroom activities. This approach fosters learner autonomy, the development of planning skills, and critical thinking. In-class time is increasingly dedicated to speaking tasks, discussions, and group work, which creates conditions for deeper consolidation of material and the development of communicative competence. Additionally, the model has a positive effect on students' motivation, as they gain a sense of control over their learning and can participate more actively in collaborative tasks. The approach also enables more effective use of teachers' time for individualized support and consultations with students who require additional assistance.

At the same time, the study identifies several organizational challenges, including varying levels of students' digital literacy, the need for continuous pedagogical support, and the risk of insufficient involvement among some learners. Despite these difficulties, the findings demonstrate that the implementation of the flipped classroom model substantially improves the quality of the learning process and motivates students to engage actively in foreign language study.

Conclusions. The flipped classroom approach in foreign language teaching represents a promising innovation that expands opportunities for language practice and promotes learner autonomy. However, its effective implementation requires thorough teacher preparation, adaptation of learning materials, and support from the educational environment.

KOSTIKOVA, Ilona

<http://orcid.org/0000-0001-5894-4846>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

UNDERGROUND SCHOOLS IN KHARKIV: NEW IDEAS AND TECHNOLOGIES

Introduction. The Russian-Ukrainian War has created an unprecedented humanitarian crisis severely impacting the education. Kharkiv, Ukraine's second-largest city, located just 30 kilometers from the Russian border, exemplifies this educational devastation. More than 300 secondary schools in the Kharkiv region – over 70% of all educational facilities – have sustained significant damage, with approximately 70 schools completely destroyed. In response to this crisis, municipal authorities launched a comprehensive underground school construction program with remarkable achievements.

Aim. The **purpose** is to show the new ideas and technologies of underground school solution.

Results. The first Underground School was built and opened in May 2024. It is located in Industrial District (areas under severe shelling), has facilities exceeding 1,000 square meters, includes classrooms, dining facilities, and conference spaces (Fig. 1). Its initial capacity is 900 schoolchildren operating in two shifts. The second underground school in other Kharkiv district was built and opened in January 2025, its capacity is 1,000 schoolchildren operating in two shifts. The third and fourth underground schools were opened in 2025.

Currently, there are four underground schools operating in Kharkiv, three more are opened in September 1, and by the end of 2025 their total number will reach 10. There are also classrooms at six metro stations, representing 1/3 of Kharkiv 54,000 school-aged children. Stakeholders – parents and educators alike – emphasized the critical importance of in-person learning for learners' socialization, communication, and collaborative work, which are essential for their social and academic development. These underground facilities incorporate extensive security measures beyond physical protection from missile strikes: regular presence of national police and emergency service personnel; controlled entry/exit procedures; on-site medical and psychological support services.



Figure 1. *The first underground school in Kharkiv.*

Conclusions. The development required unprecedented collaboration between educational authorities, emergency services, and security personnel, representing a significant achievement in cross-sector coordination during wartime conditions in Kharkiv. The innovative ideas and technologies demonstrate educational resilience and commitment to maintaining education even under war circumstances.

KOVALENKO, Andrii

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODS OF DEVELOPING SKELETAL MUSCLE HYPERTROPHY IN BODYBUILDING

Purpose of the of the study: to analyze the methods of developing skeletal muscle hypertrophy and identify the most effective training techniques currently used to achieve results in bodybuilding.

Results: The most important factors influencing skeletal muscle hypertrophy are the training volume and intensity. These are the two variables that an athlete can control and adjust to improve training outcomes.

Training intensity refers to the amount of weight lifted during an exercise. It is currently known that an intensity range from 40% to 100% of one-repetition maximum (1RM) is sufficient to stimulate skeletal muscle hypertrophy. Forty percent of 1RM corresponds to approximately 30 or more repetitions per set for a given muscle group. Thus, even relatively low intensities, such as 40% of 1RM, can be effective in promoting muscle growth. Training volume represents the total amount of work performed at a given intensity that provides adequate stimulation for hypertrophy (within the range of 40%–100% of 1RM).

The main criterion for assessing training volume in bodybuilding is the working set. The number of working sets determines the total workload. Only sets performed to failure or near muscle failure are considered truly effective, as they differ significantly from light sets in their mechanical and biological impact on muscle fibers. For example, ten repetitions performed to failure and ten repetitions performed far from failure at low intensity have very different effects on muscle hypertrophy. It is precisely the state of muscle failure or near failure that triggers the physiological responses leading to hypertrophy.

With each successive repetition in a working set, the physiological stress on the muscles and their response to load change. The first repetition differs from the fifth, sixth, or seventh, both in muscle activation and fatigue level. Current scientific evidence indicates that the closer a repetition is performed to failure or significant fatigue, the stronger the physiological stimuli that drive muscle growth. As fatigue accumulates, the speed of movement decreases, facial expressions change, and additional muscle groups become involved (e.g., neck, jaw, trapezius), indicating the body's compensatory reactions to increasing effort. These visible and internal changes typically occur during the final repetitions of a set, where the most pronounced hypertrophic stimulus is achieved.

Conclusions: The analysis revealed that the key factors in developing skeletal muscle hypertrophy are training volume and intensity. These variables can be adjusted to maximize training effectiveness. The optimal intensity range is 40%–100% of 1RM, and performing sets to or near muscle failure is crucial. Such a training induces the necessary physiological adaptations in muscle fibers, promoting their growth and enhancing overall muscular development.

KRAVCHENKO, Hanna

<https://orcid.org/0000-0002-2156-3203>

*Educational and Scientific Institute of
Management and Psychology State Educational Service
"University of Educational Management" NAPS of Ukraine, Ukraine*

TRAINING PROFESSIONAL EDUCATION TEACHERS FOR WORK IN DIGITAL ENVIRONMENT

In conditions of war and economic challenges, teachers of vocational and technical educational institutions require special preparation for working with new technologies and ensuring cybersecurity of the educational process.

Digital competence of a teacher is defined as a complex of knowledge, abilities, and skills necessary for successful integration of information and communication technologies into the educational process. It is a key element of the modern pedagogical paradigm that determines the ability to effectively use digital resources to improve the quality of education.

The structure of digital competence includes technological competence, content knowledge, and pedagogical competence as interconnected components of modern teacher's professional mastery.

An integral component of digital competence is cybersecurity culture, which involves the teacher's awareness of information threats, understanding of potential risks, and ability to identify cyber attacks.

Analysis of responses from 195 respondents regarding the need for developing digital competencies of pedagogical staff in professional education institutions revealed the existence of significant barriers in using digital technologies and different levels of teachers' readiness for their implementation in the educational process.

An effective way to solve this problem is the development of special educational programs for teacher training in higher education institutions. Programs should include academic disciplines that involve studying fundamentals of digital space security, possibilities of artificial intelligence in the educational process, use of mobile applications as effective learning tools, application of virtual reality for creating educational simulations, and organization of learning in a digital educational environment.

Formation of a digital educational-professional ecosystem in higher education institutions involves integration of intellectual, scientific, and technological potential using digital and interactive technologies. This promotes the development of digital tool usage skills, formation of cybersecurity culture, and preparation of teachers for work in conditions of constant technological changes.

Promising development directions include implementation of educational process digitization tools, ensuring effective and safe digital feedback between educational process participants, and systematic monitoring of teachers' digital competence formation level. This will allow creating a sustainable professional training system capable of adapting to digital society challenges.

KRYVOSHEI, Kyrilo

<http://orcid.org/0000-0002-9163-9891>

V.N. Karazin Kharkiv National University, Ukraine

PSYCHOSOCIAL FACTORS OF DISTRESS AMONG UNIVERSITY STUDENTS IN THE CONTEXT OF ARMED CONFLICT

The emotional state of students during an armed conflict is significantly influenced by a variety of factors that are interrelated and often have a cumulative effect. One of the most significant sources of distress is the constant threat to physical safety. Air raid alarms, shelling, the loss of housing, or forced evacuation create a chronic sense of danger, which fosters a state of ongoing emotional tension among students. Learners often find themselves in environments where it is impossible to relax or feel protected, which leads to the exhaustion of the adaptive resources. In addition, due to wartime conditions, the educational process often takes place remotely or under circumstances of limited access to the internet, resources, and academic support. The loss of familiar, structured learning formats means not only academic difficulties but also a reduced sense of stability and predictability. As a result, many students experience decreased motivation, difficulties with concentration, and challenges in completing academic tasks.

Another important factor is social isolation caused by forced displacement, the loss of familiar contacts, or relocation to another city or country. In such conditions, students face the rupture of social ties, a lack of support from family and friends, feelings of loneliness, and emotional disorientation. Living in a new environment without the ability to adapt quickly, young people may lose their sense of belonging, which is a key factor of psycho-emotional stability. The absence of support from friends or relatives, family separation due to evacuation, and the loss of loved ones further reduce the sense of security and contribute to feelings of loneliness.

Financial instability is a major source of distress, as many students lose income or family support due to the war. They are forced to combine work with studies, which increases exhaustion, while material hardships often trigger guilt or helplessness. In addition, uncertainty about the future adds further pressure. Young people who had planned careers, further studies, or relocation abroad are confronted with the fact that long-term plans no longer have a concrete implementation. This generates feelings of powerlessness, lowers personal motivation, and provokes doubts regarding professional self-realization.

Wartime factors such as safety threats, social isolation, financial instability, disrupted education, and uncertainty about the future significantly undermine students' mental health. These factors do not operate in isolation; together they create a deeply stressful environment that depletes adaptive resources, provokes anxiety, emotional burnout, and general disorientation. Therefore, psychosocial support for students becomes especially important both at the level of higher education institutions and from the state and civil society organizations. It is crucial not only to respond to existing manifestations of psycho-emotional exhaustion but also to develop effective strategies for distress prevention and resilience building.

KSHEVETSKIY, Volodymyr

<https://orcid.org/0000-0001-9769-4931>

Yuriy Fedkovych Chernivtsi National University, Ukraine

EVALUATING THE IMPACT OF THE “PROJECT-BASED LEARNING WITH ETWINNING/ERASMUS+ FOR INTERCULTURALITY” COURSE ON INTERCULTURAL AND DIGITAL COMPETENCES

The research evaluates the impact of the blended-learning course “Project-Based Learning with eTwinning/Erasmus+ for Interculturality,” offered collaboratively by Stuttgart University, Pädagogische Hochschule Ludwigsburg, and Hohenheim University during the 2025 summer semester. This 13-week course, facilitated via Zoom, Moodle, and eTwinning’s TwinSpace, aimed to enhance participants' skills in project-based learning, educational project management, and international collaboration. Data was gathered through post-course self-assessment surveys combining quantitative Likert-scale responses and qualitative open-ended feedback from 20 participants.

The primary goal of this study was to assess the course's effectiveness in improving participants' familiarity with eTwinning and the European School Education Platform (ESEP), as well as their digital competences (based on the DigCompEdu framework) and intercultural competences (including cultural awareness, confidence in international collaboration, and integration of intercultural elements into lesson planning).

Participants reported significant improvements in platform familiarity, shifting from initial scores of 1-5 (with many at 1-3) to post-course scores of 3-5 (majority at 4-5). Digital competences enhanced across areas: online collaboration tools (from 2-5 to mostly 5), digital content creation (from 1-5 to mostly 5), and international online communication (from 1-3 to 4-5). Intercultural competences grew notably, with average scores rising by 0.7-0.9: cultural awareness (3.35 to 4.05), confidence in cross-cultural work (3.3 to 4.15), and lesson integration (3.05 to 3.95). Key contributors included direct international collaboration, project-based activities, discussions, and course facilitation. Confidence in future eTwinning use was 95%, with 95% reporting high motivation (scores 4-5). Foreseen challenges focused on time management, partner finding, curriculum integration, school support, and technical issues.

The course successfully fostered individual digital and intercultural competences, boosting participants' proficiency and enthusiasm for eTwinning. However, systemic barriers like institutional support and time constraints hinder broader implementation. Recommendations include enhancing course practicality, and policy-level support from institutions to integrate eTwinning into workloads, curricula, and mentorship programs, ensuring its transformative potential in a global educational context.

KUPCHANKO, Dmytro

<https://orcid.org/0009-0000-4371-6963>

Kharkiv National University of Internal Affairs, Ukraine

EUROPEAN DIGITAL EDUCATION POLICY: STRATEGIC DIRECTIONS AND IMPLEMENTATION

Nowaday, the digitalization of education is a key priority for European Union countries. Europe's digital education policy aims to create a competitive educational environment where knowledge and digital skills become the foundation of sustainable development.

The goal is to ensure equal access to digital educational resources, build digital competences among EU citizens, and strengthen European cooperation in education.

One of the key documents in this direction is the European Digital Education Action Plan (2021-2027), which defines strategic directions for development. The plan envisions the modernization of education systems, the enhancement of digital literacy, and the integration of new technologies into the educational process. The first strategic direction is to create a highly efficient digital education ecosystem. This includes access to high-speed internet, modern equipment, digital platforms, and educational materials. The second is to develop digital skills and competencies across all segments of the population.

Particular emphasis is placed on the training of teachers and lecturers who will be the pioneers of digital transformation in the educational environment. Particular emphasis is placed on inclusiveness and equal access. European policy aims to narrow the digital divide between urban and rural schools and between different social groups and to provide educational opportunities for individuals with special needs. Security in the digital environment is also important. The EU is actively implementing policies on personal data protection, cybersecurity, and media literacy to foster critical thinking among students. European programs such as Erasmus+, Horizon Europe, and the Digital Europe Programme play a key role in the practical implementation of strategic initiatives that fund educational initiatives, research, and innovation. Furthermore, European educational platforms such as the School Education Gateway and the European Schoolnet are being established to enable teachers and students to exchange experiences, acquire resources, and participate in international projects.

European digital education policy also supports the development of artificial intelligence and adaptive technologies in education. This creates new opportunities for personalised learning and more effective monitoring of outcomes.

Overall, the European digital education policy is a systematic process that combines innovation, inclusiveness, and security. It not only shapes the future of education but also strengthens integration processes within the European Union.

KUSKOV, Mykyta

<http://orcid.org/0000-0001-7204-9872>

KUSKOVA, Svitlana

<http://orcid.org/0000-0002-4725-3537>

State Biotechnological University, Ukraine

TECHNOLOGICAL APPROACH TO THE DEVELOPMENT OF THE EDUCATIONAL PROCESS

Educational methods today are a fuzzy universe that has yet to be systematized. We will provide only a few examples, which can be found on the websites of universities in Europe and America. Educational methods can be divided into general ones, applicable to all areas of study, and special ones, characteristic of specific areas. General educational methods are traditional lectures, and “theoretical and conceptual classes” (such as, for example, at the Faculty of the British University), as well as reports at seminars, compiling a bibliography on a chosen topic, projects, laboratory work, consultations. Some examples of special educational methods are given below:

- The New York University School of Journalism is challenging first-year students to produce a series of mini-reports and short interviews on a seminar topic;
- At the Faculty of Psychology at the same university, students are divided into competing groups to solve the same research problem: the group that finds the most effective and creative solution wins;
- In one of the basic courses of the same faculty, students must review two articles that examine two different approaches to the same problem: the purpose of this method is to teach students to work with professional literature;
- Student teachers at the University of Hanover often begin a new topic with a “round table” or “expert group” – a role-playing game in which they discuss a specific topic from the perspective of experts, the public, journalists, and politicians;
- A mandatory element of the pedagogy course at the same university is a field trip. This is an independent type of practical lesson: throughout the semester, students visit various cultural and educational institutions, and at the end of the semester, they present course projects in the form of an annotated interview with someone from the staff of the places visited.

It's worth noting that, alongside theoretical and practical methods, knowledge assessment in Western universities is also considered an educational method. These include oral exams, computer-based testing, written independent assignments, and examinations, which can take the form of a quiz (selecting the correct answer from a series of answers), a commented test (an extended written response to each question), or an essay. A separate group of activities should be dedicated to those directly related to technology. For example, in the Department of Geography at Bristol, students collect and conduct computer analysis of geographic data. Their individual laboratory practice includes the following computerized methods: remote sensing, environmental modeling, micrometeorological observations, macroclimate and satellite image analysis, and numerical research methods.

KUZA, Andrian
MUKHINA, Tetiana

Berdyansk State Pedagogical University, Ukraine
<https://orcid.org/0000-0002-1758-882X>

DIGITAL COMPETENCE OF PRIMARY SCHOOL TEACHERS AS A FACTOR OF INNOVATIVE EDUCATIONAL ENVIRONMENT

Digital competence in contemporary education has evolved from a narrow ICT skill to a meta-professional quality, forming the basis of the philosophy of the New Ukrainian School (NUS). There has been a shift from an instrumental understanding to a broader perspective: the critical and responsible use of digital technologies for learning, professional activities, and societal participation. The teacher becomes a facilitator of the educational environment, while digital competence is a key factor in creating flexible, individualized conditions for developing competencies, as stipulated in the Law of Ukraine «On Education».

The architecture of teacher digital competence in Ukraine combines European approaches with national priorities. Its foundation is the DigComp framework, which comprises five areas: information literacy, communication, content creation, safety, and problem-solving. The Ukrainian adaptation is embedded in the Professional Standard for Teachers, where information and digital competence (A3) is one of the core elements. It encompasses orientation in the information space, critical thinking, working with digital resources, applying technologies in teaching, and ensuring digital safety.

The «forced digitalization» caused by the pandemic and the full-scale war accelerated the mastery of basic tools but also revealed certain systemic problems. In primary education, a particular pedagogical dilemma emerged regarding the need to balance the benefits and risks of digitalization.

To address these challenges, a systematic approach to professional development is required, creating an ecosystem of continuous learning: integrating digital technologies into teacher education programs (HEIs), offering professional development courses, promoting active self-education, mentorship, activities of school methodological associations, and collaborative development of digital lessons.

The ultimate goal is to improve student learning outcomes, as the level of teacher digital readiness directly influences the development of key competencies in pupils. Future prospects are linked to the integration of cutting-edge technologies, including artificial intelligence (AI). AI-based tools can optimize teachers' routine tasks, freeing time for individualized work. This will require teachers to develop new skills for critical evaluation and ethical use of these tools.

Despite a strong regulatory framework aligned with European standards, there remains a significant gap between ambitious goals and complex practice, exacerbated by crisis conditions. The success of further digital transformation depends on systemic efforts: investments in infrastructure, bridging the digital divide, and creating a comprehensive professional development system. The priority should be the shift from mere tool-based learning to the development of deep pedagogical design thinking, enabling teachers to intentionally design effective and safe digital educational processes focused on student needs.

LAGUTINA, Anastasia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

**POSSIBILITIES OF USING STEM EDUCATION
DURING ENGLISH LESSONS AT PRIMARY SCHOOL**

An important direction in the development of primary education today is the use of various technologies, approaches, and methods that contribute not only to a deep understanding of the learning material by students but also to the diversification of the modern educational process. One of these innovative educational trends is STEM education, which integrates different sciences into a single learning process.

Today, STEM education is viewed as a technology, an approach, and a learning program. The acronym STEM stands for Science + Technology + Engineering + Mathematics. Thus, this methodology combines the integration of all these subjects and promotes the practical application of the material learned during lessons.

Learning English always requires a certain level of consistency and, in some cases, mechanical memorization. The teacher should understand this and create conditions in which learning English in primary school takes place in real-life situations. STEM education offers a wide range of opportunities for implementing active learning, during which students remember information better when they discover it on their own.

Some of the directions of STEM education in English lessons include robotics, maker activities, and storytelling. Regarding the first, in primary school it can be implemented through educational games with LEGO or the use of virtual environments. Such activities combine the development of language skills with the formation of spatial thinking, attention, and the ability to follow instructions in English.

Maker activities in English lessons create conditions for implementing not only a creative but also a communicative approach. The process of making can be combined with teamwork, for example, in project-based learning. Students can create posters on different topics such as «My Family», «My School», etc., where they use learned vocabulary and grammatical structures to describe their work. They can also make a model of a garden “plant” trees and flowers, and label them in English.

Storytelling in English lessons helps develop imagination, logic, and creativity, as it presents material in the form of a story. For example, while studying the topic «Friends», the teacher can create a comic strip and tell a story using specific vocabulary.

Thus, in English lessons in primary school, it is possible to use various STEM-based approaches such as robotics, maker activities, and storytelling. All these directions contribute to active learning and the acquisition of the English language through projects, creativity, and practical activities.

**LAVRYNOVYCH, Konstantin
GOLENKOVA, Yuliia**

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE INFLUENCE OF MODERN FITNESS EQUIPMENT ON THE FUNCTIONAL STATE OF BOXERS IN THE BASIC TRAINING GROUP

Introduction. The functional state of athletes plays a decisive role in the development of physical qualities, technical mastery, and resistance to training loads. For boxers at the stage of basic training, the formation of a strong functional foundation ensures further sports progress and helps to prevent early fatigue or injuries. In recent years, the use of modern fitness tools (such as suspension training systems, balance platforms, smart fitness equipment, and digital monitoring devices) has become widespread in sports practice. These tools not only diversify the training process but also provide objective control over the functional condition of athletes, which is especially important in the early stages of sports preparation.

Purpose. The aim of this study is to examine the impact of modern fitness tools on the functional state of boxers during the stage of basic training.

Results. The introduction of fitness technologies into the training process made it possible to evaluate their practical effects on athletes' functional indicators. The use of suspension training and functional fitness devices significantly increased the involvement of stabilizing muscle groups, which improved postural control and general coordination. Training with balance platforms and reaction balls enhanced neuromuscular regulation, contributing to more effective movements in both offensive and defensive actions. The application of heart rate monitors and fitness trackers allowed for precise regulation of training intensity, ensuring optimal load distribution and recovery.

Experimental observations revealed that after an eight-week program, boxers of the basic training group demonstrated an increase in aerobic capacity (VO_2 max by 8–10%), a reduction in recovery time after high-intensity exercises, and an improvement in heart rate variability, indicating better adaptive capacity. Additionally, athletes reported greater training motivation and engagement due to the interactive and varied nature of fitness tools.

Conclusions. The integration of modern fitness tools into the training process of boxers at the basic training stage positively influences their functional state. Improvements were observed in aerobic performance, recovery dynamics, and neuromuscular regulation, which create favorable conditions for the further development of technical and tactical skills. The use of such tools not only enhances physiological readiness but also supports the formation of motivation and interest in systematic training. Thus, modern fitness technologies should be considered an effective means of optimizing functional preparation and ensuring the long-term development of young boxers.

LEBED, Oleksii

<https://orcid.org/0009-0003-2514-182X>

Kharkiv National University of Internal Affairs, Ukraine

CONTENT FEATURES OF THE CONCEPT OF “PROFESSIONAL COMPETENCE OF A NATIONAL GUARD PSYCHOLOGIST”

The necessity of developing professional competence among future psychologists of the National Guard of Ukraine is determined by the contemporary requirements of their professional activities, as they are tasked with performing a wide range of functions related to the psychological support of military personnel during service and combat operations. Addressing this issue requires enhancing the professional training of future psychologists of the National Guard of Ukraine by introducing new approaches and modern technologies into the educational environment of higher military institutions, with the ultimate goal of fostering their professional competence.

In accordance with the standards of higher education in Ukraine, a competence-based model of specialist training has been introduced, and the competency-based approach to education has been implemented as a mandatory requirement at the state level. Consequently, the development of professional competence in future psychologists occurs during the process of higher education and is the outcome of institutional professional training.

The professional knowledge of future psychologists constitutes the conceptual foundation of their competence. This includes fundamental principles of general and social psychology, personality psychology, psychodiagnostics, developmental, pedagogical, and applied psychology, as well as other general professional and specialized disciplines that define the essence of the profession.

Professional skills and abilities represent the operational and functional component of competence. They determine the effectiveness of the psychologist's practical activities and their capacity to apply psychological knowledge in the performance of their duties, including specific actions, methods, and psychological techniques.

Therefore, the professional competence of a psychologist integrates both theoretical (conceptual) and practical (operational) components, and also possesses a creative dimension, as it requires the flexible application of innovative approaches, techniques, and methods in diverse professional contexts.

Summarizing existing research on the scientific understanding of the content and structure of the concepts of “professional competence” and “professional competence of a psychologist,” and considering the specific nature of the professional activities of future officer-psychologists of the National Guard, it was defined that “the professional competence of future officer-psychologists of the National Guard” as a socio-professional phenomenon is an integrative personal characteristic that combines a system of military-professional and psychological knowledge, skills and abilities, professionally significant personality traits, and professional motivation. Collectively, these elements ensure the effective implementation of psychological support measures for the service and combat activities of National Guard units of Ukraine.

LEVCHENKO, Anna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE USE OF CLIL (CONTENT AND LANGUAGE INTEGRATED LEARNING) IN PRIMARY SCHOOL

Introduction. In modern education, it is important not only to develop strong subject knowledge in primary school students but also to improve their language competence. Adding a language component to the teaching of general subjects is an effective way to achieve this goal. One of the most promising approaches is *CLIL* (Content and Language Integrated Learning).

Aim. The aim of using *CLIL* in primary school is to develop children's communicative competence in a foreign language through the content of general subjects.

Results. Children learn to use the language not in isolation but in real communication, which increases their motivation and helps them understand the material more deeply. An important point is that *CLIL* creates a natural language environment where students expand their language skills through familiar and interesting topics.

A key element of *CLIL* is the "4 Cs" model: *content*, *communication*, *cognition*, and *culture*. These components support one another and create a complete learning environment.

Content refers to subject knowledge; communication means active language use during learning; cognition involves the development of thinking skills; and culture helps students understand another culture while also becoming aware of their own. In primary school, it is especially important to create a positive emotional atmosphere, as it helps language immersion and supports effective learning.

When planning a lesson with the *CLIL* approach, the teacher must adapt the material to the students' age and language level. Texts should not be too difficult and should be supported with visual aids such as graphs, tables, and diagrams.

The use of thematic glossaries or vocabulary lists, videos, interactive tasks, and group work is also important. In addition, teachers should provide opportunities for practical language use through games, role-plays, debates, discussions, inquiry tasks, and mini-projects.

As a result of using *CLIL* in primary school, students improve not only their language skills but also their cognitive engagement. They learn subject content more effectively because their motivation increases, and the language becomes a real tool for understanding the world rather than an abstract set of words.

Conclusions. In conclusion, the *CLIL* method in primary education is not only an innovative teaching approach but also an effective tool for integrating content and language.

It helps students form a holistic view of the world and develop their language, thinking, and social skills, preparing them for learning in a multicultural environment.

**LEVKOPULOS, Ihor
KRAVCHUK, Tetiana**

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

SPECIAL PHYSICAL TRAINING TASKS FOR FEMALE AEROBIC GYMNASTICS ATHLETES AT DIFFERENT STAGES OF TRAINING

Special physical training represents one of the key components of the overall training system in aerobic gymnastics. Achieving high athletic performance in this discipline requires athletes to present competitive routines performed individually, in pairs, trios, or groups of five or eight participants (aero dance, aero step). These routines incorporate a wide range of elements defined by the competition regulations, along with fundamental aerobic movements that form so-called aerobic movement combinations. Additionally, acrobatic and dance components are included to create a cohesive and aesthetically expressive performance synchronized with carefully selected musical accompaniment. Naturally, to master and accurately execute such technically complex and dynamic routines during competitions, athletes must possess a solid foundation of special physical preparation developed through systematic training.

Purpose. The purpose of the study is to define the objectives of special physical training for female athletes of various qualification levels specializing in aerobic gymnastics.

Results. A review of the literature demonstrates that special physical training is primarily aimed at preparing athletes for the effective execution of competitive routines. It encompasses a system of targeted preparatory exercises that develop flexibility, strength, speed, coordination, and endurance to the level required for the technically correct performance of elements prescribed by the rules of aerobic gymnastics competitions – such as strength exercises on the floor, jumps, turns, balances, and flexibility-based movements.

At each stage of long-term training, the objectives of special physical preparation may evolve and expand. For the youngest gymnasts, emphasis is placed on developing physical abilities, forming correct posture, combining general and special training, and mastering basic acrobatic and choreographic skills. During the basic training stage, the focus shifts toward continued physical development, gradual load progression, and the acquisition of more complex acrobatic and dance movements. At the stage of specialized training, workloads increase systematically (up to three to four times higher than during competition performances), accompanied by the improvement of functional fitness, technical mastery, and movement variability. At the stage of preparation for high-level results, physical conditioning is stabilized at an advanced level, and training is optimized to ensure effective performance at competitions.

Conclusions. Each stage of long-term training in aerobic gymnastics defines its own objectives for special physical preparation – from the balanced development of fundamental physical qualities and proper posture formation in beginners, to the maximal increase of training loads and stabilization of advanced levels of physical and functional preparedness in highly skilled athletes.

LISNYCHA, Albina

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MODERN METHODOLOGICAL APPROACHES TO TEACHING ENGLISH IN PRIMARY SCHOOL

Teaching English in primary school requires methods that match the age, interests, and cognitive abilities of young learners. At this stage, it is important to create a positive attitude toward language learning and develop basic skills for future study. To achieve this, teachers use several approaches: communicative, game-based, visual, integrated, and individualized. Their combination helps create an effective learning environment and supports children's language development.

The *communicative approach* focuses on oral skills and overcoming the language barrier. It uses role-plays, pair and group work, short dialogues, and simple problem-solving tasks. Authentic materials such as songs, videos, and stories help create natural communication and increase motivation.

The *game-based approach* makes learning engaging and reduces stress. Board and card games, bingo, outdoor tasks, and dramatizations encourage active use of English and help students remember vocabulary and structures more easily.

The *visual approach* is essential for young learners, who rely on strong visual associations. Pictures, drawings, flashcards, real objects, and multimedia presentations make new words more concrete and memorable and support associative thinking.

The *integrated approach* connects English with other subjects, such as math, science, or art. Through simple experiments, tasks, or creative activities in English, students see the practical value of the language and develop cognitive and linguistic skills at the same time.

The *individualized approach* takes into account different learning speeds, interests, and needs. Differentiated tasks, flexible grouping, and personal feedback help each learner progress and build confidence.

Successful language teaching also requires a positive classroom atmosphere, regular practice, authentic materials, and cooperation with parents.

In conclusion, the effective teaching of English in primary school depends on the balanced use of these methodological approaches. Together they create a motivating learning environment, help children gain essential language skills, and support a lasting interest in studying English.

LYTKEVYCH, Yelyzaveta

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

GAME-BASED AND INTERACTIVE TEACHING METHODS DURING ENGLISH LESSONS IN PRIMARY SCHOOL

Introduction. Modern education requires innovative approaches to teaching foreign languages, especially in primary school, where it is important to create a comfortable environment for language learning. Game-based and interactive teaching methods are effective tools for activating students' cognitive activity, increasing their motivation, and developing communication skills. These methods also help students remember information better through practical experience and interaction.

Aim. The aim of this paper is to analyse the role of game-based and interactive teaching methods in English lessons in primary school and to show how these methods improve students' motivation, communication skills, and learning outcomes.

Results. Game-based teaching methods include pedagogical techniques that use game elements to achieve learning goals. They involve lexical, grammatical, communicative, and phonetic games that help students learn new material in a relaxed atmosphere.

Popular games such as *Bingo*, *Memory Game*, *Role-Play*, *Guess the Word*, and *Simon Says* support not only vocabulary learning but also quick thinking, reaction speed, and communication skills in English.

Interactive methods encourage active cooperation between participants in the learning process. They include pair and group work, storytelling, project activities, and the use of digital tools that support better understanding of the material. Interactive lessons often use online platforms (*Kahoot!*, *Quizizz*, *LearningApps*), multimedia presentations, video lessons, and virtual tours, which make learning more dynamic and engaging.

The topic of game-based and interactive teaching methods has been studied by O. Pometun, H. Shchukina, V. Beliaieva, S. M. Nikolaeva, and other researchers, who explored their influence on the effectiveness of primary school education. According to O. Pometun, interactive learning promotes active student participation, develops critical thinking, and supports communicative interaction.

In **conclusion**, game-based and interactive methods in English lessons in primary school play an important role in improving the quality of the educational process. They help form speech competence, increase motivation, and encourage active learning, making language study more effective and enjoyable. Further research may focus on developing new interactive approaches and adapting modern digital technologies to the needs of primary education.

LITTIKH, Marharyta

<https://orcid.org/0009-0008-0124-7327>

Taras Shevchenko National University of Kyiv, Ukraine

THE PSYCHOLOGY OF TEACHING IN A TECHNOLOGICAL WORLD: A EUROPEAN CONTEXT

The twenty-first century has brought fundamental changes to education, driven by the rapid development of digital technologies and the expansion of virtual learning environments. Within the European educational context, marked by autonomy, digitalization, and a strong humanistic tradition, there is an urgent need to explore the psychological aspects of teaching in the technological era. These changes affect not only the methods of instruction but also the teacher's identity, motivation, and emotional well-being.

The purpose of this research is to analyze the key psychological transformations occurring in the professional activity of educators in the technological world, with a particular focus on the European context. The study aims to identify how technological integration influences the teacher's cognitive, emotional, and motivational functioning, as well as to determine the psychological strategies necessary for maintaining professional identity, emotional balance, and humanistic values in a digitalized educational environment.

The analysis indicates that the digitalization of education has led to a redefinition of the teacher's psychological role. Educators increasingly act as facilitators, mediators, and mentors rather than mere transmitters of information. This shift requires a high level of emotional intelligence, adaptability, and metacognitive awareness. European educational systems are gradually responding to these challenges through psychological and professional development initiatives that enhance emotional resilience, digital confidence, and reflective competence among teachers. At the same time, technological teaching environments create new psychological risks. Many educators experience emotional exhaustion, reduced motivation, and feelings of isolation caused by limited face-to-face communication. Furthermore, the integration of technology has provoked deep reflection on values and professional identity. In many European contexts, educators strive to preserve the humanistic dimension of teaching, maintaining empathy, authenticity, and personal connection within technologically mediated communication. Psychological adaptation in this regard depends on the teacher's ability to balance efficiency with emotional presence, and innovation with ethical responsibility.

The psychology of teaching in a technological world represents a complex field integrating cognitive-emotional processes, motivation, identity, and values. European educational experience demonstrates that successful adaptation to technological change depends on developing psychological flexibility, reflective thinking, and emotional competence. Ensuring a sustainable balance between technological advancement and humanistic principles remains the core psychological challenge of modern pedagogy. The teacher's psychological presence, empathy, and authenticity are not replaced by technologies, they are amplified by them, ensuring that education continues to serve as a space for personal growth, meaningful interaction, and the preservation of humanity within the digital age.

LIU, Gengchen

<https://orcid.org/0000-0003-3160-9057>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine, the PRC

THE CONTENT OF STATE LANGUAGE COMPETENCE FOR YOUNG LEARNERS IN THE PRC

The content of state language competence for young learners at primary schools in the PRC is regulated by the framework of primary education system in the PRC, which is based on the documents of the Ministry of Education of the PRC, including legislative acts, program and strategic papers of the last decade.

The purpose is to focus on the content of state language competence for young learners in primary school in the PRC.

Results. The goal of state language competence in primary school in the PRC is to develop young learners' speech and language. According to the requirements of the program (<https://www.gov.cn/>), young learners should develop the skills of communicating with peers and teachers, develop communicative politeness; listen to each other's speech and understand everyday speech; express themselves clearly; listen to stories and read books; understand what is read and written in the state Chinese language.

The program provides methodological recommendations for a Chinese language teacher: create a free environment for language communication, support, encourage, and involve young learners in communication; teach young learners to enjoy language communication and use appropriate, polite language interaction; promote the listening skills development and develop understanding of listening comprehension; encourage young learners to express their thoughts and feelings in order to explain and describe simple things or processes, develop young learners' thinking skills.

A teacher should teach young learners to write state Chinese characters to help them record and summarize simple texts for understanding in daily life. It is recommended to encourage young learners to use pictures, symbols, etc. to make their own logos, stickers, seals, write stories, storylines, wishes. To teach writing techniques, a teacher is recommended to use the technique of making precise hand movements and promote hand-eye coordination, in tasks such as puzzles. It is necessary to teach young learners to move up, down, left and right, and help them understand the structure of writing through the games of "jumping out of the house", "finding a house for small animals", etc.

The key to the development state language competence is to create a language environment in which young learners can communicate freely, express themselves, have the opportunity to say and receive a positive response, feedback. The development of young learners' speech and language is closely related to the development of other aspects of learning, to which experience, thinking and skills of social interaction are added. Therefore, an important way to develop young learners' language is to expand their experience in various activities and promote language development through the mutual penetration of education into various areas of life.

The **conclusion** is the content of state language competence for young learners at primary schools in the PRC is realized through different methods, forms, means and activities.

ILBOVNYK, Yana
PONOMAROVA, Nataliia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

SYSTEMATIZATION AND GENERALIZATION OF STUDENTS' KNOWLEDGE IN INFORMATICS AS A METHODOLOGICAL PROBLEM

Educators note that the systematization of students' knowledge is a process of structuring and organizing educational material into logical and interconnected blocks, which contributes to the formation of a holistic view of the subject area. It involves establishing internal connections between concepts, placing knowledge in a certain hierarchy, which allows students to realize the interdependence of educational material and use it effectively.

The **purpose** of the article: to establish the theoretical origins and prospects for the formulation of the methodological problem of systematizing and generalizing students' knowledge in computer science.

Systematization plays a crucial role in the deep assimilation of knowledge, as it contributes to the development of critical thinking, the ability to analyze and synthesize information, and facilitates its application in new contexts. Generalization enables students to transition from partial knowledge to broader concepts, establishing general principles that can be applied to various situations. Thus, systematization forms a logical structure of knowledge, and generalization expands its boundaries, providing a comprehensive approach to the educational process. At the same time, they are inextricably linked: the wider the scope of generalization, the deeper the relationships between the elements of knowledge appear, which contributes to their integration into a holistic system. In the educational process (including in the teaching of computer science), several stages of generalization and systematization are distinguished. Primary generalization is formed at the level of perception and awareness of educational material, contributing to the emergence of general ideas about objects and phenomena. Conceptual generalization occurs in the process of mastering new concepts, focusing on establishing cause-and-effect relationships and revealing the deep essence of objects. Interconceptual generalization and systematization involve establishing common and essential features between concepts and integrating them into structured systems, which ensures a logical sequence for mastering theories and key concepts. The next stage is thematic generalization, which systematizes a cycle of interconnected concepts, forming a holistic vision of the subject area. Final generalization, on the other hand, allows for establishing connections between different systems of knowledge, creating the basis for a comprehensive understanding of scientific material. Therefore, generalization and systematization of knowledge are complementary cognitive processes that determine the quality of learning.

Given the growing role of computer science in the formation of competencies of a graduate of a general secondary education institution, research into the methodology for generalizing and systematizing educational material in computer science lessons will allow not only to ensure that students understand the educational content, but also to transform fragmentary knowledge into holistic conceptual models necessary for the successful mastery of interdisciplinary connections and adaptation to new educational tasks, as provided for in the concept of the New Ukrainian School.

ENGLISH TEACHING WITH DIGITAL MEDIA: ENHANCING STUDENT ENGAGEMENT AND LANGUAGE ACQUISITION

In recent years, digital media have become an increasingly integral part of foreign language education. The integration of online platforms, interactive applications, and multimedia resources has fundamentally transformed how students acquire language skills and how teachers design their learning environments. Despite this progress, a key challenge remains: ensuring that digital tools are used in a pedagogically meaningful way rather than simply for their technological novelty. Teachers must carefully consider how to align digital resources with learning objectives to maximize their educational impact.

Aim. The present paper aims to explore how digital media can enhance students' motivation, engagement, and linguistic competence in English language learning. It focuses on the practical use of interactive platforms (such as Quizlet, Padlet, and Kahoot) and video-based learning in secondary school classrooms, highlighting both opportunities and potential challenges. Special attention is given to how these tools can support differentiated instruction and meet the diverse needs of learners.

Results. Based on a small-scale classroom study with secondary school learners, the implementation of digital tools showed a noticeable increase in student engagement and active participation. Learners reported higher satisfaction, motivation, and confidence when using digital resources to practice vocabulary, improve pronunciation, and engage in communicative tasks. Teachers observed that digital activities helped create a more dynamic, student-centered learning environment and facilitated collaboration among peers. Moreover, the combination of visual and auditory input provided by multimedia tools supported vocabulary retention, improved listening comprehension, and enhanced pronunciation accuracy.

Conclusions. Digital media, when thoughtfully and purposefully integrated, can effectively enhance English language teaching and learning. They encourage creativity, collaboration, and learner autonomy while offering opportunities for more personalized and interactive learning experiences. However, the success of digital integration depends heavily on careful pedagogical planning, ongoing teacher training, and sufficient access to technological resources. Future studies should investigate the long-term effects of digital media on learning outcomes, language proficiency, and the development of digital literacy skills, as well as explore strategies for sustainable and inclusive implementation in diverse classroom settings.

LOZOVA, Nataliia

<https://orcid.org/0000-0002-1961-5473>

Communal institution "Pryluky Humanitarian and Pedagogical College named after Ivan Franko" of the Chernihiv Regional Council,

PROJECT TECHNOLOGIES IN TEACHING UKRAINIAN LITERATURE

Ukrainian literature is one of the key school subjects, the study of which involves not only obtaining basic knowledge, but also the formation of a humanistic worldview, the development of aesthetic taste, love and respect for Ukrainian culture and history.

Today, unfortunately, there is a tendency of decreasing interest of students in reading Ukrainian literature, which is due, in our opinion, to the monotony of lessons and homework, as well as the pessimistic and depressing sound of national literature.

One of the effective factors in renewing interest in reading, in our opinion, is the project method, which has recently gained popularity in pedagogy.

The "Ukrainian Pedagogical Dictionary" defines the project method as an organization of learning in which students acquire knowledge and skills in the process of planning and performing practical project tasks.

Thanks to project activities, students have the opportunity to work in conditions of freedom, learn to formulate and solve problems, use information resources, engage in self-education, and work in conditions of dialogue or polylogue.

The project method has a number of advantages in modern conditions of the educational process. First of all, project work makes it possible to work on a topic that has not been sufficiently studied due to air alarms or lack of light. The second positive aspect of this type of activity is that already at the preparatory stage, the author of the project forms a holistic idea of what the final product of his search activity will be. Projects can vary in: duration: short-term, medium-term, long-term; number of participants: individual and group; nature of the problem: mono-subject and interdisciplinary.

A student's creative project can take many forms. It can be a presentation, a dictionary, a comic, a report, a game, a map, drawings, videos, memes, etc. For example, second-year students, with the aim of popularizing Ukrainian classics, prepared a modern performance based on the socio-everyday story "The Kaidash Family". Another popular method of teaching literature is presenting characters and problems in the form of memes. Such modern methods of studying literature, in our opinion, not only force students to read more, but also develop their creative thinking and horizons.

The most important thing is that when creating projects on Ukrainian literature, students should have established communication with a supervisor who would not give ready-made solutions, but only help in materializing the students' creative potential.

The implementation of the project method in the educational process is a difficult, but interesting and necessary task that encourages students' intellectual development and creative rethinking of classical works of literature.

The project method in Ukrainian literature lessons teaches you to work in a team, but also to be able to take responsibility, and most importantly, project activities allow you to gain solid knowledge with interest and without coercion.

LOZOVY, Vasyi

Pryluky Gymnasium №. 12 Pryluky City Council, Ukraine

ADVANTAGES AND DISADVANTAGES OF USING ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL SPACE OF UKRAINE

Modernization of the educational process is inevitable, as it is caused by social changes and political conditions in Ukraine. Due to constant air raids and stabilization or emergency power outages in Ukraine, distance and blended learning forms prevail, which necessitates the need to diversify and improve educational material. One way to solve this problem may be through the motivated and moderate use of artificial intelligence resources.

The widespread use of artificial intelligence, in particular ChatGPT or Google Gemini, has caused changes in education. Artificial intelligence has become a part of our daily lives and the educational process. Today, everyone has access to smartphones, computers and the Internet, and can use the resources of artificial intelligence to select the necessary educational materials.

This allows students to compensate for educational losses due to the lack of proper learning conditions, and teachers to minimize the time needed to prepare for online classes. Artificial intelligence can perceive and process much more information than a person, and accordingly, perform various tasks much faster and more accurately.

It is common knowledge that students and teachers today have access to websites that facilitate their self-education, and that many of them use artificial intelligence.

So, let's try to outline the main advantages and disadvantages of using artificial intelligence information resources in the educational space of Ukraine. For example, by integrating artificial intelligence into their educational systems, teachers can save time on preparing for classes, developing assessment criteria, selecting necessary educational materials, etc.

Among the advantages of using artificial intelligence by students, it is worth highlighting the following: it can process a large amount of information, provides access to educational resources according to the needs of education seekers, helps in creating educational content, knows how to count accurately, can translate texts into other languages, can select the information needed for various projects, etc.

Despite all the strengths of using artificial intelligence, it is worth focusing on some of its shortcomings, in particular, as a result of abusing the capabilities of artificial intelligence, the cognitive abilities of both scientific and pedagogical workers and students may decrease. So, if you rely too much on artificial intelligence for everything, you can forget how to think for yourself. In addition, artificial intelligence only has the information it is given and cannot think for itself.

Thus, we can conclude that artificial intelligence helps improve the quality of education, makes it possible to restore educational losses, quickly and efficiently select educational material, but it should not be considered an absolute blessing. For example, it is worth considering that digital technologies are completely changing the education model. This means that creative thinking, the ability to accumulate original ideas and implement them in life, may give way to the formulaic actions of artificial intelligence.

LUKIANENKO, Nataliia

<https://orcid.org/0009-0007-8836-7788>

Kharkiv National Automobile and Highway University, Ukraine

IMPROVING ACADEMIC WRITING SKILLS IN ENGLISH FOR UNIVERSITY STUDENTS

Introduction. Academic writing is a crucial component of higher education, as it enables students to communicate research findings, develop critical thinking, and participate in international academic discourse. For non-native speakers of English, mastering academic writing presents particular challenges, including the use of appropriate vocabulary, structuring arguments, and adhering to academic conventions. Universities increasingly recognize the importance of supporting students in developing these skills, as academic writing competence directly influences both academic success and future professional opportunities.

Aim. The purpose of this study is to examine effective strategies for improving academic writing skills among university students learning English as a foreign language. The research focuses on identifying common difficulties faced by students, evaluating the impact of targeted writing instruction, and exploring methods that enhance clarity, coherence, and critical engagement in student writing.

Results. The findings reveal that systematic instruction in academic genres, combined with regular practice and constructive feedback, significantly improves students' writing performance. Students who participated in writing workshops and peer-review sessions demonstrated greater confidence in structuring essays, using academic vocabulary, and referencing sources correctly. Moreover, the integration of process-oriented approaches – such as drafting, revising, and editing - helped students to view writing as a developmental skill rather than a one-time task. The results also highlight the importance of teacher guidance in fostering independent writing strategies and encouraging reflective learning.

Conclusion. Improving academic writing skills in English requires a comprehensive and sustained approach. The study demonstrates that progress is most effective when instruction combines explicit teaching of academic conventions with opportunities for practice, feedback, and reflection. Writing should be treated as a process rather than a product, allowing students to draft, revise, and refine their work over time.

Universities should therefore invest in structured writing support programs, including workshops, writing centers, and peer-review initiatives. Such programs not only enhance linguistic accuracy but also cultivate higher-order skills such as critical thinking, argumentation, and independent learning. Furthermore, integrating writing instruction across the curriculum ensures that students see academic writing not as an isolated skill but as an essential part of their academic and professional development.

Ultimately, strengthening academic writing competence equips students to participate more fully in the global academic community, enabling them to publish research, collaborate internationally, and contribute meaningfully to scholarly dialogue. By prioritizing writing development, universities prepare graduates who are not only proficient in English but also capable of expressing complex ideas with clarity, precision, and confidence.

LYSENKO, Natalia

<http://orcid.org/0000-0001-8607-2213>

SHVARP, Nataliia

<http://orcid.org/0000-0003-0255-9310>

FESENKO, Volodymyr

<http://orcid.org/0000-0001-7437-0854>

National University of Pharmacy, Ukraine

APPLICATION OF PBL IN HIGHER EDUCATION INSTITUTIONS OF MEDICAL AND PHARMACEUTICAL PROFILE

Abstract. At the present stage, society requires specialists who are creative, analytically minded, capable of problem-solving, self-development, and teamwork. Problem-based learning (PBL) in higher education fosters these qualities.

Purpose. Our goal is to demonstrate that the problem-based learning (PBL) method is universal and can be effectively applied in training future specialists across various fields where analytical thinking, research skills.

Results. We propose using problem-based tasks of various types, including tasks with variable content. To facilitate dialogue in a distance learning environment, we suggest using interactive boards. **Example of a problem-based task with variable content for physical therapists:** a 35-year-old patient consults a physical therapist following an injury to the right knee joint sustained during a football game three weeks ago. The orthopedic diagnosis is a grade II ligament sprain of the knee joint. At the time of consultation: pain when bending the knee beyond 90°, slight swelling, reduced range of motion, and quadriceps weakness; the patient walks without crutches but with a stiff gait. **Tasks:** Formulate short-term and long-term goals of physical therapy. Suggest a set of exercises appropriate for this stage of rehabilitation. Identify which physical factors (heat, cold, electrotherapy, etc.) can be applied. Determine how the rehabilitation program will change in case of: (a) increased pain syndrome; (b) occurrence of knee joint locking; (c) the patient's return to active sports. Format your response to the assignment as a <https://padlet.com/>. Add theoretical information in a text file with your answer and include idiomatic materials that support your opinion.

Conclusions. A problem-based task has no single correct solution – students create individualized rehabilitation plans that foster clinical reasoning, analytical thinking, and adaptability. Thus, problem-based learning is an educational method in which real-life complex tasks are used as a tool for learning. This approach encourages students to apply critical thinking and problem-solving skills within a specific time frame, promoting practical experience and active knowledge acquisition. The use of interactive boards for presenting completed project assignments enables students to learn how to justify their point of view during possible dialogues with colleagues.

LYSYTSKYI, Mykola

<https://orcid.org/0009-0000-6366-6238>

Kharkiv National University of Internal Affairs, Ukraine

SELF-EDUCATIONAL SKILLS AS THE BASIS OF STUDENTS' SELF-EDUCATIONAL COMPETENCE

Educational policy in the field of legal education puts forward new requirements for the quality of training of legal specialists, while the emphasis of training is shifting to students' self-education, self-development and self-control. Informatization of the professional sphere, in particular the legal one, constant changes in the legislative framework and regulatory documents, stable trends toward the digitalization of various legal services – all these processes determine the need for legal specialists capable of professional growth and self-improvement, independent mastering both knowledge and modern professional tools. The solution to this problem is associated with the formation of self-educational competence in future lawyers during their education.

Self-educational competence involves students' independent activity in applying the acquired knowledge, transforming it into various forms; independent activity in obtaining knowledge from various sources; independent search for errors, overcoming difficulties in the process of independent activity; application of acquired knowledge in practice. The basis of self-development competence is a complex of self-educational skills of students:

- educational and organization skills (the ability to work according to an algorithm, independently compose an algorithm, occupational hygiene, time management, the ability to work in a team);
- educational and informational skills: navigating the structure of the content of scientific and educational literature (textbook, training manuals, encyclopedias, dictionaries, reference books) and other sources of information, mastering of various reading methods, making a plan, review, abstract, the ability to use electronic resources to search for information, etc.;
- educational and communicative skills (mastering the monological and dialogical language, the ability to manage attention, mastering the information memorization techniques);
- educational and intellectual skills (analysis, synthesis, comparison, classification, systematization, generalization, ability to perform creative tasks).

Therefore, self-educational competence of future lawyers is a dynamic integrative characteristic of the personality that is determined by the motivational and value attitude towards professional self-improvement that is implemented through independent cognitive activity and allows achieving certain personally significant educational, cultural and professional goals.

Self-educational competence helps students master the abilities and skills for independent acquisition of knowledge for their further application in educational and professional activities.

LYTVYENKO, Olha

<https://orcid.org/0000-0003-3322-8805>

National University of Civil Protection of Ukraine, Ukraine

MOTIVATING CADETS IN LEARNING ENGLISH FOR PROFESSIONAL PURPOSE

Motivation can be strengthened through the creation of a positive learning environment, consistent support from instructors and peers, the implementation of interactive teaching methods, and a balance between intrinsic values and extrinsic incentives (e.g., praise and rewards). Intrinsic motivation refers to the learner's internal drive for self-improvement, grounded in personal values and goals whereas extrinsic motivation involves the pursuit of external rewards such as praise, recognition, or material incentives. To ensure the learning process, both types should be combined.

Purpose. Cadets' motivation to learn English can be significantly enhanced by linking language to their professional goals, employing interactive teaching methods and technologies, creating a supportive learning environment, setting achievable objectives, and providing opportunities to communicate with native speakers.

Results. Some of the practical strategies for enhancing motivation are as follows:

- **professional relevance:** demonstrating how English language skills are essential in their future careers – for instance, in understanding international standards, engaging with scientific publications, or communicating with foreign partners – helps cadets perceive the practical value of language learning;
- **interactive learning activities:** Incorporating role-plays, simulations of professional scenarios, discussions, and project-based tasks makes the learning process more dynamic and engaging;
- **use of technology:** integrating modern applications, online resources, mobile games, and audiovisual materials aligns with the preferences of contemporary cadets and increases their engagement in the learning process;
- **setting achievable goals:** instructors should guide cadets in setting specific, realistic objectives (step by step) – such as reading a professional article or passing a proficiency exam – and monitor their progress towards these goals;
- **creating a supportive environment:** a classroom atmosphere where cadets are unafraid of making mistakes and instead view them as a natural part of the learning process fosters motivation and confidence;
- **encouraging communication:** organizing meetings with native speakers or participation in language clubs promotes the development of communication skills and cultural competence;
- **role of the instructor:** an active and enthusiastic instructor who can effectively engage the audience and foster interaction among cadets plays a pivotal role in sustaining student motivation.

Conclusions. Proficiency in English grants cadets access to international scientific literature, professional networks, and career advancement, serving as a strong incentive for language learning. It is crucial to consider the individual needs of cadets, set clear goals, and provide opportunities for self-development.

LYU, Qiang

MAIN FORMS AND METHODS OF COUNSELOR MANAGEMENT WORK IN CHINESE COLLEGES AND UNIVERSITIES

In the context of China's transition toward high-quality and digital higher education, the management work of university counselors has become an essential component of student development and campus governance. The diversification of Generation Z students – characterized by individualized values, fragmented information access, and strong self-expression – poses new challenges to traditional student management systems. As counselors serve as the backbone of ideological and political education, their effectiveness directly influences the implementation of the fundamental educational goal of “fostering virtue through education.” However, the persistence of homogeneous methods, weak technological integration, and limited collaboration mechanisms necessitates a systematic study of the existing management forms and the search for innovative approaches.

The research focuses on the management activities of university counselors in Chinese colleges and universities. Its purpose is to identify the main forms and methods used in counselor management work, analyze their practical effectiveness and problems, and propose strategies for optimization in line with the characteristics of students in the new era.

The research reveals that counselor management work in Chinese universities has formed a four-dimensional structure integrating *ideological guidance, academic support, life services, and risk prevention and control*. The most widely used methods include:

1. Classified guidance – personalized management strategies according to student type and background;
2. Technical empowerment – using digital platforms and data analysis for accurate student tracking;
3. Collaborative linkage – building communication networks among counselors, teachers, parents, and social partners;
4. Example demonstration – guiding students through role models and counselor self-example.

Despite its progress, the system still faces several limitations: insufficient technological capacity, low frequency of cross-departmental cooperation, and lack of scientific efficiency evaluation mechanisms.

Counselor management work plays a critical role in ensuring campus stability and promoting students' holistic development. To improve its effectiveness, universities should:

1. Develop precision-based management systems that address students' differentiated needs;
2. Strengthen digital governance through integrated data platforms and counselor training in big data tools;
3. Enhance multi-subject collaboration among counselors, teachers, and parents;
4. Establish scientific evaluation systems to measure management outcomes based on student growth and satisfaction.

By advancing these strategies, universities can achieve the transition from experience-based to data-driven and collaborative management, fostering an educational environment that supports both moral and intellectual growth of students.

MARCHUK, Alisa

<https://orcid.org/0000-0003-3694-9245>

S. Kuznets Kharkiv National University of Economics, Ukraine

HYBRID LEARNING IN UKRAINIAN HIGHER EDUCATION: CHALLENGES AND PERSPECTIVES

The ongoing crisis conditions faced by Ukraine have created significant challenges for the higher education system. The need to maintain educational quality encourages universities to adopt flexible and adaptive approaches that ensure students' safety, equality, and access to learning.

Aim. The purpose of this study is to identify the key challenges in implementing hybrid learning in Ukrainian higher education institutions and to outline ways to enhance its effectiveness under crisis conditions.

One of the tools that has been gradually introduced in universities is hybrid learning, which combines elements of in-person (classroom-based) and distance (online) formats of interaction between teachers and students. Hamza-Lup and White (2018) define hybrid learning as “an instructional approach that combines face-to-face classroom methods with computer-mediated activities to form an integrated instructional experience.” The main goal of hybrid learning is to ensure educational continuity, maintain accessibility, and support an inclusive environment for students unable to attend classes in person.

However, this model brings several difficulties for institutions, teachers, and students. As noted by Vereshchahina, Liashchenko, and Babi (2018), challenges include low technological literacy, limited digital support, inadequate classroom infrastructure, and a lack of practical experience with digital tools.

Results. The analysis revealed major issues such as uneven distribution of teachers' attention between on-site and online students, unstable Internet connections, poor sound and video quality, and limited technical resources within universities. In many cases, instructors are compelled to use their personal devices and materials due to inadequate software and equipment in classrooms. This situation increases their workload and reduces the overall efficiency of the educational process. At the same time, the experience of hybrid interaction confirmed the importance of further developing teachers' digital competence and institutional support for this format, as it ensures flexibility, inclusivity, and the continuity of education under crisis conditions.

Conclusins. Hybrid learning ensures educational resilience in emergencies; however, its success depends on overall readiness. The main difficulties are related to unstable Internet connectivity, uneven student participation, and insufficient technological resources. To improve learning outcomes, it is essential to strengthen the material and technical infrastructure, enhance teachers' digital competencies, and create conditions for equal participation of both online and in-class students.

MAZEPA, Iryna

Communal Establishment «I. Franko Pryluky College of Humanities and Pedagogy» of the Chernihiv Regional Council, Ukraine

FORMATION OF SOCIOCULTURAL COMPETENCE IN THE PROCESS OF LEARNING THE ENGLISH LANGUAGE

Introduction. Today, one of the leading principles of education is the principle of cultural relevance, which means the educational process should be based on universal human values while considering the norms of national culture. In this context, learning foreign languages becomes an important tool for forming sociocultural competence—the ability not only to communicate freely but also to understand the cultural codes, traditions, and values of the native-speaking people.

The objective is to determine the pedagogical conditions that will contribute to the effective formation of this competence in higher education institutions during the process of learning English.

Research Results. Experience has shown that the effective formation of sociocultural competence is possible under a number of pedagogical conditions: careful selection of adapted sociocultural material and authentic texts; a key role is played by performing communicative exercises that stimulate intercultural communication; the visualization of linguistic exercises and tasks; and the application of a logical processing algorithm.

Conclusions. Mastering sociocultural competence is a fundamental condition for forming a personality ready for intercultural communication. This involves not only teaching foreign language communication but also the assimilation of elements of the sociocultural environment of the country whose language is being studied. The proposed approaches, which include integration, the use of authentic materials, and innovative forms of work, allow students to successfully participate in a dialogue of cultures.

**MELO, Juliana
FÉLIX, José**

<https://orcid.org/0000-0002-3494-0362>
UNEB, Brazil

CARTOGRAPHIES OF ANCESTRAL VOICES: INDIGENOUS LITERATURES IN ENGLISH AND BRAZILIAN LANGUAGES

The subproject *“Cartographies of Ancestral Voices: Indigenous Literatures in English and Brazilian Languages”* aims to map, select, and analyze literary, theoretical, and verbo-visual productions by Indigenous authors writing in both English and Portuguese. Grounded in a counter-colonial perspective and guided by the practice of critical curation, this research seeks to highlight how these narratives challenge colonial paradigms, resignify identities, and address essential themes such as ancestry, spirituality, political resistance, and environmental preservation. The methodology involves the creation of thematic trails organized according to representative criteria, critical reading, textual analysis, and the development of pedagogical materials, with all results to be systematized in open-access digital repositories. By engaging with both well-known and lesser-known Indigenous voices from Brazil, Canada, Australia, New Zealand, the Caribbean, and other regions, the project constructs an intercultural cartography that values multiple epistemologies and aesthetic expressions. In addition to its academic dimension, the subproject emphasizes the ethical and political commitment to inclusive, sensitive, and transformative educational practices. It seeks to strengthen intercultural dialogues, expand the academic repertoire of scholarship holders, and democratize access to Indigenous knowledge within the fields of English and Brazilian literature. Ultimately, this research contributes to rethinking literary studies through Indigenous perspectives, fostering new pedagogical pathways that honor ancestral knowledge and contemporary social challenges.

BRUNO, Ediclecio

UNEB, Brazil

MENDES, Valdiney.

<https://orcid.org/0000-0001-6847-2221>

State University of Bahia, Brazil

ENGLISH FOR ACADEMIC READING: SKILLS FOR UNIVERSITY SUCCESS

The main goal of this article is to report a mini-course, entitled “Instrumental English,” developed as part of an English language teacher training program at UNEB, Campus IV – Jacobina, Bahia, Brazil. Unlike traditional approaches, the Instrumental English course aims to develop all language skills (speaking, listening, reading, and writing), while prioritizing reading and interpretation—especially of academic, technical, and professional texts. The course was taught by two undergraduate students majoring in English, in Room 8 at UNEB, every Tuesday and Friday from 5:00 p.m. to 7:00 p.m. Recruiting students for the course was somewhat challenging. After visiting two local schools and a police complex near the city’s airport, we decided to hold the course at the university. We started the course with eight university students. In our first classes, we played songs using a projector so that the students could identify familiar English words. We also presented our theme and reading content and worked on topics such as cognates, articles, personal pronouns, the verb to be, and the present continuous tense. Instrumental reading, focused on comprehension rather than speaking or listening, is essential for meeting everyday needs. Activities involving quick reading, observing key words, cognates, connectives, articles, and pronouns may facilitate interpretation and can be important for learning the language. The aim of this course is to help undergraduate students develop efficient reading and interpretation skills through techniques that promote understanding of written texts, even without deep grammatical knowledge.

MYKHAILENKO, Lina

V. N. Karazin Kharkiv National University

EMPATHIC TEACHING: THE ROLE OF EMOTIONAL INTELLIGENCE IN TEACHERS' PROFESSIONAL PRACTICE

The relevance of the topic is underscored by the importance of distinguishing the best teaching methods according to the needs of applicants in order to create appropriate relations. Teachers are to be aware of emotional intelligence, its relevance and practical application. The issue of combining traditional methods, which claim knowledge to be at the first place, and modern insights about the privilege of emotional conditions and inclusivity has become a subject of intense debate and discussion.

The primary objective of this thesis is to find the connections between the level of teachers' emotional intelligence and the situation in class: behavior, engagement and communication. It is known that teachers who are able to handle their emotions and are more empathetic can avoid conflicts and share higher level of trust, that is why, to prove it is an essential key on the way to improve the world's educational system.

According to the recent studies (Aldrup, Carstensen, & Klusmann, 2022; Rahman, Amin, & Huda, 2024; Ampofo et al., 2025).), several surveys and personal experience the positive effect can be observed. The ability to manage own emotions helps teachers to provide psychologic comfort in classes where the atmosphere is to be safe for everyone. Student tend to have lower level of anxiety and higher level of commitment. It does not cause stress for them to ask questions and to make mistakes this way cognitive interest is more like to occur. Moreover, teachers may receive personal benefits from improved emotional intelligence. For example, susceptibility to professional burnout is out of risk therefore resistance to stress should be developed. It is also significant to admit that emotional intelligence includes realization and managing own emotions as well as being empathetic and conscious. Some of the students' emotions can be distinguished which is eminent in order to help learn new information better and maintain interest, especially in difficult cases.

In conclusion, the key findings of the research have confirmed that teachers' emotional intelligence level is not just a valuable feature but a significant factor which may influence the quality of the educational process and the general atmosphere in class. Emotional intelligence is a tool which helps to create individual contact and to maintain students' motivation for a certain subject or the whole learning process. Developing necessary skills is a need for an experience teacher because it may directly affect on mental condition and health. An avenue for future inquiry would be to explore exact methods and technics to cultivate emotional intelligence among modern teachers so that it can be easily integrated in the world's education system.

NAGAYEV, Viktor

<https://orcid.org/0000-0002-3130-6112>

BOBLOVSKYI, Oleksandr

<https://orcid.org/0000-0002-1427-3267>

State Biotechnological University, Ukraine

PHILOSOPHICAL DIMENSION OF DIGITAL TRANSFORMATIONS IN THE CONTEXT OF HUMANIZATION OF EDUCATION

The purpose of the study is to understand the philosophical foundations of digital transformations in education according to the principles of the humanistic paradigm.

Main results. The digitalization of education is not a purely technocratic process, it has deep philosophical dimensions related to the transformation of knowledge, subjectivity, communication and cultural identity. That is why there is a need for a philosophical understanding of the changes taking place in the educational environment of Ukraine in the context of its rapprochement with the European Educational Space. In this context, the study of the philosophical foundations of digital transformations becomes especially important for understanding how to ensure a harmonious combination of innovative technologies and humanitarian principles in Ukrainian education on the path to European integration.

Philosophical innovations of modernity (post-structuralism, philosophy of the information society, technophilosophy and transhumanism) challenge traditional ideas about education as a linear process of knowledge transfer. In the digital environment, education is transformed into an open, nonlinear, interactive practice, where knowledge appears as a process of co-creation. Digital transformation entails: rethinking the role of the teacher (from a carrier of knowledge to a facilitator of learning); changing the status of the learner (from a passive listener to an active participant in the educational process); the dynamics of communication (from vertical to horizontal); a new understanding of time and space in learning (asynchrony, virtual classrooms). The humanistic paradigm in education focuses on the active role of the learner, which is reflected in self-management of educational and creative activities, the development of his axiological competence. The main thing is to involve the learner in the didactic process of searching for truth. Humanistically oriented educational processes create favorable conditions for the implementation of individual and personal development of future specialists in the system of digital pedagogy; contribute to the accumulation of creative experience and social maturity.

Conclusions. The combination of technocratic and humanistic models of learning should contribute to a new philosophy of educational thinking, the development of the pedagogical system, and the achievement of new achievements not only in the educational field, but also in science, production, and social life. The philosophical dimension of the digital environment also lies in the need to preserve the humanistic foundations of education: the development of critical thinking, ethical responsibility, and spiritual self-governance. Technological efficiency should not replace the value content of education. Therefore, the digital educational environment requires philosophical understanding as a new form of education - multidisciplinary, open, dialogic, and value-laden.

NAGAYEVA, Galyna

<https://orcid.org/0000-0002-5856-2263>

State Biotechnological University, Ukraine

FINANCIAL COMPETENCE OF INSURED PERSONS AS THE BASIS FOR THE FORMATION OF INSURANCE CULTURE

The purpose. The effective functioning of the financial market as a whole and its individual segments requires the continuous development of financial literacy and financial culture, within which the culture of insurance should be highlighted.

Main results. By financial competence of insurance consumers (insurance competence), we mean the ability to apply relevant financial knowledge (in the areas of risk analysis, selection of insurance products, and building relationships with insurance companies), adhere to certain financial behaviors (making informed and balanced insurance decisions, purchasing insurance products based on an understanding of one's needs, adhering to financial discipline), and use available financial opportunities to achieve financial well-being.

With sufficient insurance literacy, a person is able not only to consciously approach the choice of insurance services and protect themselves from various risks, but also to form a positive attitude towards the insurance sector.

Insurance competence and insurance culture interact and influence each other, contributing to the development of the insurance system as a whole.

The formation of financial competence among policyholders and its improvement depend on the influence of the following factors: motivation (value orientations); personal attitudes and efforts; economic education; individual abilities and skills; access to insurance products and services; financial capabilities; effectiveness of insurance behavior; government measures and investments in the development of skills in the use of insurance products and services in the lives of citizens, etc.

The financial competence of insurance service consumers is still developing and depends primarily on the measures implemented in the country.

At the level of insurance companies, measures are being implemented that can be summarized as follows: offering insurance products tailored to different income levels; sales channels (online, intermediaries); interaction with consumers of insurance services; insurance tailored to the individual needs and characteristics of customers.

Conclusions. The financial literacy of insurance consumers is useful, but insufficient for them to actively purchase and use insurance products to manage their risks. To raise the level of insurance culture, the following measures should be implemented: improve financial literacy and financial competence through education and information campaigns; ensure transparency and clarity of insurance terms and conditions; strengthen trust through reliable payments and the reputation of insurers; adapt insurance products to the needs of the population, especially in times of instability; expand the scope of personal and liability insurance.

NAUMENKO, Elizaveta

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

ENHANCING MOTIVATION IN FOREIGN LANGUAGE LEARNING AMONG YOUNG LEARNERS

Aim. The aim of this study is to determine the role of motivation in primary school students during foreign language learning.

Results. At the beginning of learning, young students usually show high motivation: they enjoy speaking, singing, reading, and using the new language. However, motivation often decreases as tasks become more difficult or repetitive, which can lead to loss of interest, lower performance, and reduced self-confidence.

Motivation plays a central role in foreign language learning and reflects the child's interests and needs. The teacher's role is to create conditions that support and develop this motivation. Both intrinsic and extrinsic motivation should be considered.

Motivation can be strengthened in three areas: *in the classroom*, through meaningful tasks and cultural texts; *in extracurricular activities*, through information about languages and their global role; and *at home*, through reading and multimedia tasks.

Real-life examples, media, literature, and stories from peers or family also help increase motivation. According to I. Osipov, positive motivation depends on lesson content, teaching methods, the teacher's approach, group work, and dynamic assessment.

To maintain *motivation*, teachers should allow students to set personal goals, connect tasks to their experiences, make lessons engaging with games and visual aids, use creative methods, and vary activities. A positive classroom climate is essential.

Teachers should encourage independence, maintain friendly communication, and give timely praise. Role-plays, songs, rhymes, and communicative tasks stimulate activity and develop both communicative and aesthetic motivation. The main goal is to help students communicate in real-life situations.

Conclusions. *Motivation* is essential for successful foreign language learning and must be continuously supported. Audiovisual tools and modern video materials increase engagement and support visual learning. Success depends on the teacher's professional skills, understanding of students' characteristics, and ability to choose suitable methods. Equally important are raising awareness of the social and cultural value of the language and maintaining a positive and comfortable classroom environment.

NAZARETS, Nazar

<https://orcid.org/0009-0001-9231-2524>

Kharkiv National University of Internal Affairs, Ukraine

THE TRANSFORMATION OF UNIVERSITY EDUCATION IN EUROPE UNDER THE INFLUENCE OF ARTIFICIAL INTELLIGENCE

University education in Europe is undergoing a radical transformation with the development of artificial intelligence (AI). Technologies considered futuristic a few years ago are now being actively integrated into the educational process and research activities.

The aim is to analyze the impact of AI on university education in Europe, identify the main directions of this transformation, and outline the possibilities and challenges of integrating new technologies into the educational process.

European universities are using AI to personalize learning. Algorithm-based systems analyze student performance and individual needs and provide tailored learning materials. AI also helps teachers automate their routine tasks: checking exams, grading exam papers, and creating individual learning plans. In research, EU universities are using machine learning algorithms to analyze large datasets in medicine, economics, ecology, and the social sciences. This opens up new horizons for scientific discovery. A key direction is the development of intelligent learning platforms. These platforms combine electronic libraries, interactive tasks, and AI-powered tutors who can provide real-time guidance to students. At the same time, universities face challenges. One of these is the need for new digital competencies for teachers and students, as working with AI requires specialized knowledge.

Another challenge is ethical and academic integrity. The use of generative models and automated systems creates risks of plagiarism, manipulation, and the diminishing of students' critical thinking skills. European education policy is trying to balance the benefits and risks. Universities are developing new integrity rules, AI usage rules, and assessment methods that take into account new realities. A positive consequence of AI integration is increased accessibility to higher education. Students with special needs are gaining access to learning tools: automatic translations, speech recognition systems, and voice assistants. AI is becoming a key element in the development of academic mobility. Automatic translation and course adaptation systems are helping students from different countries integrate more effectively into the EU educational landscape.

Considering all the points, AI is becoming a powerful driver of change in European higher education. It is improving teaching quality, fostering innovation, and making education more accessible, but it also requires addressing ethical, legal, and methodological challenges. The future of university education in the EU will depend on the balance between technological innovation and preserving the human values of the academic environment.

NEPRAN, Anastasiia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

EFFECTIVE METHODOLOGIES FOR TEACHING VOCABULARY IN PRIMARY SCHOOL ENGLISH LESSONS

Introduction. Vocabulary acquisition plays a fundamental role in the language development of primary school learners. At this stage, children are highly receptive to new words, yet they require engaging, meaningful, and structured learning experiences to ensure long-term retention. This thesis examines core methodological approaches used in teaching English vocabulary to young learners and highlights the value of creating supportive and interactive learning environments in early language education.

Aim. The aim of this paper is to investigate effective methodologies for teaching vocabulary to primary school students and to identify strategies that support the successful understanding, memorization, and use of new English words and phrases. The study focuses on approaches that teachers can apply to strengthen students' engagement, comprehension, and long-term retention.

Results. The analysis of methodological practices reveals several key strategies that significantly enhance vocabulary learning in the primary classroom:

- **Contextual Learning:** Introducing new vocabulary through real-life situations helps students interpret words meaningfully and connect them to personal experiences, improving retention.
- **Interactive Activities:** Games, flashcards, and role-playing activities increase engagement and promote active use of language, making vocabulary learning both enjoyable and effective.
- **Repetition and Reinforcement:** Revisiting vocabulary across different contexts consolidates learning. Continuous exposure enables young learners to internalize and reuse new words confidently.
- **Use of Visual Aids:** Pictures, videos, and charts provide strong visual associations that support memory and help children quickly grasp and recall vocabulary items.
- **Technological Tools:** Digital applications, interactive platforms, and online games – such as Quizlet – offer additional opportunities for practice. These tools support individual learning styles and foster self-directed vocabulary development.

Conclusion. Effective vocabulary instruction in primary school requires the balanced use of diverse methodologies tailored to the needs of young learners. Contextual presentation, interactive techniques, repetition, visual support, and technology integration collectively enhance vocabulary acquisition and encourage active participation.

By creating a motivating and child-friendly learning environment, teachers can ensure that vocabulary learning becomes both an enjoyable process and a solid foundation for broader language proficiency.

NIKISHYNA, Anzhela

<https://orcid.org/0000-0002-6182-8405>

Simon Kuznets Kharkiv National University of Economics, Ukraine

BUILDING UP CONFIDENCE ON THE WAY TO BETTER SPEAKING SKILLS

Confidently speaking a foreign language is considered one of the primary aims of learning, although it can often be accompanied by difficulties and doubts. With the new creative ideas, speaking practice can become an enjoyable experience, leading to better results.

The **aim** of this article is to demonstrate modern approaches to enhancing speaking skills. It is crucial for learners to feel sure of their knowledge, be surrounded by a positive atmosphere, and stay motivated. Speaking can be encouraged by technological advancements, providing the learning process with new and creative ideas.

The **results** of the work can be seen in a generated set of ideas connected with creating situations of interest that can definitely lead to involvement in speaking. Using online applications is a helpful tool, as it offers possibilities such as shadowing - repeating after the native speaker- and includes chats, where there is an opportunity to discuss topics that students might be interested in. Intellectual companion tutor apps and automated speech recognition can benefit speaking by reducing the need for error correction, which may have a positive impact on future speaking engagements. There are also advanced technological methods to master new words and expressions, such as creating flashcards and making mind maps. Building up confidence can be assisted by recording speaking episodes with the intention of further listening to them and encouraging progress. The learners can assess their own achievements and feel more motivated. Constant support of students and a belief in their skills are crucial to success, and every task in the lesson can be seen as an opportunity to discuss and lead to a conversation. A variety of tasks with fun elements will definitely create the kind of learning surroundings where students feel free to express their views and ideas. With every coming lesson, learners tend to believe in their success.

Conclusions. The current learning process has been facilitated by the fast-paced development of technologies. Even a five-minute practice of speaking skills might be of significant benefit for future results. The new forms of practicing speaking skills offer a choice, raise self-esteem, and lead to an improved quality of teaching. Involvement and motivation, accompanied by a trustworthy attitude, are sure to build confidence while speaking a foreign language.

NIKOLAIENKO, Yuliia

<https://orcid.org/0000-0002-4635-2461>

National University «Yuri Kondratyuk Poltava Polytechnic», Ukraine

ENHANCING SOFT SKILLS DEVELOPMENT THROUGH COLLABORATIVE ONLINE INTERNATIONAL LEARNING

In the context of globalization and digital transformation, soft skills development is an essential component of higher education.

Aim. The aim of the abstract is to analyze COIL as an effective tool for enhancing soft skills development in universities.

Results. Soft skills, which refer to non-technical abilities that enable individuals to interact effectively in academic and professional environments, are increasingly recognized as critical for career success. They include communication, critical thinking, emotional intelligence, creativity, leadership, problem solving, intercultural awareness, team work, adaptability etc. Traditional classroom settings often lack the dynamic and diverse contexts required to develop soft skills. In order to fill in this gap educational institutions implement innovative and technology-driven approaches into their curricula. COIL (collaborative online international learning) is an approach that connects students and teachers from different countries through online collaborative projects, in which participants work together virtually on tasks designed around shared topics.

COIL enhances soft skills development via several tools: 1) intercultural communication: students engage with peers from different cultural and linguistic backgrounds, enhancing their ability to communicate across cultural boundaries; 2) teamwork and collaboration: COIL projects require joint problem-solving and decision-making, fostering cooperative behavior and conflict resolution skills; 3) digital literacy and adaptability: by using diverse digital platforms and navigating asynchronous communication, students improve their technological competencies and adaptability to new work environments; 4) empathy and global mindset: exposure to diverse perspectives encourages open-mindedness, empathy, and a global perspective development; 5) critical thinking and reflection: working in international teams often presents unforeseen challenges, encouraging students to think critically and reflectively.

Numerous studies have documented the positive impact of COIL on soft skills. Helm and van der Velden (2019) found that students participating in COIL projects reported significant improvements in intercultural competence. Rubin and Guth (2016) highlighted that COIL participants demonstrated enhanced collaboration and communication skills compared to peers in traditional classroom settings.

There might be some challenges in using COIL, e.g. technical issues, time zone coordination, language barriers, and different academic expectations. However, effective instructional design, institutional support, and instructor training can be helpful to overcome these problems.

Conclusions. COIL can be recommended as a powerful model which provides an authentic online environment for enhancing soft skills development by engaging students in intercultural communication and collaboration.

NOSYRYEVA, Olena

<https://orcid.org/0009-0009-5094-496X>

Kharkiv National Automobile and Highway University, Ukraine

BRITISH EXPERIENCE IT EDUCATION STANDARDIZATION

The dramatic changes that have recently occurred in the IT industry have led to a new understanding and assessment of the role of information technology, the awareness of the need to consolidate the efforts of the global community to form a comprehensive, harmonized approach to training of highly skilled specialists for various IT industries.

Based on this, the British model of training IT specialists occupies a leading position in terms of the quality and fundamentality of IT education due to the fact that the British educational system provides the clear formation of a complex of professional IT competencies and their continuity at all levels, as well as learning outcomes and recourses involved.

The format of requirements for the qualification and competence of specialists that ensures interaction between the professional field and the field of education in the context of compliance of the quality of graduates' training in higher education institutions with the requirements of employers and the UK labor market, is the professional standard. Standardization of IT education is the basis for ensuring the quality of higher education: it provides for the standardization of learning outcomes and allows for the formation of professional qualification.

IT educational standards should take into account the following criteria:

- trends in the formation of the information society;
- requirements of international standards;
- legislative framework of a particular country;
- national standards of industry regulatory and technical and methodological documents on ICT (information and communication technologies).

The problem of quality of specialists training is central to the issue of the national economy demand and international recognition of degrees and qualifications that directly related to the content of education and the technology of educational program implementing.

International recognition of education programs and qualifications, particularly in the IT field, is based on the comparison and coordination of quality criteria for training specialists in accreditation and certification procedures in different countries.

The practical implementation of the British experience in the formation and implementation of educational programs imposes appropriate conditions related to the need for constant updating their relevant content and structural modernization due to a special feature of the IT industry – its extraordinary dynamism.

British professional IT training programs are among the objects subject to required standardization. They fully comply with modern innovative trends in the development of the IT industry in Great Britain.

British educational practice convincingly demonstrates that standardization of both educational and professional activities is an effective mechanism for the functioning of the system of training of highly skilled specialists, in particular in the IT industry.

NOVIK, Victoria

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PRINCIPLES AND APPROACHES TO PLANNING ENGLISH LESSONS IN PRIMARY SCHOOL

Introduction. Planning English lessons in primary school is a key element of a teacher's work and directly shapes the effectiveness of learning. A well-organized lesson supports pupils' understanding of new material, strengthens their motivation, and helps create an engaging classroom atmosphere. Since young learners experience the world through play and vivid sensory input, instruction must reflect their psychological and developmental needs. Therefore, lesson planning should follow the principles of clarity, accessibility, creativity, and regular repetition.

Aim. The aim of this paper is to outline key methodological principles that guide effective planning of English lessons in primary school.

Results. The analysis of lesson-planning practices highlights several core components that ensure successful learning outcomes in primary school English classrooms:

- **Structured Lesson Stages:** Effective lessons follow a clear sequence – warm-up, presentation of new material, practice, playful reflection, and conclusion – supporting the integrated development of all language skills.
- **Developmentally Appropriate Tasks:** Activities should match learners' abilities and developmental potential, encouraging curiosity, participation, and communication.
- **Learning Through Play and Creativity:** Playful, interactive, and creative tasks maintain interest, support natural language acquisition, and reduce anxiety.
- **Communicative Orientation:** Lessons should prioritize simple, meaningful communication rather than focusing solely on grammar or vocabulary.
- **Flexibility and Individualization:** Flexible planning allows teachers to adapt tasks to learners' diverse needs and support each child's linguistic progress.

Conclusion. Planning English lessons in primary school is a dynamic and multifaceted process that requires pedagogical competence, creativity, and an understanding of learners' developmental needs.

A balanced combination of structured lesson stages, communicative tasks, visual support, and playful learning strategies enables young pupils to acquire language naturally and confidently.

When planning is both thoughtful and flexible, it creates the conditions for effective learning and supports the individual progress of every child, fostering long-term interest and motivation in studying English.

PAVLENKO, Tetyana

<https://orcid.org/0000-0001-9926-728X>

*State Non-Commercial Enterprise State University
"Kyiv Aviation Institute," Ukraine*

CYBERPSYCHOLOGY: THE INFLUENCE OF DIGITAL TECHNOLOGIES ON MENTAL HEALTH AND PERSONAL DEVELOPMENT

Purpose. In light of the unprecedented integration of digital technologies into daily life, there is an urgent need to understand their influence on the human psyche and personality. Modern psychology must move beyond traditional paradigms to explore new phenomena emerging in cyberspace.

Findings. We consider digital addiction (to social media, online games, etc.) not merely as a behavioral problem but as a disorder with a neurobiological basis. Special attention is given to the impact of dopaminergic reactions, associated with receiving "likes" and instant gratification, on the formation of persistent patterns of addictive behavior.

Social media creates a unique environment for social comparison, which can lead to decreased self-esteem, anxiety, and depressive states. We will analyze the phenomenon of the "facade self" – the creation of an idealized online persona – and its connection to feelings of loneliness and emotional burnout.

Cyberspace has become a new arena for aggression and violence. Cyberbullying differs from traditional bullying due to its anonymity, wide reach, and round-the-clock nature. The psychological traumas experienced by victims and effective counter-strategies will be examined.

Despite the potential risks, technologies also open up new opportunities. We will discuss the use of virtual and augmented reality (VR/AR) for treating phobias and post-traumatic stress disorders. The role of chatbots and artificial intelligence in providing psychological support and monitoring emotional states will also be considered.

Mobile applications and "smart" devices (smartwatches, fitness trackers) allow for monitoring physiological indicators such as heart rate and stress levels. Based on this data, personalized programs for meditation, relaxation, or training can be created. **Biofeedback-based interventions** enable individuals to consciously manage their reactions and improve self-regulation.

Conclusion. The digital era necessitates the development of new approaches to education and mental hygiene. It is essential to implement digital literacy programs that teach critical thinking, conscious use of technology, and building healthy relationships in cyberspace. We will emphasize that technology should be a tool for improving life, not a source of psychological problems.

PAVLIUCHEKO, Inna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

Research Adviser: Dr. Olha A. Honcharova

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MOTIVATING VOCABULARY GROWTH: THE IMPACT OF GAMIFIED DIGITAL TOOLS

Purpose. This paper aims to examine how gamification supported by digital tools influences students' motivation to learn vocabulary in English language lessons.

Particular attention is given to interactive platforms that integrate instructional and game-based elements, encouraging regular vocabulary revision, fostering learner autonomy, and promoting competitive interaction among students.

Results. The use of gamified platforms such as Digital Dialects, Kahoot, and Wordwall was investigated, where students receive points, praise, levels, and rankings for completing vocabulary tasks.

Observations and surveys showed that interactive activities increase secondary school students' engagement and interest, make the learning process more enjoyable, and foster a positive attitude toward regular vocabulary revision.

In addition, elements of competition and personal achievement encouraged more active use of new vocabulary in both written and oral tasks, while also promoting greater learner autonomy.

The platforms proved effective not only due to their interactive content but also because of their bright and appealing visual design. Visual materials – such as photos, videos, flashcards, and GIFs – facilitated vocabulary retention and supported the development of associative connections, creating conditions for more dynamic and effective lessons.

Conclusions. Gamification in digital learning platforms has a direct positive impact on secondary school students' motivation to learn vocabulary by combining instructional content with engaging game elements.

Integrating such tools into English language lessons can significantly enhance vocabulary acquisition and support the development of students' independence in learning.

PEREIRA, Letícia Souza
FELIX, José Carlos
UNEB, Brazil

DECOLONIAL LITERARY CARTOGRAPHIES – DIALOGUES AMONG CONTEMPORARY BLACK WOMEN WRITERS IN ENGLISH AND BRAZILIAN PORTUGUESE

The subproject aimed to map, analyze, and systematize the literary productions of contemporary Black women writers in English and Brazilian Portuguese through a decolonial approach based on critical curatorship. The research articulated theory, practice, and pedagogical formation, establishing dialogues between the analyzed works and the sociocultural contexts of their authors. The analyses included writers such as Conceição Evaristo (2005), Bell Hooks (1994), Zora Neale Hurston (1937), Alice Walker (1994), Chimamanda Ngozi Adichie (2014) and Djamila Ribeiro (2017), whose literary productions highlighted themes related to *escrevivência* (life-writing), ancestry, political resistance, religiosity, and intersectionality.

Throughout the project's development, literary and theoretical works were critically selected and analyzed, and analytical pathways were produced to systematize thematic trails aimed at understanding the aesthetics and discourses of these authors. The research process involved reflective field journals, collective discussion meetings, and the elaboration of multimodal pedagogical materials, such as didactic guides and activity scripts, applicable to the teaching of literature in English and Brazilian Portuguese. A **digital repository** was also created to disseminate the resources and results obtained during the investigation.

Moreover, **academic papers** were produced and **presentations at scientific events** were carried out, strengthening the participants' critical, theoretical, and methodological formation. The experience expanded the theoretical repertoire on Black women's literature and reaffirmed critical curatorship as a tool of resistance and reexistence in the literary field. Thus, the subproject consolidated itself as an initiative committed to valuing Black female voices and promoting decolonial, inclusive, and transformative educational practices.

POHORILA, Anna

<https://orcid.org/0000-0002-4342-8942>

Drohobych Ivan Franko State Pedagogical University, Ukraine

ADAPTATION OF THE “FLIPPED CLASSROOM” MODEL IN THE PROCESS OF FOREIGN LANGUAGE LEARNING

Contemporary educational practice increasingly focuses on the implementation of technologies that stimulate learners' cognitive activity and create conditions for the development of communicative competence. One of the most effective approaches in this regard is the *flipped classroom* model, which shifts the emphasis from traditional knowledge transmission to interactive engagement and the practical application of acquired skills. This model opens up new opportunities for teaching foreign languages in upper secondary school, as it combines independent preparation with active in-class interaction.

The aim of the study is to determine the specific features of adapting the *flipped classroom* model to foreign language lessons and to analyse its impact on the effectiveness of language learning.

The conducted research revealed that the implementation of the *flipped classroom* model in foreign language teaching significantly enhances learning efficiency and promotes more rational use of classroom time. Students who familiarize themselves with learning materials at home (videos, texts, and interactive exercises) come to class better prepared for active discussion and practical knowledge application. This organisation of learning fosters the development of learner autonomy, responsibility for one's educational progress, and critical thinking skills. Lessons conducted in this format demonstrate increased oral activity, more intensive peer interaction, and greater involvement in discussions and group assignments. Furthermore, students exhibit higher confidence in using newly acquired vocabulary and grammatical structures, as well as greater readiness to independently solve communicative tasks.

The analysis also indicates that the systematic application of the model enables teachers to differentiate instruction more effectively in accordance with individual learners' needs. However, certain challenges have been identified, including uneven levels of student readiness for self-directed learning, as well as the need for sufficient technical resources and methodological support from the teacher. Despite these challenges, the overall assessment of the model's effectiveness confirms its strong potential in developing high school students' language competence.

In conclusion, the *flipped classroom* model demonstrates considerable potential in foreign language teaching by achieving a balance between independent learning and collaborative classroom work. Nevertheless, the success of its implementation largely depends on resource availability, pedagogical guidance, and the establishment of a culture of self-directed learning.

PONOMAROVA, Nataliia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PSYCHOLOGICAL ASPECTS OF CAREER GUIDANCE WORK WITH STUDENTS OF THE NEW UKRAINIAN SCHOOL

Professional self-determination is a multi-component, long-term, and dynamic process that covers all stages of active labor activity. In the context of implementing the concept of the New Ukrainian School, the period of profile training of high school students acquires special importance in terms of professional self-determination. At the New Ukrainian School, in line with the principles of a personality-oriented approach, senior profile students will be able to independently select educational profiles and individual subjects, thereby forming their own personalized educational trajectory.

The purpose of the article: to determine the psychological aspects of career guidance work with schoolchildren of the New Ukrainian School.

Professional self-determination in the context of a modern school should be considered a key psychological task of adolescence and youth, requiring deep psychological support.

At the same time, psychological support for professional self-determination should take into account the stages of career guidance activities in educational institutions, which is based on a deep understanding of the features of professional self-determination as a multidimensional and variable process, characterized by specificity at different stages of a child's life.

Thus, the professional self-determination of an individual is based not so much on accumulated life experience as on ideas about the future that are formed in the process of understanding one's own perspective. In a challenging situation, which is typical for high school students, it is essential to consider a comprehensive view of the future, encompassing life values, plans, guidelines, and goals. It is these components that determine the direction of professional choice. The criteria for a formed life perspective are its duration, optimism, realism, and consistency between the individual's goals, values, and plans.

In the process of professional self-determination, individual psychological characteristics play an important role: interests, inclinations, abilities and their compliance with the requirements of the chosen profession. The primary task facing secondary school students is to overcome the internal conflict between their desires ("I want"), capabilities ("I can"), and social necessity ("I must"). This contradiction forms a program of actions of the individual, aimed at achieving a professional goal, which, in turn, activates the processes of self-affirmation, self-realization and self-improvement throughout life. The regulatory function in this process is performed by value orientations.

A conscious choice of profession is based on the formed "self-image" - the idea of oneself as a subject of activity. The dominant motives and needs of the individual determine the content aspect of the choice, which is implemented through the formation of a holistic "self-concept" that encompasses individual psychological characteristics. The procedural aspect involves implementing plans to master the professional sphere in accordance with individual interests and abilities.

PONOMAROVA, Vlada

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PSYCHOLOGICAL DIMENSIONS OF STUDENTS' DIGITAL ADAPTATION TO THE UNIVERSITY EDUCATIONAL ENVIRONMENT

The current stage of educational development is marked by rapid digital transformation, which reshapes both the forms of learning activities and the nature of communication among participants in the educational process. Consequently, the issue of students' psychological adaptation to the digital learning environment has become increasingly relevant. Digital adaptation can be understood as the process of integrating an individual into new learning conditions dominated by information and communication technologies, digital tools of interaction, and online educational platforms (Bondar, 2021; Koval, 2022).

The psychological dimensions of this adaptation include several interrelated components. The motivational component reflects students' internal readiness to use digital tools, their drive for self-development, and their willingness to acquire knowledge in digital formats. The emotional component concerns the ability to regulate emotional states, prevent digital burnout, and maintain psychological balance amid constant online interaction (Petrenko, 2020).

The cognitive component of digital adaptation involves developing critical thinking skills, the ability to independently search, analyze, and synthesize information, as well as the formation of metacognitive strategies that enhance learning efficiency. The social-communicative aspect encompasses digital communication competence, the ability to establish interpersonal connections in online spaces, avoid social isolation, and preserve a positive sense of self (UNESCO, 2023).

A common negative outcome of insufficient digital adaptation is digital anxiety, expressed through feelings of uncertainty, information overload, and technophobia. Overcoming these challenges requires implementing psychological and pedagogical support programs that foster students' self-regulation, resilience, digital competence, and emotional intelligence (Prensky, 2001).

University instructors play a crucial role in supporting students' psychological adjustment to digital learning. Their efforts should focus on creating a positive socio-psychological climate, enhancing students' intrinsic motivation, promoting a constructive attitude toward digital education, and nurturing conscious and responsible technology use (Koval, 2022; Petrenko, 2020).

In summary, digital adaptation is a complex psychological process that integrates cognitive, emotional, motivational, and social-communicative dimensions. Its success largely depends on students' digital literacy, psychological readiness for change, and the presence of consistent pedagogical and psychological support throughout their digital socialization journey.

**POPKO, Mariia
SYDORIV, Sergiy**

<https://orcid.org/0000-0001-6707-0052>

Vasyl Stefanyk Carpathian National University, Ukraine

FOSTERING CRITICAL THINKING IN THE DIGITAL WORLD WHILE TEACHING CHILDREN WITH DISABILITIES

In the XXI century humanity started using extensively various digital systems and did not even notice how they began to affect us. Every day we receive new information about the world, animals, politics, weather, and many other things. It is amazing that we can see everything and everyone online, but our minds do not always think critically about what we see. Fostering critical thinking in the early age demands attention and research.

The aim of the study is to explore effective strategies for developing critical thinking skills among children with disabilities in the context of digital education. Integration of technology in inclusive learning offers both opportunities and challenges. The research identifies how digital tools can be used to improve analytical thinking and problem-solving abilities from early childhood, ensuring that learners with diverse abilities can participate in cognitive and reflective learning processes as well as social activities.

Results. The findings reveal that digital technologies can significantly enhance critical thinking development in children with disabilities. Interactive educational platforms, learning apps, adaptive software, educational games, cartoons, and assistive technologies (such as alternative, subtitled and voiced texts, visual supports) provide accessible and often inexpensive environment for exploration and learning. The study emphasizes that early introduction to digital problem-based tasks helps children learn to question, evaluate, and make informed decisions.

Teachers play a key role as organizers of inclusive learning environment, facilitators who design digital activities and guide the learning process. They also can teach parents how to apply critical thinking and use technologies meaningfully and safely. Classroom observations and case studies indicate improved engagement, self-expression, and independent learning among children exposed to digital critical thinking exercises. Children must learn to check information for reliability, to have their own opinions, and to distinguish whether something is useful or harmful for their future.

By combining traditional teaching with digital tools, adults can show children how to verify information. Creating safe and supportive digital environments at home and in schools encourages children to express their thoughts freely, to ask questions, and to make their own conclusions.

Conclusions. Developing critical thinking from an early age among children with disabilities is essential for preparing them for future life challenges in a digital world. Inclusive digital education should cultivate reasoning, evaluation, and decision-making skills through differentiated instruction. Teacher training, curriculum design, and digital equity policies are crucial to sustain this approach. Integrating technology with inclusion enables all children to think critically, act independently, and participate fully in society.

PRYMAK, Artem

<https://orcid.org/0009-0000-6324-628>

Kharkiv National University of Internal Affairs, Ukraine

DIGITAL LITERACY AND CYBERSECURITY AWARENESS AMONG EUROPEAN STUDENTS

In today's digital world, digital literacy is becoming a core competency for students. The European education system places great emphasis on developing digital skills among young people. This is because students are increasingly learning, communicating, and working in virtual environments. Without adequate digital literacy, they are vulnerable to cyberattacks and fraud. Digital literacy encompasses not only the ability to use modern technologies but also critical thinking, the ability to verify information reliability, and adherence to digital ethics. Furthermore, awareness of cybersecurity risks plays a significant role. This is due to students' active use of social networks, online platforms, and mobile applications. European universities are actively conducting courses on cyber hygiene and safe online behavior. Curricula aim to foster a responsible attitude towards the use of personal data. Students must understand the importance of creating strong passwords, multi-level authentication, and device protection. These skills are essential for their education and future professional activities.

The objective is to determine the level of digital literacy and cybersecurity awareness among students in Europe, to analyze educational practices aimed at improving their competences and to determine expectations for the development of digital education programs in higher education.

Developing digital literacy has not only an individual impact but also a societal impact. Knowledgeable students are less vulnerable to phishing attacks and identity theft, reducing the overall level of cyber threats in educational institutions. Therefore, cybersecurity in higher education is directly linked to students' digital culture. Special emphasis is placed on preventative measures. Cybersecurity at universities includes information campaigns and hands-on workshops. Students learn to identify malicious programs and dangerous links. This fosters a culture of safe digital tool use.

However, developing international cooperation is also important. European universities are exchanging experiences in the field of digital literacy. They are developing joint courses and programs to raise awareness about cybersecurity. This contributes to the harmonization of educational standards across countries. In the future, digital education is expected to become even more integrated into curricula. Students must be prepared to work in a complex and dangerous cyberspace. A high level of digital literacy will be key to competitiveness in the labor market. European higher education aims to cultivate a generation that can effectively protect itself and society from cyber threats.

Therefore, improving digital literacy and raising awareness of cybersecurity among students is a strategic goal. This ensures the safety of the educational environment and contributes to the development of responsible citizens in the digital age.

PUHAREVYCH, Valentyn

Kharkiv National University of Internal Affairs, Ukraine

REGULATORY FRAMEWORKS FOR CYBERSECURITY IN EUROPEAN HIGHER EDUCATION

In a global modern world, the digitalization of higher education in Europe comes with new cyber threats. Protecting the educational environment requires a clear regulatory framework. The European Union is developing comprehensive regulations to ensure data security. These regulations target universities, research institutions, and educational platforms.

The purpose of the research is to analyse the regulatory framework for cybersecurity in higher education in Europe, to determine their impact on universities and students, and to identify possibilities for regulatory policy development to ensure reliable data protection and resilience of the educational environment against cyber threats.

The main document is the General Data Protection Regulation (GDPR). This regulation sets high standards for the processing and storage of student and teacher personal information. Universities are obligated to implement privacy policies and information procedures. Another important law is the NIS2 Directive, which aims to increase the cyber resilience of organizations. This directive obliges educational institutions to report serious cyber incidents. This ensures the creation of a unified response and information exchange system, thus ensuring the collective security of the education sector. Universities across Europe are increasingly implementing cybersecurity policies. These policies include regular security audits and monitoring of digital infrastructure. Digital literacy curricula play a crucial role. Students and teachers should be aware of the risks associated with cyberattacks.

The legal framework is supported by numerous initiatives from the European Commission. Programs such as the Digital Education Action Plan are fostering cybersecurity competencies. The European Cybersecurity Agency (ENISA) provides methodological recommendations for educational institutions, contributing to the widespread adoption of uniform security standards. While regulatory frameworks provide a legal framework, their effectiveness depends on practical implementation. Every university should integrate cybersecurity policies into its strategy. It is important to combine legal requirements with technical solutions. This means using encryption systems, multi-level authentication, and secure servers. True cybersecurity is impossible without training specialists. European universities are launching master's programs in cybersecurity. Such programs focus on practical incident response skills. This is creating a new generation of specialists for the education and research sectors.

Therefore, regulatory frameworks play a vital role in protecting European higher education from cyber risks. They maintain a balance between academic freedom and the need for cybersecurity. Legal mechanisms, combined with technical and educational innovations, create a comprehensive security model.

PYLYPCHUK, Roman
VOSTROKNUTOV, Leonid

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

BREATHING EXERCISES AS AN EFFECTIVE MEANS OF DEVELOPING STRESS RESILIENCE IN BOXERS

Boxing is a sport characterized by high levels of stress for athletes. When entering the ring, a boxer experiences significant psychological pressure, manifested in an increased heart rate, elevated adrenaline levels, and unstable breathing. In such a state, the athlete must also gather physical strength to demonstrate their technical skills and tactical abilities at the highest level during the match. In our opinion, mastering specific breathing techniques can improve the pre-competition condition of boxers and enhance their stress resilience.

Purpose of the study – to reveal the potential of breathing exercises for improving stress resilience in boxers.

Results. Breathing exercises have long been used in various fields of human activity. Scientific studies have confirmed the positive effects of breathing techniques on self-regulation of emotional states, concentration, self-control, and recovery. For example, slow rhythmic breathing can reduce heart rate, normalize blood pressure, and lower the level of the stress hormone cortisol. Such a positive physiological influence can be effectively applied in the training process of boxers.

Breathing exercises can be beneficial during training sessions – for enhancing concentration and mental readiness before intense workloads in the preparatory and main parts of the session, as well as for recovery during the final phase. However, the greatest benefit, in our view, breathing techniques can provide during competitions. They help athletes focus, reduce pre-start anxiety, control breathing during intensive rounds, and recover between them.

Among the most effective breathing techniques for improving boxers' stress resilience are "Box breathing," diaphragmatic (abdominal) breathing, and contrast breathing. "Box breathing," also known as square breathing, is widely practiced by U.S. special forces. Its essence lies in maintaining equal durations of all breathing phases – inhale, hold, exhale, hold – for four seconds each. This method helps calm the mind, reduce stress and anxiety, and improve concentration.

Diaphragmatic breathing, also known as abdominal breathing, is another effective method for ensuring high stress resilience. This technique involves a slow inhale through the nose and exhale through the mouth, focusing on relaxation. A key feature is that air fills the diaphragm and abdomen rather than the chest during inhalation.

To reduce sympathetic nervous activity, contrast breathing (2–4–8) is recommended. The technique includes a 2-second inhale, a 4-second hold, and an 8-second exhale – inhaling through the nose and exhaling through the mouth. Other ratios may be used, but the exhale should always be approximately twice as long as the inhale.

Conclusions. Breathing exercises incorporating various techniques – such as "Box breathing," diaphragmatic, and contrast breathing – can serve as effective tools for self-regulation of the nervous system and for increasing stress resilience in boxing.

PYSKUN Danylo

<https://orcid.org/0009-0001-9192-481X>

Kharkiv National University of Internal Affairs, Ukraine

MORAL QUALITIES AS THE BASIS OF PROFESSIONAL AND ETHICAL CULTURE OF POLICE OFFICERS

The professional and ethical culture formation among specialists is one of the important areas of professional training for employees in various professions. At the same time, there are professions in society for which professional and ethical culture has a special significance. The police profession is one such profession. For officers of the National Police, professional ethics is a professionally significant characteristic, a prerequisite and factor for the successful performance of professional duties based on the rule of law, respect for human rights and freedoms, legality, openness and transparency, and interaction with the population on the basis of partnership. That is why the police profession is now considered one of the most socially significant in the context of Ukraine's current state and legal development.

The concept of ‘professional and ethical culture of a law enforcement officer’ is associated with a person's moral qualities. Such as: a) qualities that reveal an employee's attitude towards their homeland, their people, their culture, language, and history (worldview convictions, patriotism, internationalism, loyalty to the oath); b) qualities that reveal an attitude towards society (humanism, civic-mindedness, integrity, dedication); attitude towards the performance of professional duties (responsibility, restraint, discipline, self-control, conscientiousness, energy, perseverance, restraint, diligence, diligence, organisation, reliability, stability, courage, selflessness, thoroughness); c) qualities that reveal one's attitude towards others and oneself (politeness, openness, truthfulness, tact, friendliness, decency, fairness, tolerance, honesty, attentiveness, adequate self-esteem, self-criticism, sense of dignity and honour); d) moral qualities that manifest themselves in extreme situations: determination, courage, discipline, willingness to sacrifice oneself, etc.; e) qualities that characterise the culture of communication among employees in their professional activities and in everyday life.

We consider the concept of ‘professional and ethical culture of future National Police officers’ as a substructure of professional culture, based on fundamental ethical values and knowledge, professionally important personal qualities and ethical feelings, needs, and a value-based attitude towards professional activity; which together ensure the effective performance of professional duties in compliance with and protection of human rights and freedoms. The structure of the phenomenon of «professional and ethical culture of future officers of the National Police» distinguishes ethical and substantive, personal and value-based, and professional and operational components that reveal the substantive content of the phenomenon under study.

RADCHENKO, Iryna

<https://orcid.org/0000-0002-7853-1990>

YEHORKINA, Daria

<https://orcid.org/0009-0000-9477-109X>

Ukrainian State University of Railway Transport, Ukraine

THE VALUE OF ENGLISH IN THE MODERN EDUCATIONAL WORLD

English is the language of international speech and is used in different areas of life, like science, business, technology, and so on. Scientists from around the world work together on research studies, and English is often the language of publication and interaction for academics. It is also essential for accessing international conferences and resources. Students who can speak other languages have a competitive advantage in the job market. Employers are seeking specialists who can interact with clients and co-workers from other countries. The **aim** of this work is to illustrate the significance of the English language in the modern world and the role of English teachers in improving students' perception of the English language.

As a **result** of searching for information on this topic, we found an interesting opinion by researcher T. Honcharenko rightly pointed out that while motivation comes naturally in foreign language courses at language-focused higher education establishments, artificial motivation is essential at non-language-focused higher education establishments where there is no real language surrounding. The teacher's aim is not only and not so much to familiarize learners with the subject in the first lesson, but rather to engage them and create opportunities for learning activities (Honcharenko, 2010, p 48–50).

In **conclusion** of our brief work, learning methods cannot be viewed as simple “algorithmic units.” They require rational and reasonable usage, which might vary depending on the particular context and characteristics of the group of learners. A good teacher's creative approach to choosing and applying learning techniques is super important because teaching is both a science and an art. That's why the way you pick learning techniques should be based on your creativity and professional background (Hryshkova, 2015, p. 240–250).

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ROMENSKA, Nataliia

<https://orcid.org/0009-0009-9123-6804>

National University “Yuri Kondratyuk Poltava Polytechnic”, Ukraine

FEATURES OF FEMALE CHARACTERS PORTRAYING IN THE STORY “MERDIVEN” BY SHAMIL ALYADIN

The **purpose** of the study is to analyze the features of the female characters portraying in Shamil Alyadin’s story “Merdiven” through the prism of the socio-historical context and the author’s vision of the role of women in the Crimean Tatar culture of the first half of the 20th century. The task is to identify the artistic means through which the writer reveals the inner world of the heroines, their attitude to love, family, and life’s trials.

Results. The story “Merdiven” shows the period of the formation of a new social order in the 1920s-1940s in Crimea, conveying the atmosphere of change and internal tension. The central symbol of the work is the staircase, which denotes Abibulla’s spiritual and life path, his desire for harmony between ideals and reality. In this context, female characters act not only as a background for the protagonist, but also as full-fledged carriers of the ideas of the work.

The author creates a gallery of female types that embody various social, moral and emotional aspects of Crimean Tatar life. Saniye, Abibulla’s mother, is the keeper of family warmth, the personification of traditions and spiritual purity. Tenzile-kartana represents a generation of older women who carry the moral memory of the family.

The female theme is most deeply revealed in the images of Leilia and Usnie. Leilia is a poetic, lyrical image that embodies the romantic ideal of a woman. Her inner world is full of tenderness, anxiety, a desire for sincere feelings and at the same time – fear of loss. Nature, dreams, intuition, and premonition – all these elements become means of revealing her mental states. Through Leilia Alyadin expresses love for his native land, showing how the beauty of Crimea resonates with the heroine’s emotionality.

In contrast to her, Usnie appears as a realistic and deeply tragic image. She went through losses, loneliness and humiliation, but did not lose her human dignity. Her life story demonstrates inner independence, the ability to fight and survive. Usnie is a symbol of a woman who does not submit to circumstances and builds her own destiny. She also reflects the new social role of women in society. Through her image the author emphasizes the moral strength and resilience of the Crimean Tatar woman, who is able to become a support even in a destroyed world.

Conclusions. Shamil Alyadin creates a holistic system of female images that reflect the spiritual experience and mental characteristics of his people in his story “Merdiven”. Leilia embodies the fragility and romance of female nature, Usnie – strength, endurance and moral maturity. Their contrast emphasizes the multidimensionality of the female world and its role in preserving national and spiritual foundations. The author claims that it is women who are the bearers of memory, moral core and vital stability of the people, and women’s fates become a metaphor for the history of Crimea itself.

RUDAKOVA, Sofia

V. N. Karazin Kharkiv National University, Ukraine

GAME-BASED METHODS AS A TOOL FOR ENHANCING THE COGNITIVE ACTIVITY OF PRIMARY SCHOOL LEARNERS

Play constitutes the natural leading activity of primary school children and serves as a powerful means of fostering motivation, emotional engagement, and interactive learning. Contemporary pedagogical research emphasizes the integration of both traditional games (role-playing, didactic, and movement-based) and digital game-based learning (DGBL) solutions into the educational process, given their capacity to improve attention, motivation, and learning retention. The theoretical foundations of this approach rest upon the concepts of learning through play and gamification, which underline the importance of emotional involvement and active learner interaction with instructional material. The use of play-based strategies thus significantly contributes to the cognitive development of young learners.

The purpose of this study is to analyze the pedagogical potential of game-based methods as a means of stimulating the cognitive activity of primary school learners.

A comprehensive review of relevant literature, methodological developments, and empirical research (including pedagogical experiments and descriptive studies) reveals that the implementation of game-based technologies in primary education has attracted considerable attention from both international and Ukrainian scholars. Among the contemporary researchers who have substantially contributed to the theoretical and practical development of game-based learning are M. Prensky, J. P. Gee, K. Squire, R. Mayer, and C. Steinkuehler, who regard play as a vehicle for cultivating critical thinking, communication, and learner motivation. In the Ukrainian pedagogical context, this issue has been examined by O. Matviienko, I. Bilous, I. Okhrymchuk, V. Markiv, and L. Kushnir, who demonstrate the effectiveness of play-based methods in enhancing cognitive engagement, creativity, and the formation of key competences in primary school education.

The findings indicate that the use of didactic games, role-play scenarios, interactive quests, and digital simulations enhances comprehension, strengthens memory, attention, and logical reasoning, and promotes the development of communication skills. The effectiveness of game-based learning increases with its systematic implementation, consistent pedagogical guidance, and differentiation of tasks according to individual learners' needs.

Game-based learning represents a highly effective pedagogical tool for fostering intrinsic motivation and developing the key competences of primary school learners. Its integration into the educational process facilitates a shift from passive knowledge acquisition toward active inquiry. The success of such approaches correlates with the quality of instructional design, regularity of application, and teacher expertise – all of which align with the modern competence-oriented paradigm of education.

SAIENKO, Nataliia

<https://orcid.org/0000-0001-7953-3747>

Kharkiv National Automobile and Highway University, Ukraine

EXPLORING THE POTENTIAL OF DIGITAL TECHNOLOGIES IN DEVELOPING THE PHONETIC COMPETENCE OF FUTURE PHILOLOGISTS

One of the primary objectives of training future specialists in foreign philology is to develop phonetic competence. This includes achieving a high level of proficiency in a foreign language, understanding the theoretical foundations of that language phonetic system, and acquiring practical skills for using this knowledge in communication.

The purpose of this paper is to explore various potential uses of audiovisual digital technologies in enhancing the phonetic competence of future philologists. These technologies serve as valuable tools for improving phonetic knowledge and skills. In today's context, digital technologies that facilitate real-time language learning have proven to be effective in developing phonetic competence. The introduction of new software products, such as ELSA Speak, Say It, Speakometer, FluentU, and Duolingo, provides extensive opportunities for enhancing phonetic skills among foreign language learners. Nevertheless, the search for effective phonetic training tools continues. One promising yet underexplored area in this field is the use of audiovisual translation (AVT) technology for phonetic training.

To teach phonetics to future specialists in applied linguistics, Kharkiv National Automobile and Highway University has developed a course titled "Practical Phonetics of the English Language." This course includes a traditional textbook as well as digital resources for mobile learning, such as audio and video files for pronunciation practice, which are available on the YouTube platform. The course was designed using the parallel translation method and audiovisual translation (AVT). Students receive bilingual texts along with audio recordings of those texts in both their foreign language and native language for independent study. The proposed method incorporates a technique known as code-switching, where students alternate between their foreign and native languages. This approach is referred to in modern didactics as translanguaging.

Students develop essential automatic responses by translating bilingual monologues and dialogues. Unfortunately, these tasks are often missing from modern practical foreign language courses, even though the importance of helping students quickly and accurately switch between languages is undeniable.

The implementation of this phonetics course demonstrates the effectiveness of combining traditional and digital teaching methods in fostering high-quality phonetic competence among future philologists. With the digitalization of education and enhanced access to audiovisual materials and software, AVT presents an interesting and promising research area. However, to assess the effectiveness of the proposed approach, further experience in its application and additional research on the results are necessary.

SAMOILENKO, Nadiia
KRAVCHUK, Tetiana

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE IMPACT OF DANCE AEROBICS ON THE SPECIAL PHYSICAL PREPAREDNESS OF ATHLETES IN RHYTHMIC GYMNASTICS

Modern competition rules impose high demands on the level of special motor preparedness of rhythmic gymnasts, starting from the initial stages of training. To achieve good results in competitions, athletes must perform a large number of complex, highly coordinated movements while demonstrating artistry, expressiveness, and musicality. Therefore, researchers and practitioners continue to seek effective means of improving gymnasts' special motor preparedness. In our view, one such means may be the inclusion of dance aerobics exercises.

Purpose. The purpose of this study was to examine the effect of dance aerobics exercises on the special motor preparedness of female athletes specializing in rhythmic gymnastics at the stage of initial preparation.

Results. For the experiment, 30 rhythmic gymnasts from initial training groups were randomly selected and divided into a control group (CG, $n = 15$) and an experimental group (EG, $n = 15$). Sets of exercises were selected from three dance aerobics styles – Latin, rock'n'roll aerobics, and dance aerobics with elements of Ukrainian folk dance. These exercises were incorporated into the warm-up routines of the experimental group and consistently implemented over a 16-week training period. The control group followed the traditional training methodology.

As a result of the experiment, the gymnasts in the experimental group demonstrated significantly better scores for several indicators of special motor preparedness. These included harmony of movements with musical rhythm and tempo, the level of emotional connection with music, and artistry scores during the performance of the competitive routine without apparatus (see Table 1).

Table 1

Indicators of special motor preparedness of the control (CG, $n = 15$) and experimental (EG, $n = 15$) groups before and after the pedagogical experiment

Nº	Indicator	Group	Before	After	t	p
1.	Harmony of movements with musical rhythm (points)	CG	2,7±0,21	3,1±0,17	1,5	p>0,05
		EG	2,8±0,22	3,7±0,21	2,7	p<0,02
2.	Harmony of movements with musical tempo (points)	CG	1,7±0,15	2,0±0,17	1,5	p>0,05
		EG	1,9±0,18	2,8±0,21	3,0	p<0,01
3.	Emotional connection with music (points)	CG	2,0±0,17	2,3±0,17	1,3	p>0,05
		EG	2,2±0,26	3,0±0,19	2,5	p<0,05
4.	Artistry score (points)	CG	4,6±0,25	5,1±0,22	1,4	p>0,05
		EG	4,7±0,28	5,6±0,21	2,5	p<0,05

Conclusions. The findings of the study demonstrate that incorporating dance aerobics elements into the preparatory (warm-up) part of rhythmic gymnastics training sessions can significantly improve the indicators of musical-motor expressiveness and artistry among young gymnasts.

SANTOS, Jaiane

<https://orcid.org/0009-0009-8282-7784>

SANTOS, Taisson

<https://orcid.org/0009-0004-5772-5325>

TREVISOL, Juliane

<https://orcid.org/0000-0001-6847-2221>

UNEB, Brazil;

EXTENSION ACTIVITIES IN THE UNDERGRADUATE ENGLISH LANGUAGE AND LITERATURE TEACHING PROGRAM AT UNEB-JACOBINA: CURRENT PROJECTS

At Brazilian universities, extension activities represent a key pillar of the academic triad, alongside teaching and research. These initiatives promote transformative interactions of a cultural, social, scientific, political, and technological nature, fostering the exchange of knowledge and experiences between the university and the community (UNEB, 2024; Bahia, 2012). In this context, the present paper aims to describe the extension projects and actions developed by members of the Undergraduate English Language and Literature Teaching Program at the State University of Bahia (UNEB), Campus IV, in Jacobina, Bahia, Brazil, in 2025.

In this program, extension initiatives are centered on the learner leading these activities, under faculty supervision. That is, the undergraduate students themselves are generally responsible for planning, organizing, and delivering short courses, workshops, lectures, academic events, and festivities (e.g., São João's Fest, Literary Festival of Jacobina - FLIJA, Halloween Party at UNEB), among other actions. These activities involve and engage the external community, contributing to social development and mutual learning.

In 2025, several events were carried out in collaboration with the community, including lectures on inclusive pedagogical practices in English teacher education and on active methodologies in language teaching, as well as visits to schools, community centers, and homes for the elderly. Currently, five extension projects are underway. These include language courses (English, Spanish and Italian) for the general public, critical reading and meaningful writing, cognitive linguistics, and ethnic-racial literacies. All of these projects are publicly funded, and all involve undergraduate students receiving scholarships as a means of supporting student retention in the program, considering that the vast majority come from cities far from campus and face socioeconomic challenges.

Therefore, these initiatives highlight the collaborative work developed within the program, which has provided greater opportunities for undergraduate students to engage with the community, fostering social development, and enabling new partnerships, practices and reflections relevant to education professionals.

SAVRASOV, Mykola

<http://orcid.org/0000-0003-1434-903X>

KRAVCHENKO, Olha

POLYKOVA, Julia

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

STRUCTURE OF ACADEMIC AND PROFESSIONAL SUCCESS OF MODERN HIGHER EDUCATION APPLICANTS

The determinant of the success of professional activity is the student's academic success in educational activities in the chosen specialty. In the future, since modern students, as an age group and social formation, in response to the challenges of the present, usually combine studies with a certain labor activity, which in content is often close to the chosen specialty, it is appropriate to consider the concept of educational and professional activity and its subject. Thus, the development of personal factors that ensure the ability of students to achieve academic success (high results in educational and professional activity) is the leading task of the system of psychological support of the educational process (educational and professional activity of students) in higher education institutions of Ukraine.

Aim. In the area of determining the personal factors of achieving success in educational and professional activity, we consider the subjective methodological approach to be the most heuristically valuable, within which we consider students as subjects of both educational and professional activity.

Results. Therefore, it is appropriate to understand a subject as a person who is at a higher level of activity, communication, while maintaining integrity and autonomy, who is characterized by a constant desire for self-development throughout life, in various areas of activity, including in the course of educational and professional activity. We consider educational and professional activity as the activity of a subject, which is aimed at interacting with the environment in order to satisfy their own educational (motivated, meaningful, emotionally positive mastery of knowledge, skills and abilities) and professional needs (acquiring professionally necessary qualities, characteristics, norms, values, a sense of self-realization and self-actualization in this profession, a thirst for professional development and self-improvement).

Conclusion. Based on the fact that the objective indicator of a student's success in a significant activity for him (studying in the chosen profession and professional activities close to it in content, which enhances the motivation for learning and ensures the direct implementation of the achieved results) is academic success, it is quite natural to study the phenomena that make up the giftedness system as the most important personal predictors of achieving life success by a subject of educational and professional activity. Giftedness in this triad model is described as the result of the interaction of three groups of qualities: intellectual abilities (level of development above average), motivation (high level of enthusiasm for the tasks performed) and a high level of creativity. It is noted that the productivity of learning and significant academic achievements of a person is ensured precisely by their interaction.

SELIVANOV, Yevhen

<https://orcid.org/0000-0003-1057-9039>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine,

PHYSICAL EDUCATION AND DEVELOPMENT OF PERSON'S HEALTH

The development of person's health involves creating healthy lifestyles through health education, promoting physical activity, ensuring a supportive environment, and addressing mental health. Key components include:

- fostering knowledge of health, providing students with the fundamental knowledge and skills needed for lifelong healthy behaviors and attitudes;
- formation of good habits, encouraging healthy eating, hydration, and proper rest to support both the mind and body, especially during demanding academic periods;
- implementing comprehensive health programs, creation of a supportive environment at home, educational institution and the community to promote student well-being;
- providing access to health services;
- integrating physical and mental well-being with academic success, addresses rising levels of anxiety and stress by offering necessary mental health supports and fostering a nurturing environment;
- conducting regular physical activity, which supports academic performance, brain health, and long-term physical health, including bone strength and a healthy weight.

Physical education is vital for student development, fostering physical health through improved fitness, strength, and reduced disease risk, while also enhancing mental well-being by boosting mood and cognitive function. It improves academic performance by increasing focus and memory, develops crucial social skills like teamwork and leadership, and cultivates positive lifelong health habits.

The benefits of physical education for person's physical health are: improved fitness (physical education strengthens muscles, improves cardiovascular health, and increases flexibility, leading to better overall physical function); weight management (regular physical activity helps students maintain a healthy weight and reduces the risk of obesity); disease prevention (regular physical activity helps to lower risk of developing chronic conditions such as diabetes, high blood pressure, and heart disease later in life); stronger bones (physical activity is crucial for developing and maintaining strong bones throughout childhood and adolescence); enhanced mood and stress reduction (physical exercises release endorphins, which have a positive effect on mood and can reduce stress, anxiety, and symptoms of depression); Improved Cognitive Function (physical activity boosts brain function, leading to better focus, memory, and self-control, which positively impacts academic performance); increased self-esteem (physical education provides a positive outlet for people, fostering a sense of accomplishment and improving their overall self-esteem); teamwork and cooperation (group activities in physical education teach students how to collaborate, cooperate, and work toward a common goal); leadership skills (participation in team sports and activities helps students develop important leadership qualities); character development; better concentration and focus etc.

SHALAMOVA, Yelyzaveta

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE ROLE OF FAIRY TALES IN TEACHING ENGLISH IN PRIMARY SCHOOL

Introduction. Modern approaches to foreign language teaching emphasize the value of authentic materials that help young learners acquire vocabulary, grammar, and communication skills in a natural way. Fairy tales are considered one of the most effective tools for primary school English lessons because they create an engaging atmosphere, support imagination, and make it easier for children to immerse themselves in the language environment. Thanks to simple plots, emotional appeal, and repetitive structures, fairy tales correspond to the psychological and developmental needs of young learners.

Aim. The aim of this thesis is to highlight the methodological potential of fairy tales in primary school English lessons and to demonstrate how they support language acquisition, motivation, and creativity.

Results. The analysis shows that fairy tales contribute to learning English in several key ways:

- **Development of Speech Competence:** Fairy tales contain repetitive lexical and grammatical patterns that support quick memorization of new words and structures.
- **Improvement of Listening Skills:** Listening to stories helps children adapt to natural intonation, rhythm, and pronunciation.
- **Increased Motivation:** Engaging plots and expressive characters create positive emotions, making the learning process enjoyable and meaningful.
- **Support for Creative Thinking:** Acting out stories, illustrating scenes, or inventing new storylines fosters imagination and helps children express ideas in English.

Practical methods of using fairy tales include reading or listening to stories, dramatization, completing interactive exercises, and creating original fairy-tale variations. These activities help consolidate vocabulary, practice comprehension, encourage communication, and stimulate fantasy-driven learning.

Conclusion. Fairy tales serve as an effective and versatile teaching tool in primary school English lessons. They align with children's developmental features, make the learning process emotionally rich, and naturally integrate language practice into storytelling, play, and creativity. By incorporating fairy tales into lessons, teachers can enhance vocabulary acquisition, listening comprehension, communication skills, and overall motivation. As a result, fairy tales help create a supportive, imaginative, and engaging learning environment that promotes successful early language development.

SHCHERBYNA, Anatolii

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

DEVELOPMENT OF SUBJECT COMPETENCE IN PHYSICS WITHIN THE STEM APPROACH

The modern education system is actively implementing the STEM approach, which integrates Science, Technology, Engineering, and Mathematics. In this context, the development of students' subject competence, particularly in Physics, becomes especially important. Physics is a fundamental scientific discipline that fosters critical thinking, research skills, and the ability to apply knowledge in practice.

Purpose. To analyse effective approaches to developing students' subject competence in Physics within the STEM framework and to identify practical teaching methods and strategies that promote the integration of Physics with other STEM components.

Results. The implementation of STEM-oriented projects in the educational process enables students to apply Physics knowledge to real-world tasks, fostering strong motivation to learn.

The use of interdisciplinary connections (Physics + mathematics, computer science, biology, etc.) deepens students' understanding of material and promotes the development of systemic thinking.

Teamwork, experimental research, digital simulations, and 3D modeling help students grasp complex physical concepts more effectively.

The active use of digital laboratories and online resources increases student engagement and allows for dynamic exploration of physical phenomena.

When students feel that their efforts are recognized and valued, their motivation and persistence increase.

Providing opportunities for student choice and autonomy in learning activities also enhances responsibility and ownership of their learning process.

Conclusions. Developing subject competence in Physics through STEM education not only leads to deeper knowledge acquisition but also enhances practical skills essential for students' future professional growth.

The STEM approach supports the integration of theory and practice, builds key competencies, and increases student involvement in the learning process. As a result, Physics becomes not just an academic subject, but a tool for exploring the world and a foundation for engineering thinking.

SHUMSKA, Olha

<https://orcid.org/0000-0002-5422-8663>

Kharkiv Humanitarian-Pedagogical Academy, Ukraine

PEDAGOGICAL CONDITIONS OF FORMING PROFESSIONAL CULTURE OF FUTURE MUSIC TEACHERS

The basis of studying the professional culture of future music teachers is the interpretation of culture as a product and process of human activity, as a result of which the world and at the same time the person him/herself changes. The choice of this approach is due to the fact that, firstly, it provides an opportunity to study the specified phenomenon through the lens of music-pedagogical activity and its results. Secondly, the quality of the performed activity can serve as an indicator of the level of the studied culture. And, thirdly, the professional culture itself, reflected in the activity of the music teacher, will act as a measure of the development of his/her creative forces and abilities necessary for the chosen professional field.

As pedagogical conditions of forming the professional culture of future music teachers in the course of instrumental and performing training, we suggest the following:

- actualization of the cultural and educational potential of instrumental and performing training to ensure forming the professional and pedagogical world outlook of future music teachers;
- orientation of the process of instrumental and performing training to future teachers' mastering the skills of musical and pedagogical communication, specific for professional activities in the field of general music education;
- educational and methodological support for forming the professional culture of future music teachers in the course of instrumental and performing training, which reflects the content of its cultural and educational potential.

It should be noted that the specified conditions have a complex nature and are mutually complementary. The basis for choosing these pedagogical conditions was the understanding that the quality of the music teacher's professional activity is determined not only by the extent to which he/she possesses versatile psychological-pedagogical and special knowledge, abilities and skills, but also by the system of views and beliefs that guide this activity. In other words, it is important for the teacher-musician to understand his/her educational mission, his/her place in the educational process, to be consciously guided in his/her work by professional values and ideals.

Therefore, one of the leading tasks of forming the professional culture of future music teachers on the basis of the higher education institution is the development of their professional and pedagogical outlook.

Thus, a distinctive feature of the process of forming future music teachers' professional culture is its practical orientation that is the determinism of organizational forms and content filling with various aspects of music-pedagogical activity. The effectiveness of the aforementioned process depends on successful implementing a set of pedagogical conditions.

SHUMSKYI, Oleksandr

Simon Kuznets Kharkiv National University of Economics, Ukraine
<https://orcid.org/0000-0002-9498-7509>

THE PRC'S EXPERIENCE IN HIGHER EDUCATION INTERNATIONALIZATION

Currently, in the context of intense competition in the global educational services market, the expansion and stimulation of educational exports has become one of the most important priorities of public policy in all developed countries. That is why Chinese government is focusing on the internationalization of education, which will ensure the implementation of modernization policies. Under China's political reform, higher education internationalization took three main forms: studying abroad, integrating international perspectives into university teaching and learning, and implementing joint programs with foreign institutional partners in Chinese universities.

In 1993, the “Main Points of Education Reform and Development in China” outlined priorities for the further development of education, which included the development of international cooperation in the field of education and adoption of foreign experience in the field of education management. One of the main directions of reforming the higher education system became orientation towards Western educational models and globalization of the educational process, including opening the border for Chinese students to travel abroad to get education or carry out scientific research. As one of its strategic goals Chinese government did their best to increase the competitiveness of Chinese universities in order to achieve equal positions with world's top universities.

Higher education internationalization is one of the fundamental tasks that Chinese government has been consistently implementing for more than forty years since the launch of the reform and openness policy. An important feature of China's internationalization policy is the leading role of the state, which sets the strategic vision of its goals depending on the priorities of the domestic policy and the specifics of the foreign policy context. At present, the internationalization of Chinese education has taken several forms, namely sending Chinese students and teachers abroad; attracting foreign teachers, professors, and researchers; inviting international students to China both at their own expense and through an extensive system of grants; developing joint educational programs with foreign universities, a system of double degrees, and modular study abroad; introducing foreign textbooks and bilingual programs into the educational process; opening foreign language centers (and implementing more extensive educational programs on their basis).

Thus, the experience of higher education internationalization in China is really relevant for universities in many countries worldwide (including Ukrainian higher education institutions) which are planning to engage with international entrants and counting on getting support from the state in this endeavor. Studying this experience is important both for understanding the existing competition and its political and economic context as well as for developing and implementing specific institutional mechanisms and practices.

MOTA, Maria Luísa Silva
FELIX, José Carlos
UNEB, Brazil

ON THE BLOOM OF COMING OF AGE: INFLECTIONS OF NARRATIVE FOCUS, TIME, AND REFLECTIVE SETTING IN IAN MCEWAN'S SHORT STORY *FIRST LOVE, LAST RITES* (1975) AND ITS FILM ADAPTATION (1997)

The analysis of Ian McEwan's short story *First Love, Last Rites* (1975) and its film adaptation *First Love, Last Rites* (1997), directed by Jesse Peretz, reveals the complexity of translating into cinematic language a narrative rooted in deep interiority and psychological density. Through internal focalization and the use of stream of consciousness, McEwan constructs a protagonist imprisoned within his own fantasies, whose desires, repulsions, and obsessions merge with the space surrounding him. The damp, decaying apartment functions as a symbolic mirror of his emotional deterioration, while temporal fragmentation and the overlap of present, memory, and fantasy intensify the claustrophobic tone of the text.

In the adaptation, the narrator's subjectivity is reconfigured through visual and auditory strategies that attempt to mimic the mental flow of the prose. Aware of the limitations of cinematic language in conveying literary interiority, Peretz opts for a predominantly external focalization, yet punctuated by subtle moments of subjectivization close-up shots, expressive use of color, muffled sounds, and confined settings that visually communicate the protagonist's psychological unease. Thus, the film does not aim to reproduce the literary experience literally but to reinterpret it through cinema's sensory possibilities, reaffirming, as Hutcheon (2011) argues, adaptation as a form of recreation and interartistic dialogue.

Space, temporality, and symbolism operate in both the short story and the film as extensions of mind and body: the mold, humidity, rat, and imagined creature are materializations of the unconscious, condensing the tension between desire and decay, pleasure and repulsion. Physical and emotional confinement becomes the central axis of both works, revealing that McEwan's true horror lies not in external events but in the impossibility of escaping one's own consciousness.

Therefore, the comparative analysis demonstrates that, although distinct in their expressive means, the short story and the film converge in constructing a sensorial and psychological experience that exposes human discomfort in the face of desire and solitude. McEwan and Peretz, each in their own way, transform love into a final rite an experience of dissolution between body, space, and memory, where the inner and outer worlds become indistinguishable.

**SIVEVSKA, Despina
STAVREVA VESELINOVSKA, Snezana
PETROVSKA, Sonja**

<https://orcid.org/0000-0003-3557-8059>

Faculty of educational sciences, "Goce Delchev" University, North Macedonia

**THE ATTITUDES AND OPINIONS OF PRESCHOOL TEACHERS AND INITIAL
TEACHERS IN RELATION TO ENVIRONMENTAL EDUCATION AND THEIR
AWARENESS OF SUSTAINABLE DEVELOPMENT**

Sustainable development is a concept that integrates environmental, social and economic considerations for a balanced and sustainable progress of society. It emphasizes a balanced approach to growth that integrates economic progress, social inclusion, and environmental protection. In today's world, where issues such as climate change, resource depletion, and social inequality are increasingly urgent, sustainable development provides a framework for building a more resilient and equitable future. It encourages responsible use of natural resources, innovation in technology, and cooperation among nations to ensure long-term prosperity and well-being for all.

In modern society, where we face environmental challenges every day, it is of particular importance that education guides children towards responsible and conscious behavior towards nature. Environmental education and education for sustainable development aim to develop positive attitudes, knowledge and habits in children from an early age.

The educational process in preschools plays a key role in creating generations that will live in harmony with nature and society. By including environmental content and the principles of sustainable development in everyday activities, children learn from a young age that change for a better world begins with them.

The aim of this research paper is to examine the attitudes and opinions of preschool educators and initial education teachers regarding environmental education and their awareness of sustainable development. The research is based on qualitative and quantitative analysis of data collected through survey questionnaires and interviews with teachers from various educational institutions.

The paper applies quantitative and qualitative methods in order to gain a deeper understanding of the attitudes, opinions, and practices of preschool and initial education teachers regarding environmental education and environmental awareness for sustainable development.

The purpose of the research is to determine:

- Teachers' attitudes towards environmental education;
- The level of environmental awareness among teachers;
- The presence and manner of integration of environmental content in the educational process;
- The needs for additional education and resources for the successful implementation of environmental education.

A descriptive methodology was applied, using a survey and semi-structured interviews as the main research techniques.

The target population includes teachers working in public and private preschools and primary schools (grades I–III) on the territory of several municipalities in the Republic of North Macedonia. The sample consists of: 50 preschool teachers and 50 initial education teachers (grades I–III). The sample was selected through purposive sampling, in order to include respondents with different levels of experience, institutional affiliation, and geographic distribution (city/rural).

The following data collection techniques and instruments were used: A survey questionnaire with closed and semi-open questions, designed to examine:

- attitudes about the importance of environmental education;
- self-assessment of readiness for integration of environmental content;
- practices and examples of activities related to ecology;
- perception of institutional support.

Semi-structured interviews with 10 selected respondents from both categories (educators and teachers), in order to gain deeper insights into their personal experiences, motivations and challenges.

Quantitative data from the surveys were processed with descriptive statistics (frequencies, percentages, averages), using Microsoft Excel and SPSS. Qualitative data from the interviews were analyzed through thematic analysis, identifying main themes and categories related to environmental awareness, teaching approaches and support needs.

The results indicate that the majority of teachers recognize the importance of environmental education and its role in building environmental awareness in children from an early age. However, there are differences in the level of engagement, availability of resources, and support from institutions. Teachers in initial education have more theoretical knowledge than teachers in preschool institutions, and teachers in preschool institutions have more practical knowledge than teachers in initial education. This can be explained by the fact that the knowledge that initial education teachers acquire at university is quite new, they spend more limited time with children within the framework of applied courses, while preschool teachers interact much more with children every day and are further away from theoretical knowledge. Furthermore, it can be said that preschool educators and initial education teachers are sensitive to environmental issues, interested in environmental education, prepared and open to development.

The conclusion emphasizes the need for more systematic training of teaching staff, integration of environmental topics into curricula, and promotion of active approaches to learning for sustainable development from an early age. The paper provides recommendations for improving practices and policies that support the development of environmental awareness in children through education.

SKLIAR, Iryna

<https://orcid.org/0000-0002-1660-3899>

*Horlivka Institute for Foreign Languages of the State Higher Educational
Institution “Donbas State Pedagogical University”*

DIGITAL HUMANITIES AS AN INTERDISCIPLINARY PHENOMENON

Digital Humanities (DH) is, first and foremost, an interdisciplinary phenomenon that transforms the very methodology of research, creating new forms of knowledge. It emerges as an integrative field that combines traditional humanities disciplines (philology, history, art history, cultural studies) with information technologies (computer science, Big Data, machine learning, etc.). The idea of this study arose as a direct response to an acute problem raised by participants in round tables and conferences organized within the framework of the Erasmus+ educational project “Modernisation of university education programmes in foreign languages by integrating information technologies” (DigiFLEd).

The relevance of studying digital humanities is driven by the global processes of digital transformation in society and culture.

The level of research on the problem can be conditionally divided into two stages: paradigm formation and methodological institutionalization. DH has a history spanning over half a century (beginning with computer linguistics and textual studies in the 1940s–1960s). Today, it is an institutionalized discipline. Fundamental discussions are centered on the philosophy of computational thinking. Researcher Johanna Drucker emphasizes that DH is an epistemological shift, not merely a set of tools. She stresses that humanists must critically analyze the nature of data and not perceive them as ‘innocent’ facts. Research from the last five years, particularly the work of Matthew Kirschenbaum, focuses on the preservation of digital heritage and critical coding.

In Ukraine, DH has been developing intensively over the last decade, especially in the field of corpus linguistics and archive digitization. Researchers Kulyk V. A. and Sydorenko O. M., in their works published after 2020, underscore the need to integrate Ukrainian humanities data into global standards (TEI, CIDOC CRM). The main research challenge in Ukraine lies in the insufficient number of open, well-annotated, and validated corpora for machine learning and further analysis. However, centers are actively being formed to work on digital archives and lexicographical databases.

New methods for processing and analysis are demanded by the growing volume of digitized cultural archives, text corpora, historical documents, and media content, which are impossible without computer technologies. DH proposes a transition from close reading to distant reading, introducing quantitative and visualization methods into qualitative humanities research. This opens the way to discovering hidden patterns in texts that are not apparent to the human eye. Digitization, 3D modeling, and the creation of virtual museums are key to preserving and popularizing material and intangible heritage, which is particularly relevant in the context of modern challenges.

The object of study in Digital Humanities is the digitized or born-digital cultural and historical objects: large text corpora (literary works, historical documents,

periodicals); multimodal data (visual, audio, and video archives); metadata describing cultural heritage; interaction networks (social networks, historical connections, bibliographic data). In general, any form of humanities knowledge that can be represented, structured, and analyzed as data can become an object of DH research.

The subject of study consists of the computational-analytical methods, tools, and epistemological models used for: creating, structuring, and annotating digital humanities objects (e.g., text markup according to the *tei* standard); quantitative and qualitative analysis of large data sets (e.g., authorship attribution, topic modeling, visualization of time series); modeling and visualization of complex humanities processes (e.g., Geographic Information System (GIS) for history).

DH is not just a means, but a new way of thinking (computational thinking) that compels humanists to formulate their questions in an algorithmically solvable form.

Successful DH projects require collaboration between humanists and computer scientists, where the humanist provides context and interpretation, and the programmer provides the algorithm and tool. Therefore, disciplinary hybridization is mandatory.

Textual data (the most common object in the humanities) is most sensitive to DH methodologies (natural language processing, stylometry, corpus analysis). The work of Ted Underwood confirms that machine learning opens new perspectives for literary history.

Contemporary research (2022–2024) demands critical reflection on algorithmic bias, as the choice of data and code impacts the final interpretation of a cultural phenomenon. DH researchers must act as mediators between ‘clean’ data and their socio-cultural interpretation. DH as infrastructure in Ukraine must become part of the national research infrastructure, ensuring not only research but also open access to digitized cultural heritage.

SKLYAROVA, Tetyana

National Pharmaceutical University, Ukraine

CHALLENGES AND OPPORTUNITIES IN DEVELOPING SUSTAINABLE MOTIVATION FOR LEARNING ENGLISH AMONG NON-PHILOLOGY STUDENTS

In the modern globalized world, English has acquired the status of a universal lingua franca, playing a crucial role in professional and personal development. The younger generation recognizes its importance for a successful career, international communication, and access to global information resources.

Despite this awareness, many students often face motivational challenges in the learning process. Therefore, modern education must not only teach the language but also develop sustainable motivation through effective teaching methods and formats.

Purpose: to examine first-year students' motivation in learning English, identify factors hindering sustained motivation, and determine optimal enhancement strategies.

Results. A survey of first-year students showed that 43% of the students consider English highly important, and 29% sufficiently important. Students recognize the critical necessity of English proficiency for building a successful professional career, which can be explained by the close integration of most modern professions with information technologies. Accordingly, the leading motivational factors identified are career prospects, opportunities for international travel, and intercultural communication (43% mentions each). Additionally, students note the importance of access to English-language information sources and understanding media content (29% of responses each).

The findings demonstrate high motivation levels: 71% of respondents showed strong positive motivation, and 14% partially positive (85% total committed to learning English). This is confirmed not only by survey data but also by the active participation of students in English-language conferences. However, the study revealed several demotivating factors, the most significant of which are lack of time (43%), insufficient self-discipline (14%), and difficulties with concentration and memorization (14%).

Students suggested several ways to increase motivation: integrating visual elements (videos, illustrations), using differentiated tasks, applying regular short tests for material reinforcement, and concentrated content without superfluous information.

Regarding effective teaching forms, 71% of respondents preferred interactive exercises and online testing. Dialogic speech and work in small groups occupy the second position in terms of effectiveness.

Conclusions. 85% of first-year students demonstrate positive motivation and understand the practical value of English. However, 43% of respondents face time constraints, emphasizing the need for flexible organization of the learning process. To minimize the impact of demotivating factors, teachers are recommended to: prioritize interactive techniques; implement small-group work; apply visualization tools; provide individualized learning pace. These recommendations will enhance educational effectiveness and foster sustainable motivation for English language mastery.

SKUBANOVA, Olena

National Technical University «*Kharkiv Polytechnic Institute*», Ukraine

CHALLENGES OF TEACHING INTERCULTURAL COMMUNICATION IN THE WORLD OF TECHNOLOGIES

The technological explosion that occurred in the information environment in the early 2000s had an unprecedented impact on all levels of international communication. Expansion of the Internet coverage, use of digital communication platforms, implementation of online distance learning programs, neural network interpreters and speech recognition systems, the emergence of instant access to information resources of other ethno-cultural communities made it possible to launch numerous international projects with complex supranational programs and multicultural teams.

The aim of this work is to analyze some of the problems and challenges of preparing future specialists for intercultural communication in the modern technological world.

The training of specialists capable of conducting a productive intercultural dialogue in modern conditions revealed a number of methodological, cognitive, sociocultural, linguistic and technical difficulties. The range of specialties requiring training for direct intercultural interaction has expanded significantly. The need to develop educational programs for students with diverse cultural qualifications, that are both substantively and methodologically responsive to modern information realities, has arisen. The widespread introduction of distance and online learning has revealed the ineffectiveness of the previous system for assessing readiness for intercultural contacts. In the language environment itself, the use of simplified English as a digital lingua franca has revealed a lack of expressive devices for transmitting unique local concepts, leading to reduction of meanings. The culture-neutral approach exposed the difficulty of choosing acceptable forms and politeness strategies for the interlocutor and disrupted the pattern of inter-age behavior.

The difficulties that have arisen can be resolved by a comprehensive revision of the content and methodology of teaching intercultural communication. In the context of increasing deglobalization, a new balance must be sought between tendencies towards ethnocentrism and cultural neutrality. The introduction of interactive methods (role-playing, simulations, analysis of intercultural communication using authentic verbal, audio and video material) should increase the level of student engagement in the learning process. The use of information and communication technologies will help create multimedia content that can clearly demonstrate to students the cultural peculiarities and linguistic differences of communicants. Remote and online formats will expand access to international educational programs and create opportunities for direct interaction with people from different cultures. Combined assessment tools for intercultural competence (online testing, video interviews) will help determine students' real level of readiness for multicultural interaction.

Thus, it can be concluded that the technological shift that has occurred in intercultural communication challenges the entire educational environment, and at the same time opens up new prospects for more effective, accessible and practice-oriented learning.

SMOLIANIUK, Natalia

<https://orcid.org/0000-0003-3524-581X>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

DEVELOPMENT OF LOGICAL THINKING OF SENIOR PRESCHOOLERS

Logical and mathematical development has a positive impact on all mental processes in preschool children, on their adaptability to life, on the ability to analyse different situations and make decisions, follow a certain algorithm of actions. In the process of logical and mathematical development, children develop intellectual abilities by mastering logical and mathematical concepts, different ways of knowing, thus gaining initial logical and mathematical experience.

Aim: to outline the methods and conditions of logical thinking of preschoolers

Results. At the age of 4, a preschooler reaches the stage of formal logical operations, after which his/her thinking becomes similar to that of an adult. At the age of 6, not only brain weight but also brain functions change significantly. As a result, thinking in preschool age also undergoes significant changes, and the child masters new ways of thinking. Thinking develops from visual-action to figurative, from figurative to visual-figurative, from visual-figurative to logical. However, often a child of the older preschool age resorts to visual-action thinking when he or she is faced with a task for which he or she lacks experience and knowledge. In other cases, actions with images begin to dominate.

Achievements in the development of preschool children's thinking, as well as children of other age periods, largely depend on how their cognitive activity is managed. It is important to gradually get rid of children's egocentrism and syncretism of thinking.

Therefore, in the process of logical and mathematical development of preschool children, the educator needs to take into account the sequence of correct mastering of logical and mathematical operations and techniques. The key tasks of developing logical thinking of a preschool child are:

- teaching to formulate a goal;
- highlight the main thing, without focusing on the insignificant and secondary;
- analyse, synthesise, compare;
- classify objects and phenomena according to certain characteristics;
- generalise, divide the whole into parts;
- construct models according to diagrams, justify their judgements;
- establish cause and effect relationships, make assumptions and hypotheses.

Successful formation of logical thinking is possible under the following three conditions: the child's understanding of the content and significance of what he or she has learned; the presence of new things; and the emotional appeal of learning.

Conclusions. The formation of logical techniques contributes to the development of children's thinking process. Correctly organised methodological guidance of such a process is not only possible, but also effective, and contributes to the effectiveness of this process, regardless of the initial level of development of the child.

SMOLIANIUK, Natalia

<https://orcid.org/0000-0003-3524-581X>

STOLNA, Olha

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

CONDITIONS FOR THE DEVELOPMENT OF EMOTIONAL INTELLIGENCE OF YOUNGER SCHOOLERS

Emotional intelligence (EI) plays an important role in the formation of a harmonious personality, especially in primary school age, when children actively learn to interact with the environment and learn about themselves. EI includes the ability to recognise and manage one's own emotions, understand the feelings of others, and build effective communication.

Aim. To outline the conditions for the development of emotional intelligence in primary school children.

Results. Results. The school environment should be safe and supportive so that children can express their emotions freely without fear of being misunderstood or judged. Students should feel that their feelings are respected. This is achieved by creating an atmosphere of emotional comfort, emotionality of the educational process, partnership interaction, emotional communication in the educational environment.

The teacher is a role model. His or her own emotional maturity and ability to manage emotions influence the behaviour of students. Teachers can contribute to the development of EI through: demonstrating empathy, exercises in emotional literacy, and teaching self-regulation.

The family is the first environment where a child learns to recognise and express emotions. Parents can contribute to the development of EI by regularly communicating with their children about their feelings, helping them to name emotions and analyse their causes, and demonstrating constructive ways to resolve conflicts.

School psychologists play an important role in the development of EI. Their tasks include diagnosing the level of emotional intelligence to identify students' strengths and weaknesses, conducting group sessions aimed at developing empathy and social skills, and consulting teachers and parents on creating conditions for children's emotional development.

The task of these adults is to create conditions for emotional friendly communication between students during and after school hours.

Conclusions. Thus, the development of primary school children's emotional intelligence is an important task of modern education. The creation of a favourable educational environment, the active role of teachers, family involvement, integration of social and emotional learning programmes and psychological support are key conditions that ensure the effective formation and development of EI, which require certain skills and perseverance to ensure; they need to be constantly supported so that they become sustainable traditions of the educational environment.

SNISARENKO, Iryna

<https://orcid.org/0000-0002-1045-9291>

Donetsk State University of Internal Affairs, Ukraine

SOME WAYS OF SPEAKING SKILLS FORMATION IN FUTURE LAW ENFORCEMENT

The formation of foreign language communicative competence of future law enforcement cadets occurs during the process of learning a foreign language for professional purposes. The discipline “Foreign Language for Specific Purposes” is an integral part of professional training of a future specialist the main purpose of which is the formation of necessary task-specific communication skills both orally and in writing; the usage of skills obtained in various speech activities; mastering professional information through domestic and foreign sources. Thus, the *purpose* of this paper is to highlight some useful and important ways through which the obtained professional knowledge may be applied.

The goal of learning a foreign language is the formation of cadets' ability for practical mastery of foreign language communicative competence, that is the ability to process and use language tools with specific goals, in specific situations, and with specific interlocutors. As law-enforcement activity is communicative in nature, the most appropriate in teaching a foreign language is a communicatively-oriented competence approach. To form the skills of professional communication, a foreign language teacher should develop all types of speech activities of cadets, use authentic language materials, domestic and foreign textbooks, audio, video and multimedia materials. Particular attention should be paid to the study of professionally-oriented vocabulary, abbreviations, ambiguous terms, instructions that are characteristic of military word-stock.

Modern digital tools and technologies, interactive language-learning platforms, online practical courses, virtual simulations make it easier and more effective to improve language proficiency. Discussion is one teaching method that may help better prepare cadets to think critically and resolve problems efficiently. It allows them to explore ideas and perspectives from another's unique point of view and, thus, develop their own deeper understanding others' ideas. It is necessary to involve cadets in speaking clubs which give cadets the opportunity to communicate in English, make presentations, as well as operate with various professional and everyday vocabulary, gain experience in clearing out professional matters while communicating with a native speaker. Speaking club is one of the additional means to improve professional communication in a foreign language and help cadets form professional communicative competence. Even passive learners in such a classroom may benefit from integrating discussion for active learning.

So, as education of future policemen is the foundation of an effective domestic security and safety system, well-trained officers are useful in solving problems in our society. Learning a foreign language goes beyond compulsory education. An additional opportunity to communicate in a foreign language helps cadets master the language according to their specialization, in accord with specific needs.

SOBCHENKO, Tetyana

<https://orcid.org/0000-0002-9213-5556>

TSYMBALOV, Danylo

<https://orcid.org/0009-0009-8099-356X>

KYRYLENKO, Serhiy

<https://orcid.org/0009-0000-5156-0217>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

ADVANTAGES OF USING AI IN THE EDUCATIONAL PROCESS

Introduction. The spread and development of artificial intelligence (AI) has brought changes to the Ukrainian education system. In particular, AI tools have a number of advantages over other resources for creating educational and methodological content, organizing and managing the educational process, and implementing professional self-education.

Objective: to identify the advantages of using AI in the educational process.

Results. Analysis of the regulatory legislative framework for the development of AI in Ukraine, the capabilities and functions of neural networks, machine learning, and personal experience with AI use has allowed us to identify the following advantages of using AI in the educational process: speed, optimal time spent on preparation, organization, and implementation; functionality, breadth of opportunities for using the created educational or methodological content to achieve the goals of training, education, and development of the applicant; productivity, compliance with standardized requirements for training content; the ability to reproduce any element of the algorithm, evaluate and monitor quality.

Conclusions. It is advisable to use AI in the educational process to achieve predefined educational goals of learning, development, and upbringing. Without resorting to in-depth analysis of the contradictions in the “human-AI” system, it is worth paying attention to the following points. Fear and at the same time excessive enthusiasm for AI among the human community will not stop progress in the field of education.

Therefore, it is important to focus on the values regulated at the legislative level. Teachers, in interaction with students and other participants in the educational process, create conditions for the development of each individual.

They have a significant advantage in terms of personal, individual, activity-based, and phenomenological approaches compared to technological ones. It is in partnership that appropriate high-quality educational and methodological content is created.

And for its development, creation, dissemination, quality monitoring, evaluation, and improvement, well-chosen AI tools and algorithms seem appropriate, desirable, and capable of harmonizing educational tradition and innovation.

SOLOSHENKO-ZADNIPROVSKA, Natalia

<https://orcid.org/0000-0002-4721-8336>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INTEGRATING STORYTELLING INTO THE LANGUAGE CURRICULUM: METHODS AND BENEFITS

Introduction. Storytelling is increasingly acknowledged as an effective pedagogical approach in foreign language education. As an instructional method, narrative pedagogy integrates stories into the learning process in a structured and purposeful manner. This strategy contrasts with traditional, decontextualised practices that frequently concentrate on isolated vocabulary items or individual grammatical rules. In contrast, stories create meaningful contexts that reflect real-life communication, enabling learners to encounter language in a natural, coherent flow. Because storytelling stimulates both cognitive and emotional processes, it helps maintain learners' attention, reinforces their motivation, and supports deeper comprehension.

The **aim** of this paper is to examine practical ways of incorporating storytelling into language curricula and to outline its potential advantages for learners.

Results. Recent pedagogical observations indicate that storytelling enhances language learning on several interconnected levels. *First*, stories assist learners in remembering new vocabulary and structures by placing them in rich, meaningful contexts. When language appears in narrative form, learners can infer meaning, identify patterns, and understand grammar as an integral part of authentic communication rather than as a set of abstract rules. Storytelling also encourages learners to process language through imaginative and sensory channels, which strengthens retention and fosters more confident use of new expressions. *Second*, narrative-based activities promote interaction and collaboration. Techniques such as group storytelling, role-play, digital story creation, or reflective writing stimulate discussion, cooperation, and personal expression. These activities allow learners to practise speaking, listening, and writing in a dynamic and supportive environment. They also provide opportunities for creativity, enabling learners to experiment with language, explore characters, and engage emotionally with the content. *Finally*, storytelling exposes learners to diverse cultural perspectives. Through characters, settings, and narrative themes, students encounter unfamiliar values and worldviews. Such exposure encourages the development of empathy, intercultural awareness, and social-emotional skills – competencies that are becoming increasingly important in contemporary education.

Conclusion. Integrating storytelling into language education offers a multidimensional approach that promotes both linguistic development and personal growth. By using narratives as learning tools, educators can design lessons that are more engaging, authentic, and memorable. Storytelling supports vocabulary acquisition, grammatical competence, and communicative skills while also encouraging critical thinking, creativity, and cultural understanding. Therefore, narrative-based instruction should be regarded as a valuable element of modern language curricula, with the potential to enrich learning experiences across various educational contexts.

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STRIUK, Natalia

<https://orcid.org/0000-0002-5857-6120>

ODINTSOVA, Olha

<https://orcid.org/0000-0001-5644-3394>

Vasyl' Stus Donetsk National University, Ukraine

ENHANCING RESEARCH AND COLLABORATION IN EFL CLASSROOMS THROUGH PROJECT MANAGEMENT TOOLS: THE CASE OF EVERNOTE AND MY RESEARCH PROJECTS

Purpose. As English as a Foreign Language (EFL) instruction continues to shift toward more collaborative, project-based learning, digital tools that help manage tasks and streamline communication are playing a larger role in classrooms. This presentation, prepared under the Erasmus+ DigiFLEd initiative, explores how two specific platforms – Evernote and MyResearch Projects – can assist in planning, organising, and monitoring both teaching and research activities. The focus lies on their use in educational settings to coordinate group work better, support individual accountability.

Results. Evernote stands out as a versatile yet straightforward platform. Its functionality allows teachers and students to keep notes, plan tasks, and store ideas all in one place. Since it works across multiple devices, users can stay organised whether in class or at home. Although it is not built specifically for education, its clean interface and flexibility make it a strong choice for managing lessons, student projects, and shared resources. That said, it may fall short for more advanced needs, particularly when it comes to customisation or syncing with institutional systems.

In contrast, MyResearch Projects is tailored for academic use. It provides a more formal environment for managing research stages, allocating tasks, sharing documents, and tracking progress. It works exceptionally well for complex assignments or longer-term investigations, involving language learning or EFL-specific research. With tools for monitoring timelines, sending updates, and managing contributors, it brings a level of clarity well-suited to university settings.

Both tools offer distinct advantages in real teaching contexts. Evernote encourages learners to take initiative, build language portfolios, and document sources in a structured manner. MyResearch Projects fosters teamwork and clarity between students, supervisors, and colleagues, especially when several contributors are involved. Together, they help develop research and planning skills, encourage responsible academic habits, and create smoother workflows for both learners and educators.

Conclusion. These tools demonstrate how digital project management tools can support EFL teaching and research in various yet complementary ways. While Evernote suits day-to-day use in the classroom thanks to its adaptability, MyResearch Projects is better suited for larger academic efforts where structure and tracking are key. The insights gained from their use in the DigiFLEd project underscore how digital infrastructure can enhance language education and facilitate greater collaboration across institutions and borders.

STUPAKOVA, Valentyna

<https://orcid.org/0009-0006-6048-2090>

KABUS, Natalia

<https://orcid.org/0000-0003-3665-8501>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

FACTOR STRUCTURE OF FUTURE PSYCHOLOGISTS' READINESS TO WORK WITH CHILDREN WITH DISABILITIES

The psychological readiness of future psychologists to work with children with disabilities is important for providing quality psychological services, and the factor structure will allow identifying latent components of (un)readiness.

The aim is to investigate the factor structure of the readiness of future psychologists to work with children with disabilities.

Results. The following methods were used in the study: intellectual risk assessment scale; Bass-Avolio multifactor questionnaire; test to determine the level of stress resistance (Perceived Stress Scale, PSS-10); diagnosis of communicative attitude and diagnosis of “barriers” in establishing emotional (by V. Boiko); short five-factor personality questionnaire TIPI (TIPI-UKR); diagnosis of “emotional intelligence” (N.Hall). To determine the number of factors, exploratory factor analysis, Kaiser's criteria, and the “rocky embankment” criteria were used, taking into account indicators that correlated with the factor at a level of at least $|0,600|$ in the “ready” (49 respondents) and “not ready” groups (38 respondents) to work with children with disabilities out of 87 future psychologists who completed the survey. As a result of the study, two factors were identified in the “ready” group, which explain 40,3% of the variance. The structure of the first factor, which we define as *“a specialist's stable leadership position and developed emotional intelligence”* (8,05 – factor weight; 28,8% of total variance), included: motivation, management, inspiration, individual approach, self-motivation, effective decision-making, intellectual stimulation, managing one's emotions, recognizing other people's emotions, and influence (values from 0,623 to 0,9), which are positively related to the factor. The second factor (3,230; 11,5%) is defined as *“insufficient stress resistance, compensated by empathy”* as it is formed by the following indicators: rejection of uncertainty, empathy, emotional vulnerability, perception of helplessness (values from 0,6 to 0,705). The results of the analysis of the factor structure of the personal qualities of future psychologists from the “not ready” group revealed the first factor (7,6; 27,1%), *“the presence of a leadership attitude with developed emotional intelligence, weakened by the inability to effectively manage activities”*, which is positively associated with openness to new experiences and the indicators of the first factor of the “ready” group, except for the management indicator. The structure of the second factor (3,11; 11,3%) consists of emotional vulnerability, management, and perception of helplessness (-0,6), which is filled with the opposite meaning and is defined as *“the ability to self-regulate with a weakened ability to manage others”*.

Conclusions. Thus, the analysis revealed hidden, insignificantly different, and conflicting factors of psychological (un)readiness of future psychologists to work with children with disabilities, which requires further scientific research.

SUSLOVA, Yuliia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

BENEFITS AND METHODS OF USING AUDIO AND VIDEO MATERIALS IN ENGLISH LESSONS

The use of interactive materials for teaching younger schoolchildren in distance education is a highly relevant topic that aligns with modern approaches to improving the quality of the educational process.

In contemporary teaching practice, considerable attention is given to multimedia resources, particularly audio and video materials. These tools help enhance students' motivation, activate cognitive engagement, and develop communicative competence.

Audio and video materials play an important role in developing speaking skills. Imitating and repeating phrases from such materials helps improve pronunciation and intonation, while reproducing dialogues or scenes from films and TV series provides an effective way to practise spoken language.

Discussing the content of audio and video resources encourages students to express and justify their opinions, supporting the development of critical thinking and communication skills.

Creating their own audio and video projects further enables students to apply their knowledge in practice and fosters their creative abilities.

Using authentic materials that reflect students' interests significantly increases motivation and engagement. Incorporating interactive exercises and games based on audio and video sources makes learning more enjoyable and effective. A positive classroom atmosphere also promotes active student participation. For example, watching a favourite cartoon episode followed by discussion can greatly enhance involvement, while using music videos to explore grammar and vocabulary makes learning more dynamic and exciting.

The careful selection of audio and video materials is a crucial stage in lesson preparation. Resources should correspond to students' language proficiency level, age, and individual characteristics. It is important to consider their educational value, relevance, and technical quality. The length of the material should be appropriate to maintain students' attention. The availability of supplementary materials – such as transcripts, subtitles, and exercises – is a significant advantage. For example, short cartoons or videos with simple vocabulary are suitable for A1/A2 learners.

In conclusion, the use of audio and video materials in English lessons increases learning effectiveness, improves comprehension, and makes the educational process more dynamic and engaging. It is essential to select high-quality content appropriate to students' proficiency levels and to combine various methods of work to achieve the best learning outcomes.

SYCHOV, Anton

<https://orcid.org/0009-0008-2269-0782>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine,

TEACHERS' TRAINING FOR THE PREVENTION OF ADOLESCENTS' DEVIANT BEHAVIOR

Adolescents' deviant behavior includes a range of actions that deviate from social norms, such as aggression, substance abuse, delinquency, and some forms of addiction. This can be influenced by factors like family structure, peer groups, and psychological factors. The behavior can range from non-dangerous temporary actions to a more stable “deviant career”, and some adolescents with these behaviors may experience psychological distress and low life satisfaction.

The examples of adolescents' deviant behavior are: aggression and violence (verbal and physical aggression, fighting, and property damage. In extreme cases, this can include public violence like mass shootings in schools); substance abuse (alcohol and drug use); delinquency and criminal behavior (theft, vandalism, and more serious criminal acts); addictions (gambling, workaholism, and certain types of fanaticism or collecting can be considered forms of addiction); sexual deviance (antisocial acts of a sexual nature); oppositional behavior (disrespect, opposition, and intractability towards authority figures); communicative deviations, including a lack of interest in educational activities.

Teachers' training to prevent adolescents' deviant behavior involves certain actions, learning skills for managing peer pressure, emotional regulation, and social skills, often delivered through group training sessions or workshops. It includes:

- understanding adolescent psychology (teachers need training to understand adolescents' development, including common issues like mental health, impact of their social and family environment);
- formation of positive relationships with adolescents (training should focus on how to build a supportive and trusting environment where learners feel heard and respected, which can reduce disruptive behavior);
- special classroom management (teachers should be trained on setting and consistently reinforcing clear rules and expectations for classroom conduct. Training should also cover how to identify and address the underlying causes of deviant behavior, such as unmet needs, stress, or family issues);
- developing social-emotional skills, namely: resistance to negative influence (training can include sessions on how to help students recognize and resist negative peer pressure), emotional regulation (teachers can be trained to help adolescents recognize and manage their emotions in a healthy way, improving their ability to cope with stress), life skills (training can focus on developing general life skills that contribute to positive behavior).

Teachers can prevent adolescents' deviant behavior organizing activities in workshops, group training, providing psychological support, modeling and consistency (teachers can learn to model positive behavior and demonstrate consistency in their approach to classroom management, which reinforces a stable environment).

SYDORIV, Lidia

<https://orcid.org/0009-0007-8617-7948>

Ivano-Frankivsk college,

Vasyl Stefanyk Carpathian National University, Ukraine.

DEVELOPING INCLUSIVE CULTURE IN THE UNIVERSITY ENVIRONMENT

Future university teachers must be trained to promote an inclusive culture within the higher education environment, since their students, upon graduation, will implement the ideas of accessibility, equal rights and opportunities, diversity, and inclusion in their future professional and social activities.

The study **aims** to theoretically substantiate and experimentally verify the pedagogical conditions for forming an inclusive culture in pre-service university teachers in the process of studying humanities. The relevance of this issue stems from the educational reforms, which emphasized ensuring equal access to quality education for all learners, including those with special educational needs. In the context of war and socio-economic challenges, the formation of an inclusive educational environment in higher education institutions is not only a pedagogical but also a socio-cultural imperative that contributes to social cohesion and post-war recovery.

Results. The study clarified the essence and structure of the concept “inclusive culture of a pre-service university teacher” as an integrative personal quality that reflects value-based attitudes toward diversity, empathy, and cooperation. It was established that humanities disciplines (pedagogy, psychology, philosophy, literature, linguistics) have significant potential for developing such culture, as they promote humanistic values, ethical reflection, and intercultural dialogue. The pedagogical conditions ensuring the effective formation of inclusive culture include: 1) integration of inclusive values and human rights principles into the content of humanities courses; 2) application of interactive and reflective teaching methods; 3) organization of inclusive educational environments that model respect for diversity and equity; and 4) fostering students’ motivation for professional self-development and empathy.

Conclusions. The research confirmed that forming an inclusive culture in pre-service university teachers is a multidimensional pedagogical process that combines theoretical knowledge, value orientations, and practical competencies. Humanities play a pivotal role in shaping future educators’ understanding of human diversity and social justice, thus ensuring their readiness to promote inclusion in professional practice. The developed methodological model can be implemented in teacher education programs through the integration of special courses such as “Fundamentals of Inclusive Education,” “Inclusive Culture,” and “Pedagogy.” The findings have practical significance for improving curricula, training modules, and professional development programs for university educators. An inclusive culture in higher education is a foundation for sustainable social development, as it nurtures respect for human dignity, fosters belonging, and empowers future teachers to create accessible, equitable, and empathetic learning environments for all.

TIGLI, Amir-Idris

Pedagogical University Ludwigsburg (Germany)

PREPARING TEACHERS FOR INTERCULTURAL AND INCLUSIVE CLASSROOMS

Aim. The decision to study English and Islamic Theology is rooted in my strong interest in language, culture, and religion, as well as my aspiration to work as a teacher in German schools. My primary aim is to foster intercultural understanding, promote critical thinking, and support students in developing both linguistic and cultural competence. English, as global language, is an essential tool for communication and connection. By teaching it, I want to enable students to engage confidently with the wider world. At the same time, Islamic Theology offers a space for students to reflect on their religious identity, values, and ethical perspectives, which is especially relevant in Germany’s pluralistic society.

To broaden my professional qualifications, I have also chosen German as a Second Language as an additional subject. This decision is driven by two main goals: first, to support immigrant students in overcoming language barriers and achieving educational success; and second, to enhance my opportunities to teach at German schools abroad, where multilingualism and cultural competence are in high demand.

Results. Through this combination of subjects, I have developed a solid academic foundation in language teaching, intercultural communication, and theological education. I have gained valuable insights into both linguistic and cultural diversity and learned effective methods to support heterogeneous student groups. My studies have also strengthened my ability to create inclusive learning environments, where students feel seen, respected, and empowered.

Conclusion. By combining English, Islamic Theology, and German as a Second Language, I am preparing myself for a teaching career that goes beyond subject knowledge. My goal is to contribute to an educational system that values diversity, mutual respect, and equips students with the skills they need to thrive in a globalized world.

This Abstract is written as a task by Prof. Ilona Kostikova

TKACHENKO, Victoria

<https://orcid.org/0000-0001-7794-3136>

*Mykolaiv Law Vocational College of National University
“Odesa Law Academy”, Ukraine*

PREVENTION AND OVERCOMING LANGUAGE BARRIERS

In today's world, a high level of language proficiency occupies an important place. However, under conditions of bilingualism, the problem of language barriers arises.

Aim: To determine the causes and methods of overcoming language barriers.

Results. Language barriers are a set of linguistic and psychological obstacles that hinder free communication. Among the linguistic causes of barriers in mastering a foreign language are: lack of communication, which leads to difficulties in using knowledge in practice; insufficient vocabulary; use of the same words in different meanings, slang, dialects, professionalisms, etc.; difficulty in perceiving foreign speech by ear, problems with the pronunciation and construction of syntactic structures.

Psychological barriers include fear of speaking due to the possibility of making mistakes; lack of practice; negative experiences during communication or language learning; criticism from others and negative evaluation.

To overcome language barriers, it is necessary to create conditions for daily language practice. The first step is to find motivation for studying and practicing the language – further education, job, making friends, traveling, etc. The next stage is to surround yourself with the foreign language: reading books in the original. During reading, it is important to highlight and write down new words for later revision, create your own analogies, which helps in mastering new vocabulary. Grammar rules (grammar tenses, morphology, stylistic features, etc.) are also gradually reinforced.

Watching films and series, listening to songs, interviews, and podcasts in the original language is useful. At first, subtitles can be used to make listening comprehension easier, and later they can be turned off. This way, one can practice understanding various accents and speech tempos, repeating words and syntactic constructions.

To apply theoretical knowledge in practice and develop communication skills, it is important to find a friend or a group of people with whom one can communicate in a foreign language in a comfortable atmosphere without fear of judgment for mistakes. One can also consider language courses or a speaking club where group and individual lessons are held.

Maintaining a personal diary and social media accounts in a foreign language also positively affect overcoming language barriers. This contributes to improving grammar and vocabulary skills.

Conclusions. Therefore, to prevent and overcome language barriers, it is necessary to determine what exactly hinders free communication in the language and choose the most effective methods and approaches to solve the problem.

TODOROVA, Kseniia

<https://orcid.org/0009-0001-5116-043X>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

RIISING THE AWARENESS OF AVIATION SPHERE STUDENTS ON NOISE POLLUTION

Noise pollution is one of the major environmental problems associated with the aviation industry. Excessive noise from aircraft affects not only the vicinity of airports and residential areas, but also the health and performance of aviation professionals. The **aim** of these theses is to identify effective educational strategies to increase the awareness of aviation students about noise pollution, its impact on the environment and human health, as well as methods for its mitigation in aviation operations.

The development of the aviation industry has led to a significant increase in air traffic, which, in turn, has exacerbated environmental problems, including noise pollution. According to the International Civil Aviation Organization (ICAO), aircraft noise is a critical environmental problem that requires both technological and educational measures. Student pilots, as future pilots, engineers and air traffic controllers, play a key role in shaping environmentally responsible attitudes and operational behavior.

Increasing awareness of noise pollution involves integrating environmental education into aviation training curricula. Students should gain knowledge about the sources of aircraft noise – engines, aerodynamic structures, and airport ground operations. They should understand the health effects of continuous noise exposure, including hearing impairment, sleep disturbance, stress, and cognitive decline.

Practical training should focus on noise abatement procedures, such as optimized flight paths, continuous abatement operations, and maintenance of noise abatement equipment. Simulation-based training, case studies, and collaboration with environmental organizations can help students visualize real-world impacts and encourage responsible decision-making.

Moreover, the inclusion of international frameworks – such as ICAO’s *Balanced Approach to Aircraft Noise Management* – in educational programs fosters a global perspective and motivates students to align with sustainable aviation goals.

In **conclusion**, raising the awareness of aviation sphere students on noise pollution is a vital step toward creating a culture of environmental responsibility within the aviation sector. Educated and conscious specialists are more likely to implement eco-friendly technologies and adhere to operational practices that reduce noise emissions. Thus, educational institutions must integrate environmental awareness modules into aviation programs to prepare students for the dual mission of technological excellence and environmental stewardship.

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TOLMACHOVA, Tetiana

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE SPECIFICS OF THE FAIRY-TALE GENRE IN THE WORK OF ZIRKA MENZATIUK

Introduction. *Zirka Menzatiuk* is a contemporary Ukrainian children's writer whose works are filled with love for her homeland, empathy, and respect for all living beings.

Aim. The aim of this study is to analyse the fairy-tale genre in the works of Zirka Menzatiuk.

Results. Today, the fairy-tale genre continues to develop actively, as writers can freely select and combine content and structural elements to represent the fairy-tale chronotope.

1. *"Arnika"* (1993) is a fairy tale about living water, built on the theme of the eternal struggle between good and evil. Arnika embarks on a heroic journey to help those in need. According to traditional fairy-tale conventions, the narrative clearly separates characters into positive ones, who help Arnika (the porcini mushroom, the girl Anychka, the golden eagle, the wind, the spinning old woman), and negative ones (the wandering spirit, poisonous mushrooms, cobwebs, the old man with the bag). Personification plays an important role, emphasising respect for nature. The tale contains ecological elements that appeal to children, such as bird nesting, mushroom growth, blooming periods, and plant reproduction. The idea of world harmony is also evident: only through cooperation with all living and non-living elements of nature can a person achieve their goal.

2. The fairy tale *"How to Talk to Frogs, or Magic Ivanko"* centres on overcoming the fear of meadow creatures (hoopoes, snails, frogs, etc.) in order to reach ripe mulberries. The text uses traditional fairy-tale techniques: a blend of play and fantasy, retarding moments, a seven-character structure, elements of verbal magic (spells), and mythological ideas rooted in prehistoric times. All these elements help the boy solve his main problem – overcoming fear.

3. In the collection *"The Poppy Kingdom"*, the author arranges the tales according to natural cycles: spring – summer – autumn – winter. The texts demonstrate a gradual shift toward linear time and a historical understanding of the world. This is reflected in the arrangement of stories around important Christian holidays, for example: *"Farewell to the Willow"* – Palm Sunday, *"The Easter Egg"* – Easter, *"About the Girl Lesia"* – Trinity Sunday, *"When the Herbs Are the Strongest"* – the Feast of Ivan Kupala, *"The Poppy Kingdom"* – the feasts of Makoviy and Spas, *"The Hare Shepherd"* – the Miracle of St Michael, *"The Carol Tale"* – Christmas.

Conclusions. The analysis of Zirka Menzatiuk's fairy tales shows that the author draws on a folkloric understanding of childhood. Her system of images follows the logic of children's imagination, and her textual strategies rely on fairy-tale principles supported by play, fantasy, adventure, and folklore. Thus, her tales combine both traditional and innovative narrative techniques, which contributes to the lasting popularity of her work.

TRINDADE, Max

<https://orcid.org/0009-0005-3752-8874>

TREVISOL, Juliane

<https://orcid.org/0000-0001-6847-2221>

UNEB, Brazil

TASKS AND DIGITAL TECHNOLOGIES: INVESTIGATING THE USE OF WHATSAPP FOR ENGLISH LANGUAGE LEARNING

This paper presents the final results of a Scientific Initiation (IC) research project funded by FAPESB and carried out between 2024 and 2025. The aim was to map studies on the use of WhatsApp as a task (Ellis, 2003; Skehan, 1996) or as a pedagogical activity for English teaching and/or learning, considering different contexts and learner profiles.

To this end, a systematic literature review (Petticrew & Roberts, 2006) was conducted using the CAPES Journal Portal, applying a ten-year time filter and search descriptors such as “WhatsApp AND Ensino AND Inglês” and “WhatsApp in English Learning AND Teaching,” among others.

Overall, the results indicate that WhatsApp is a promising resource to support English teaching, especially for the development of speaking, writing, vocabulary, interaction, and motivation, although its use requires careful pedagogical planning, teacher training, and strategies to overcome inequalities in access and risks of distraction.

TSEBRO, Sofia

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE POLLYANNA PRINCIPLE AS A TOOL FOR SUPPORTING PSYCHOLOGICAL WELL-BEING IN LITERATURE LESSONS

Introduction. Literature education offers many opportunities for emotional and psychological reflection, and integrating principles of positive psychology into reading lessons may support students' well-being. *The Pollyanna principle* (or positivity bias) – based on Eleanor Porter's character Pollyanna and her "glad game" of finding something good in every situation – suggests that people remember and focus on pleasant events more than negative ones. In education, psychological well-being is seen as important for student success and resilience.

Connecting literature teaching with ideas from positive psychology (such as bibliotherapy, flow, or gratitude) can help create a supportive classroom climate. Using the *Pollyanna principle* in lessons, where students focus on positive aspects or "silver linings" in stories and characters, illustrates an approach that combines literary pedagogy with psychological ideas.

Aim. The aim is to examine theoretical perspectives on how the *Pollyanna Principle* can be used in literature lessons to strengthen students' psychological well-being. The paper analyzes concepts from positive psychology and literary pedagogy to show how optimistic reframing and reflective activities may support emotional resilience and engagement.

Results. The theoretical literature suggests several possible benefits of a Pollyanna-style approach. Positive psychology highlights the importance of using students' strengths and positive emotions to improve learning and well-being. In literature classes, this may include guided activities such as "glad-game" reflections on stories, role-play of positive character outcomes, or journal tasks where students reframe a plot twist in a more hopeful way.

These activities are similar to ideas in bibliotherapy, which shows that reading and discussing narratives can increase empathy, insight, coping skills, and self-esteem. For example, when students interpret a character's difficulties and then imagine a more hopeful ending, they practice cognitive reappraisal and resilience. Research in bibliotherapy and reading-for-well-being notes that engaging with fiction can reduce stress and support empathy and self-regulation. In addition, teachers who model positive framing during discussions may help build a more supportive learning environment.

Teachers' own well-being and attitudes strongly influence classroom climate. Although the *Pollyanna principle* focuses on optimism, the literature advises balancing positivity with critical thinking; students should still recognize real challenges in texts while practicing adaptive, growth-oriented perspectives.

In classroom practice, some studies and reviews show that including emotional-wellness activities in language arts can increase engagement. For example, bibliotherapy programs report improvements in student self-esteem and coping when literature about overcoming difficulties is discussed in supportive groups. Similarly, positive reframing tasks (inspired by Pollyanna's "glad game") relate to cognitive reappraisal strategies known to reduce anxiety. While direct studies on a formal "Pollyanna principle" in schools are limited, related evidence suggests

that teaching literature with an explicit focus on positive themes (such as friendship, hope, or moral victory) can improve motivation and mood.

Conclusions. The review shows that using a *Pollyanna principle* in literature teaching may be a useful tool for supporting psychological well-being. By combining literary analysis with positive-psychology techniques (gratitude reflections, character reimagining), teachers can help build students’ optimism, emotional resilience, and sense of meaning.

This interdisciplinary approach – connecting literature pedagogy with psychological ideas – encourages learners to engage with texts both intellectually and emotionally. While it is important not to oversimplify complex narratives, focusing on constructive interpretations gives students practice in empathy, optimism, and adaptive thinking. In sum, framing literature lessons around the Pollyanna principle may enrich reading instruction and emotional support, showing how literary education can contribute to holistic student development.

TSYHANOK, Hanna

<https://orcid.org/0000-0002-6303-6831>

Sumy National Agrarian University, Sumy, Ukraine

INFORMATION SECURITY OF STUDENTS IN DAILY LIGHT SPACE

The modern world is characterized by a number of features that humanity has never faced before. The problems of globalization, integration, scientific progress, and the rapid informatization of all spheres of human activity have led to tangible changes in social life, where technologies and ideas replace each other faster than generations of people do. In the modern world, politics and education, economy and culture, national and transnational, emotional and rational, reality and the virtual world have become intertwined. The qualitative characteristics of modernity are digitalization, informatization, and multiculturalism.

At the same time, the influence of the information environment – including the informational and educational one – on the developing psyche and worldview of children, adolescents, and youth has not yet been fully studied. In this regard, society places special demands on ensuring the information security of the younger generation in the educational space.

Consequently, there arises a need to develop, first of all, methodological issues related to clarifying the traditional understanding of the categories “educational space” and “multicultural educational space,” as well as to consider, in a socio-pedagogical context, the concepts of “information space” and “information security of youth,” and to define the principles and content for ensuring the information security of the younger generation.

Information security of students in the informational multicultural educational space is a system, a process, and a result of protecting the younger generation from the negative influences and threats of the information environment. It represents a state of confidence among young people that they are protected from threats when working and interacting within the information space – a sense of safety and security of their interests, rights, and freedoms.

Ensuring the information security of students in a multicultural educational space is a crucial issue for all developed countries, including Ukraine. Solving this problem is directly linked to ensuring civilizational and national security, preserving cultural heritage, and fostering personal development.

The global nature of the issue requires a systemic approach, comprehensive solutions, and integration of efforts among all participants in the educational process. The effectiveness of pedagogical support for students’ information security is closely related to the realization of the educational potential of the information space.

In summary, the rapid development of information technologies and globalization processes has fundamentally transformed the educational environment, creating both new opportunities and serious challenges. Ensuring students’ information security within a multicultural educational space is not only a pedagogical but also a social and national priority.

URVANTSEV, Artem

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

METHODOLOGY OF PHYSICAL TRAINING FOR YOUNG SAMBO ATHLETES

Physical training is a fundamental component of the athletic development of young sambo athletes; therefore, coaches and researchers in the field of athlete preparation are constantly seeking ways to improve it.

Purpose of the study: to theoretically substantiate and experimentally verify the effectiveness of a physical training methodology for beginner sambo athletes, developed with an increased number of plyometric and balance exercises.

Results of the study showed that the introduction of the experimental methodology – based on a greater number and variety of balance and plyometric exercises – into the training process enabled young sambo athletes to achieve a greater increase in the following indicators:

- Balance: participants in the experimental group were able to maintain equilibrium longer (+56.8%), confirming the effectiveness of balance exercises.
- Speed: the 10-meter sprint time decreased by 16.7% in the experimental group, while in the control group it improved by only 5.7%, demonstrating the benefits of plyometric exercises.
- Explosive strength: participants of the experimental group improved their standing long jump results by 20.8%, compared to only 5.5% in the control group.
- Muscular endurance: the number of sit-ups performed increased by 38.5% among the experimental group, indicating enhanced overall physical preparedness.
- Flexibility: due to the inclusion of balance and coordination exercises, flexibility among the experimental group participants increased by nearly 40%.

An increase in the number and variety of balance and plyometric exercises did not lead to overtraining among the athletes in the experimental group. Visual indicators of load during training remained within normal limits: slight facial redness indicated healthy blood circulation, moderate sweating reflected a normal response to physical activity, good coordination showed the absence of fatigue, and high activity levels confirmed good physical condition. The athletes' bodies demonstrated high work capacity, rapid recovery, and good adaptability to change. Overall, the athletes displayed optimal general tone and a high level of energy.

Conclusions. The data obtained as a result of the study indicate the feasibility of using an improved methodology for physical training in sambo, with emphasis on plyometric and balance exercises and their variations. Implementing this advanced physical training methodology for young sambo athletes provides advantages in creating conditions necessary for the successful execution of technical and tactical actions, forming a foundation for athletic development.

Possessing excellent physical fitness – valuable not only in sports – the trainees may in the future become a reliable support for the defense of their country. Physical endurance, strength, and the indomitable spirit of athletes symbolize the resilience of the nation, while their personal sporting achievements are a source of national pride.

USAKLI, Hakan

<https://orcid.org/0000-0003-4307-2226>

Sinop University, Turkey

**A COMPARATIVE QUALITATIVE STUDY OF SOCIAL SKILLS TEACHING
IN KOTYHOROSHKO'S FAIRY TALES (UKRAINE)
AND BALD BOY'S FAIRY TALES (TURKEY)**

Social skills mean the tools people use to connect and talk with others in smooth ways. These skills mix spoken words and silent cues. They cover active listening, where you truly hear what someone says. Empathy lets you feel what others feel. Body language includes nods, eye contact, and open postures that show interest. Conversation skills help start and keep chats going without awkward pauses. Emotional intelligence spots feelings in yourself and others to handle them well.

All these parts aid in forming bonds, handling group settings, and grasping unwritten rules of society. These skills matter for key life areas. They build strong relationships by creating trust and closeness. In careers, good social skills lead to better teamwork and promotions; studies show they account for up to 85 percent of job success. Emotional well-being grows as people feel supported and less alone. Conflict resolution turns fights into fixes through calm talks and fair views. People can grow these skills with steady steps.

Practice active listening by focusing fully and asking questions to show you care. Engage in daily conversations, like chatting with neighbors or joining clubs. Build empathy by picturing yourself in someone else's spot during stories or real talks. Raise body language awareness; notice how crossed arms might signal defense and adjust to seem welcoming. Observe and learn from role models in books or life who handle social spots with grace. Manage emotions by pausing before reacting in tense moments, breathing deep to stay even.

This study looks close at social skills shown in fairy tales from two places: Kotyhoroshko tales in Ukraine and Bald Boy tales in Turkey. It compares how these stories teach kids key traits. Researchers want to see how each group of tales pushes values like empathy, teamwork, and right-from-wrong thinking. These traits build social skills from an early age.

The method uses side-by-side review of the tales themselves, plus books and articles on them. It pulls out shared ideas and lessons for teaching. Fairy tales act as simple tools to guide kids in social ways in their own cultures. Both set stress good morals and kind acts. Yet, the exact lessons vary. Ukrainian tales often highlight clever tricks and family ties, shaped by a history of tough times and close communities.

Turkish ones stress bravery and quick wits, tied to a culture of hospitality and oral stories passed down. Such differences show how each society's values shape the tales. Findings point to ways teachers can use these stories to help kids learn social fits across borders, making moral lessons fresh and fitting for young minds.

VERETIUK, Polina

*Communal institution ‘Paniutyne Lyceum’
of the Lozova City Council, Kharkiv Region, Ukraine*

GENDER FAIRY-TALE STUDIES: MODERN APPROACHES

Introduction. In the 1960s, the first gender studies appeared, which introduced a completely new approach to analysing fairy tales and rethinking well-known stories. Since that time, many researchers have studied gender roles and stereotypes in fairy tales. Among them are Kay Stone, Norman J. Girardot, Ivan Berezovskyi, Lidiia Dunaievska, Oleksandra Britsyna, Isabel Cardigos, Ruth B. Bottigheimer, Oksana Kis, Iryna Ihnatenko, Mariia Maierchyk, and many others.

Aim. The aim of this paper is to analyse modern approaches to gender fairy-tale studies.

Results. The term *gender fairy-tale studies* refers to a field that examines gender roles and stereotypes presented in fairy tales and established in patriarchal society for men and women. The advantages of applying gender fairy-tale studies include: analysing gender roles (revealing which roles are traditionally given to male and female characters); identifying and analysing positive and negative gender stereotypes; studying how modern gender roles in real life influence a reader’s worldview, especially that of a child; analysing contemporary fairy tales that present more diverse images of women and men and reflect modern gender roles. Today, the development of fairy-tale studies includes several approaches:

1. The **structural approach** does not aim to identify gender features or classify characters by gender. However, structuralism initiated the idea of male, female, and neutral fairy tales. It also focuses on female characters, explores neutral fairy tales, and raises new questions about gender representation in the character system, as well as about gender itself, its representation, and stereotyping in magic fairy tales.
2. The **comparative approach** is based on comparing fairy tales to find similarities and differences (in realism, storylines, characters, traditional motifs, etc.). This approach helps learners develop attention, speech, and logical thinking.
3. The **ritual approach** makes it possible to identify not only initiation rituals but also liminal, sacred, and secular spheres. It helps reveal the features of heroes and heroines and explain their movement through the story. Within this approach, fairy-tale studies went through a stage of “demasculinisation”, began to uncover female themes, and analysed symbols that were important for listeners and narrators.
4. The **computational (quantitative) approach** (Jeana Jorgensen) is based on Timothy Tangherlini’s computational method. It works by answering research questions through computer analysis of a database. The results come from counting and analysing a large corpus of texts, which is difficult or impossible to process manually.

Conclusions. Due to the development of gender studies, Ukrainian research on fairy tales is becoming more active. Many works now combine the structural and ritual approaches with the gender approach, or integrate the comparative approach with gender analysis.

VERETIUK, Tetiana

<https://orcid.org/0000-0002-3985-1529>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

VISUALISATION METHODS IN UKRAINIAN LITERATURE LESSONS

Introduction. Today, visualisation means creating and presenting text information in a graphic form. It makes the material more visible and, as a result, easier to analyse and understand for learners at different levels of education. The problem of visualising educational material has been studied by many researchers, including L. Bilousova, T. Veretiuk, N. Zhytienova, N. Sydorchuk.

Aim. The aim of this paper is to analyse visual methods that can help make the perception and understanding of educational material easier in Ukrainian literature lessons.

Results. Among the visual learning methods used in Ukrainian literature lessons, the most popular are:

1. **Scribing** – a presentation technique in which a spoken explanation is supported by drawings or schemes created in real time. This method creates the effect of parallel perception, when a listener hears the information and sees its visual form at the same time. It helps improve understanding and memory. Its advantages include vividness, clarity, conciseness, and creativity. The method also has many variations [see more: (Беретюк, 2025)].
2. **Lapbooks and pantbooks** – learning materials in the form of handmade books created by learners. This method supports better memorisation of information. Its advantages include increased interest in the subject, focus on key elements of the material, activation of knowledge and skills, development of creativity and independence, reflection, and active involvement of most learners in creating a lapbook or pantbook [see more: (Беретюк, 2024)].
3. **Book trailers** – short videos about a literary work that present its content in any creative form. The main aim of a book trailer is to attract future readers and motivate them to read the full text. Both teachers and learners can create book trailers.
4. **GIFs and social media formats** – a way to modernise the images of classic writers. A teacher or learners may create, for example, a writer's social media profile, an imaginary online conversation between two authors, thematic GIFs, or emojis. Using these formats encourages creativity with digital tools and helps present Ukrainian writers in a more modern way.
5. **Mind maps** – a convenient way to record, present, and analyse information. They help solve various learning tasks and do not require much time to create. Today, many digital tools support mind-map creation, such as *Coggle*, *FreeMind*, *MindMeister*, *XMind*, *MindNode*, *Bubbl.us*, and *SpiderScribe*. The choice depends on the teacher's or learner's preferences. Mind maps can be used to activate background knowledge, explain concepts or processes, consolidate material, check knowledge and skills, and summarise the lesson.
6. **Interactive timelines** – tools that present events in chronological order and help create a clear picture of concepts, events, and processes. Popular timeline

platforms include *TimeRime*, *Tiki-Toki*, *TimeToast*, *Timeline JS*, and *Bee Doc’s Timeline*.

7. **Internet memes (meme art)** – a product of internet culture that helps present classical literature in a modern and creative way. *Canva* and *Easy Meme Maker* can be used to create educational memes.
8. **Word clouds (word tags)** – a graphic way to organise key words or concepts in one image. Word clouds help visualise terminology, important points of a text, or main events, which supports quick memorisation. They can be created using tools such as *WordArt*, *WordItOut*, *Wordcloud.pro*, *Word Cloud Generator*, *TagCrowd*, *Wordle*, *AhaSlides*, *Mentimeter*, or *AnswerGarden*.

Conclusions. Using visualisation methods in Ukrainian literature lessons develops learners’ imagination and thinking, helps them find personal ways to perceive and process information, strengthens memory, and stimulates creativity.

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VERKHODANOV, Serhiy
GOLENKOVA, Yuliia

<https://orcid.org/0000-0003-1553-8893>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

OPTIMIZING STRIKE PERFORMANCE IN WOMEN BOXERS: TRAINING METHODS FOR ACCURACY AND SPEED

Punch accuracy and speed are key components of technical and tactical performance in boxing. For female boxers, the ability to deliver precise and rapid strikes directly affects competitive effectiveness and overall fight strategy. The development of these skills requires the integration of specific training methods that enhance neuromuscular coordination, reaction time, and movement efficiency. Modern approaches combine traditional boxing techniques with specialized drills, technological tools, and cognitive-perceptual exercises to optimize strike performance.

Purpose. The purpose of this study is to analyze and justify effective training methods for improving punch accuracy and speed in female boxers.

Results. The analysis of training practices indicates that a combination of targeted technical drills and reaction-based exercises significantly enhances strike performance. Exercises that simulate competitive situations improve both decision-making speed and movement precision, while the use of focus mitts, double-end bags, and speed bags supports hand-eye coordination and rhythm development. Additionally, integrating cognitive-perceptual training methods, such as visual cues and anticipatory drills, further refines timing and strike accuracy.

Regularly structured programs that include variable intensities, progressive load, and skill-specific drills contribute to the holistic development of both speed and precision, while maintaining motivation and engagement in athletes. Furthermore, incorporating combined training approaches—blending strength, agility, and coordination exercises—creates favorable conditions for rapid neuromuscular activation. This integration allows female boxers to perform strikes with greater efficiency, control, and responsiveness, fostering both technical proficiency and tactical adaptability.

The interactive nature of these methods also encourages consistent practice and supports the gradual mastery of complex movements. Practical training methods such as targeted mitt work, shadow boxing with emphasis on precision, and interval striking on speed bags are highly effective in enhancing punch accuracy and speed. Incorporating reaction drills with visual or auditory cues further improves the ability to respond quickly and maintain control during dynamic combat situations.

Conclusions. Optimizing punch performance in female boxers requires a systematic and scientifically grounded approach that integrates technical, physical, and cognitive components. Targeted drills, reaction exercises, and perceptual training enhance both strike accuracy and speed. Implementing comprehensive, individualized programs promotes effective skill development, supports competitive readiness, and ensures long-term progress in women's boxing training.

VERKHOVOD, Liliia

<https://orcid.org/0009-0002-7521-0953>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

MINDFULNESS AS A RESOURCE FOR DEVELOPING SELF-REGULATION SKILLS IN THE EDUCATIONAL PROCESS DURING WARTIME CONDITIONS

Introduction. The full-scale war in Ukraine has increased the level of prolonged psychological stress and emotional exhaustion, affecting various aspects of personal functioning, including learning and professional activity. Under such circumstances, the ability to regulate consciously emotions, attention, and behaviour becomes a key factor in maintaining psychological stability and successful adaptation. In this context, mindfulness is viewed as a psychological mechanism that enhances self-regulation and helps people maintain stability, concentration, and constructive participation in everyday and professional life. Introducing mindfulness practices into educational settings may serve as psychological support for both students and teachers, preserving cognitive efficiency and emotional balance.

Aim. The purpose of the study is to clarify the role of mindfulness in the system of self-regulation of an individual in conditions of prolonged stress and to determine the possibilities of its practical use to increase the regulatory potential of participants in the educational process during the war period.

Results. The study is based on the concept of self-regulation and the phenomenon of a modern approach to understanding mindfulness. Mindfulness is interpreted as a mental ability that combines focused attention, awareness of one's own experiences and control of consciousness over actions. It contributes to the development of flexible thinking, emotional balance and the ability to adapt to changing conditions. Theoretical analysis and preliminary observations show that mindfulness activates the cognitive, emotional and volitional components of self-regulation. Regular practice of mindfulness aims to better recognize one's own thoughts and feelings, to understand emotional states deeper and to reduce automatic reactions to a stressful state. Empirical results are expected to confirm positive links between mindfulness and the main aspects of self-regulation, such as goal setting, planning, and evaluating outcomes. Short mindfulness exercises used in educational practice can improve students' attention and help teachers maintain emotional balance in situations of ongoing stress.

Conclusion. Mindfulness can be seen as a general resource for self-regulation that supports adaptation, restores inner balance, and strengthens resilience in difficult times. The findings of this study may be useful for educational and psychological support programmes that develop awareness, attention control, and emotional stability. Applying mindfulness methods in education can help develop conscious, self-regulated, and emotionally resilient individuals who are ready for productive work and personal growth in post-war society.

Science advisor: **FOMENKO Karina**

Language advisor: **KOSTIKOVA Ilona**

VEDIERNIKOVA, Tetiana

<https://orcid.org/0000-0003-0139-6169>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE PROJECT METHOD IN FOREIGN LANGUAGE TEACHING

The Project method in teaching English is an effective approach that allows students to actively participate in the learning process, developing not only language skills but also critical thinking, creativity, and collaboration skills. Below are the main aspects of applying the project method in teaching English.

Aim. Students work on topics that interest them, which enhances their engagement in learning the language. The Project method promotes the development of not only language skills but also social, research, and organizational skills. Working on a project helps students better understand the material and see its practical application. Presenting results to an audience helps develop confidence in using the language.

The main principles of the Project Method are:

Active Learning. Students are engaged in the process, working on real tasks and projects, which contributes to better material retention.

Practical Application. Projects allow students to apply the language they are learning in context, making the learning experience more meaningful and memorable.

Creativity and Innovation. The Project method encourages students to express their creativity, find original solutions, and develop unique ideas.

Collaboration. Group work helps develop teamwork and communication skills, which are essential in modern society.

At the first stage, students can select topics, which increases motivation and engagement. Learners develop a work plan, define tasks, and assign roles within the group. They collect necessary data, work with sources in English, which helps develop reading and listening skills. At the second stage, students create the final product of the project, which can take various forms: presentation, video, brochure, article, etc. Then students present their projects to others, which develops public speaking skills and confidence in using the language. It is important to discuss the project results, what worked well, and what could be improved, in order to draw conclusions for future work.

Results. The Project method can be implemented when students research the culture of an English-speaking country and prepare a presentation on traditions, holidays, cuisine, etc. It can be applied in the process of creating a school newspaper or magazine in English, where students can write articles, interviews, reviews. It is efficient for filming a short movie or video in English that tells a story or addresses current issues. While investigating environmental problems in the region and proposing solutions, writing an essay, or creating posters, the Project method is productive as well.

Conclusion. The Project method in teaching English is a powerful tool that makes the learning process more interactive and engaging. It fosters the development of both language and social skills, allowing students to gain a deeper understanding of the language and culture while also preparing them for real-life situations.

VITCHYNKINA, Kateryna

<https://orcid.org/0000-0003-2955-8158>

College of International Education Wuhan University of Technology, PRC

PROJECT-BASED LEARNING STRATEGIES IN TRAINING FUTURE GRAPHIC DESIGN PROFESSIONALS

Modern art and design education increasingly emphasizes practical, interdisciplinary, and creative approaches to teaching. Within this context, project-based learning has become an effective method for developing both technical and conceptual skills among future graphic designers. In the process of implementing the project-based learning method, both the instructor and the students may encounter certain difficulties related to the dominance of dogmatic teaching methods in secondary education. In the initial stages, challenges may arise due to the possible lack of practical skills in applying methods of analysis and synthesis.

The aim of this abstract is to outline key pedagogical strategies and techniques that can be applied in project-based learning to enhance creativity, critical thinking, and practical competence in graphic design education.

When training future graphic design professionals through the project-based learning method, various pedagogical strategies and techniques can be applied to stimulate creativity, critical thinking, and practical skills. Some of these include:

1. *Project-Based Learning*: students may be assigned tasks to create real graphic designs for different clients or projects. This may include logo design, packaging, advertising materials, web design, and more. Future graphic designers work on projects from start to finish, applying their skills and abilities throughout the process.
2. *Creative Assignments*: the use of exercises that encourage creativity and originality of thought. For example, students may be tasked with creating a graphic design for an abstract idea or concept.
3. *Collaboration and Discussion*: engaging students in teamwork and discussions of their ideas with peers and instructors. This approach promotes experience exchange and mutual learning.
4. *Critical Analysis and Evaluation*: the use of critical analysis methods to assess graphic works helps future designers develop analytical and evaluative skills essential for professional growth.
5. *Real-World Scenarios*: developing scenarios that replicate real working conditions in the graphic design industry, allowing students to gain practical experience and acquire professional competencies useful in their future careers.

A certain advantage of using the project-based learning method also lies in the fact that this approach allows students to work on tasks similar to real design assignments, rather than merely abstract academic exercises without connection to practical applications. In the People's Republic of China, the application of project-based learning enables students to overcome stereotypical thinking, foster creative activity, and acquire skills in analysis, synthesis, and project development in accordance with client requirements. Moreover, this approach allows students to complete assignments closely aligned with real-world design challenges and to build their professional design portfolios during their studies.

YAVDOSHCHUK, Anastasia,

<https://orcid.org/0009-0004-7793-1425>

Krasnosil Lyceum of Odesa region, Ukraine

MODERN METHODS OF TEACHING ENGLISH

There are no ways to learn English these days, and all of them can make the process more manual and efficient. However, among them you can see a splinter, which is deservedly respected by those found. Let's figure out how to work efficiently.

1. The communicative approach to the beginning of the English language has long established itself as one of the most effective. In contrast to traditional methods that focus on learning grammar and vocabulary, this method focuses on the actual vocabulary of language in everyday situations. Students don't just memorize the rules, but begin to understand them. Students to learn language in context, which helps you understand it better. The transition from theory to practice will accelerate. Skills are being developed that are actually needed for spitting.
2. The method of confinement - once the student is exposed to my thoughts. It is possible that both the reabsorption of native language in the region and the creation of a piece of native language, so that everything that appears appears to be English. In such a situation, the teaching of confusion is absorbed, reading, hearing foreign language, and this is what has come.
3. Various technologies and online platforms have significantly changed the approach to modernization. It is clear that there are a great number of mobile apps and online courses that allow you to learn English at any time and in any place. With the help of platforms such as Duolingo and Babbel, you can practice grammar, improve your vocabulary and master the vocabulary of the language. The interactive format helps you remember information sooner and start retrieving it.
4. The TBL (Task-Based Learning) method of focusing on the research and development of languages. Students face practical problems: writing papers, making presentations, discussing various foods. Instead of developing a theory, they are constantly using language to achieve real goals. The importance of the theory is that the language is becoming more important. The skills of speaking in non-standard situations are developed.
5. Intensive learning - intensive courses in language secondary – is one of the best ways to master language. The student enters the culture completely, which helps her to adapt as quickly as possible. It's not just a lot of fun, but a daily practice that allows you to consolidate your skills. The practice of mov from real minds has been strengthened.

Current methods allow scientists to explore new topics in a quick way, allowing scientists to more readily reveal their findings and develop new interests. This brings greater creativity and self-knowledge.

ZAKHARENKOVA, Tetiana

*Communal institution 'Kharkiv Lyceum No. 141'
of the Kharkiv City Council, Ukraine*

FOLKLORE: MODERN TRENDS

Introduction. In modern literature, folklore no longer works as a decorative element. It becomes an active tool for understanding collective trauma, historical memory, and identity. The main trends include the deconstruction and retelling of classical myths and fairy tales, shifting the focus from traditional heroes to antagonists or marginalised characters, as well as the development of the “dark folklore” (folk horror) direction. In Ukrainian literature, these processes become stronger because of the war and national revival, which makes folklore structures more important in contemporary prose.

Aim. The aim of the study is to define the modern trends of using folklore in literature and to analyse how they influence the interpretation of cultural, psychological, and social processes in global and Ukrainian contexts.

Results. Modern authors actively create retellings, giving secondary characters – especially women labelled as “witches” or “monsters” – psychological depth and a clear voice, which helps to reinterpret familiar stories. The development of folk horror shows how traditional demonology appears in urban and realistic settings, where traditional spaces – the forest or an abandoned village – become metaphors of psychological danger. In Ukrainian literature, Maryna and Serhii Diachenko in their works *The Gatekeeper* and *The Shard* build parallel worlds based on folklore archetypes of the fight between Good and Evil. Yuri Vynnychuk in his stories *Forever Prisoner of Christmas* and *The Little Horn* creates intertextual links between reality and ritual culture, using folklore as a structural tool for understanding modern life. Oksana Zabuzhko in *The Tale of the Viburnum Flute* combines folklore, biblical, and modern discourses, using mythopoeics to explore identity. A common trend is the rejection of superficial ethnic decoration and the turn to the chthonic, dark layers of folk mythology as a source of inner strength and resistance. At the same time, the mythologisation of war becomes visible: modern heroes receive features of epic warriors, and the image of the enemy takes on traits of traditional evil spirits. This helps integrate traumatic experience into a familiar cultural system.

Conclusions. Modern folklore trends in literature create a new system of artistic thinking that connects the past with the present, supports the rethinking of personal and national identity, and provides cultural tools for working with trauma. Folklore becomes not only an aesthetic resource but also a powerful instrument for psychological and social understanding of reality.

ZALISKA, Anna

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE ROLE OF THE COMMUNICATIVE APPROACH IN TEACHING ENGLISH IN PRIMARY SCHOOL

Introduction. The main goal of teaching a foreign language in primary school is to develop in children the ability to communicate, using language as a tool for interaction with different cultures. Communicative competence, understood as the ability to engage in meaningful communication, forms the basis of the communicative approach to foreign language learning.

Aim. The purpose of this work is to outline the importance of using a communicative approach in teaching English in primary school and to identify effective methods and techniques for its implementation.

Results. The *communicative approach* is widely recognized as an effective method of teaching foreign languages, particularly in primary school. Various strategies are applied in foreign language education, and the term *approach* refers to a general concept that defines the fundamental principles and direction of learning. In simple terms, it is the overarching strategy the teacher adopts to achieve learning objectives.

Communicative foreign language instruction is an active process in which students learn to use the language to solve real-life problems in social contexts. The central role of the communicative approach in primary school English instruction is the formation of students' communicative competence. The primary goal is not merely to learn grammar rules or memorize vocabulary, but to enable children to communicate in English, understand and express their thoughts, participate in dialogues and discussions, and apply language in real-life situations.

Thus, learning takes place through speaking practice aimed at achieving specific communicative purposes. Grammar is acquired not through memorization of rules, but through meaningful use: students first absorb words, phrases, and ready-made language structures, and then, through communication, begin to understand their grammatical organization. To help students first speak fluently and later think in a foreign language, teachers must create a range of situations that motivate active language use.

Communicative exercises are most commonly used for this purpose. These are tasks that encourage students to engage in natural, spontaneous verbal communication. Examples include responsive exercises, situational tasks, reproductive exercises, descriptive activities, discussions, and other interactive formats.

Conclusions. In conclusion, the communicative approach plays a key role in foreign language learning, as it effectively develops learners' communication skills. Its advantages are clear: faster results compared to traditional methods, active involvement of all students, contextualized language learning that enhances understanding, and a strong link between classroom communication and real-life situations.

ZHANG, Zhengzheng

<https://orcid.org/0009-0008-0900-2308>

Simon Kuznets Kharkiv National University of Economics, Ukraine

ART IN EXTRACURRICULAR EDUCATION INSTITUTIONS IN THE PEOPLE’S REPUBLIC OF CHINA

Art is a popular and growing subject in Chinese extracurricular education. While art’s popularity is increasing, traditional views sometimes associated it with being a “gentle” and “feminine” pursuit, which influenced the gender of students in art majors in the past.

Government policies like the “Double Reduction” policy (implemented by the Chinese government in July 2021, aimed to reduce the academic burden on students by cutting back on excessive homework and after-school tutoring, improve educational equity, promote student well-being) have increased opportunities for students to participate in art programs, and art is even included in entrance examinations in some provinces, like Jiangsu, signalling its increased importance in the education system. This reflects a shift in societal emphasis, moving beyond purely academic pursuits to embrace a wider range of creative development.

On the whole, extracurricular education institutions in China include a wide range of options like academic tutoring centers (for-profit institutions that provide extra help in subjects like math, science, and languages. They are a major part of the extracurricular market), arts and sports academies (Many institutions offer activities in fine arts, music, and sports. Universities often have a variety of clubs to develop holistic personality), science and technology activity clubs (organizations like the National Youth and Children's Scientific and Technological Activities group aim to foster scientific literacy and train a future workforce in science and technology), cultural and social clubs (they can include everything from a student’s participation in university clubs to social activities like visiting parks or teahouses). These institutions have become integral to student life, but they have also faced controversy regarding their commercial nature and impact on academic pressure. While academic subjects are popular in extracurricular education institutions, art is also highly popular because it complements the strong academic curriculum offered during the school day.

The popular art forms in extracurricular education institutions in the People’s Republic of China include:

- drawing and painting. They are among the most popular forms, partly due to the abundance of art competitions;
- calligraphy. Being a highly respected traditional art form, it remains common in extracurricular education institutions;
- sculpting and dance. They are also offered, contributing to a diverse range of artistic expression.

The “Double Reduction” policy has encouraged schools to offer more extracurricular activities, which has created more time and opportunities for students to engage in the arts. A significant portion of students prefer art classes, and many districts have dedicated art classrooms.

ZHORNYK, Anna

Simon Kuznets Kharkiv National University of Economics, Ukraine

FUTURE PROFESSIONS IN CONDITIONS TECHNOLOGICAL CHANGES

In modern times world technological changes are happening extremely quickly, transforming market labor and influencing the requirements for professional skills. Automation, artificial intelligence, robotics and digital platforms create new professions, and some traditional specialties become less in demand. Understanding trends development professions allows prepare for the future and shape necessary competencies.

Purpose of work: To investigate influence technological changes in profession future, determine key trends and skills that will be in demand on the market labor.

Results:

1. **Automation and artificial intelligence:** robots and algorithms replace routine operations, increasing efficiency, but reducing the need for low-skilled labor.
2. **New generation professions:** appear specialties related to AI engineering, analysis data, cybersecurity, robotics, management digital platforms.
3. **Growth demand for “soft” skills:** creativity, critical thinking, communication, emotional intelligence and adaptability become more important than technical knowledge.
4. **Education and training for life:** fast technological changes do necessary permanent increase qualifications and retraining employees.
5. **Flexible forms labor:** remote work, freelance, project work employment are becoming the norm for many industries.

Conclusions

Technological changes radically affect the future professions. Success on the market labor will depend from abilities to adapt, constantly learn and develop critically important skills. Those specialties that combine technical expertise and high “soft” level skills”, will be most in demand.

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ZHUANG, Yan

<https://orcid.org/0009-0006-0743-7530>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

DEVELOPMENT OF EDUCATION POLICY IN THE SECONDARY EDUCATION SYSTEM IN CHINA

The development of Chinese secondary education policy has progressed from establishing a hierarchical system to universal access, driven by reforms that solidified a nine-year compulsory education and expanded high schools. Recent policy focuses on enhancing the quality of education through improved vocational training, stronger emphasis on science and research, and greater emphasis on national strategic needs and global standing. Challenges remain in addressing inequality and reforming assessment.

Key phases and policy developments include:

- universalization phase (1986-2000). The Compulsory Education Law (1986) was a landmark, making nine years of schooling compulsory. This led to a significant increase in enrollment at all levels of secondary education, especially after the expansion of higher education began in 1999;
- integration of vocational and academic tracks (1985 – to the present). A key policy focus since 1985 has been the enhancement of the vocational education and training system. The recent education policy aims to further integrate vocational training with industrial modernization;
- decentralization and autonomy (1985 – to the present). The education policy documents also called for a more autonomous higher education system. China has also employed decentralization as an approach to implement core educational goals;
- quality improvement phase (2008 – to the present). After achieving near-universal access, recent policies have shifted towards improving the quality of secondary education. This includes efforts to provide more diverse and high-quality educational experiences.

The current and future policy directions include: science and research (there is an increased focus on science, research, and technology to strengthen scientific and technological leadership through education); national needs and global standing (policy aims to align education with strategic national needs and enhance China’s global status); international collaboration (expanding international academic collaborations is a goal in the current policy landscape); student-centred learning (reforms are also being implemented to create a school environment with a greater focus on student well-being).

The ongoing challenges in education policy in China include: urban-rural inequality (significant disparities in educational resources and outcomes persist between urban and rural areas); assessment reform (reform of the highly competitive and centralized assessment system remains a challenge); student segregation (policies are grappling with the issue of student segregation).

ZHURAKOVSKYI, Vadym

<https://orcid.org/0009-0008-0534-532X>

Kharkiv National University of Internal Affairs, Ukraine

THE WAYS OF DEVELOPING CIVIC COMPETENCE IN FUTURE UKRAINIAN ARMED FORCES OFFICERS

In modern military situations involving challenges and threats, the priority task of military education, along with the training of highly qualified military specialists capable of ensuring the sovereignty and territorial integrity of the state, is to define and implement a training strategy as a multi-component and multi-vector system that ensures the formation of a Ukrainian citizen capable of fulfilling their duty to defend the Ukrainian state.

This determines the relevance of developing civic competence for future Ukrainian Armed Forces officers.

We consider the concept of 'civic competence of future Ukrainian Armed Forces officers' as an integrative characteristic of personality, which combines civic, social studies and social knowledge and skills, professionally important civic qualities, value-motivational orientations that determine civic position and allow for the fulfilment of civic duties in professional activities.

Therefore, an important task for modern higher military education is to shape and develop the civic competence of cadets, which is a guarantee of the successful professional activity of future Ukrainian Armed Forces officers. The educational process should be aimed at developing cadets' civic knowledge, understanding of civic and social values, ability to cooperate in society, and ability to communicate constructively.

Taking into account the accumulated experience, we propose the following areas for developing the civic competence of future Ukrainian Armed Forces officers in the educational process of higher military educational institutions: developing positive professional motivation and civic values among cadets; expanding and updating the content of social, humanitarian and professional disciplines by including elements of civic education in the curricula; using training and interactive technologies in the professional training process; involving cadets in civic activities; ensuring the subjective civic position of cadets in the educational process; civic orientation in the teaching of all academic disciplines; systematic implementation of the process of developing civic competence at all stages of professional training of future Ukrainian Armed Forces officers by providing interdisciplinary, comprehensive professional training; comprehensive planning and prolonged monitoring of the process of developing civic competence of future Ukrainian Armed Forces officers.

ZNACHKO, Yuliia

<https://orcid.org/0009-0002-2567-6982>

Kharkiv National University of Internal Affairs, Ukraine

ELEMENTS OF THE INFORMATION CULTURE OF A LAWYER

The processes of forming an information society, which have been actively taking place over the past decades, have led to significant changes in society and education. Possession of the necessary information, the ability to obtain it from various sources, process, systematize and use it creatively is becoming a necessary condition for a full-fledged life, personal and professional success of a modern person. This requires the formation of information culture as one of the leading requirements for the personality of a future specialist in any field, in particular legal.

The concept of "information culture", as evidenced by the analysis of scientific sources, includes the following content elements:

- information knowledge: understanding of the leading concepts, principles and technologies related to the collection, processing and transmission of information, in particular knowledge of information sources, methods of its analysis and evaluation;
- information skills and abilities: the ability to effectively search, select, analyze, sort and use information, as well as skills in working with information sources, including web resources and libraries;
- information literacy: the ability to analyze and evaluate information from a critical point of view, distinguish reliable information from unreliable, the ability to create information, including writing texts and developing multimedia educational content;
- information competence: mastery of Internet technologies; work with library catalogs; experience and willingness to work with the flow of information in oral and written, printed and electronic forms; acceptance of the value of the virtual world; readiness and ability to reasonably limit the use of information technologies;
- information ethics and copyright compliance: understanding the principles of ethical use of information, confidentiality and privacy;
- information values: awareness of the importance of information for personal and professional development and society as a whole, the value of intellectual work, people who produce information culture;
- information reflection (a person's tracking of the goals, process and results of his activities in the acquisition of information culture, as well as awareness of the internal changes that occur in the person himself).

Consideration and study of these elements allows us to reveal the meaning of the concept of "information culture" in the context of legal activity.

NATURAL & MATHEMATICAL SCIENCES SECTION

AVSITIDIISKYI, Mykyta

Kharkiv National University of Radio Electronics, Ukraine

APPLICATION OF GRAPH NEURAL NETWORKS FOR REGRESSION ANALYSIS TASKS

The problem of regression analysis remains highly relevant in the modern context of rapidly increasing data volumes generated in fields such as economics, medicine, social sciences, and urban analytics. Traditional regression models often lack flexibility when dealing with complex, high-dimensional, and interconnected data. In this work, graph neural networks (GNNs), and particularly the Graph Attention Network (GAT) architecture, are explored as a promising approach to regression analysis involving spatial and tabular data.

The aim of the research is to investigate the efficiency of graph-based deep learning methods for solving regression problems using structured data with inter-object relationships. The object of study is the regression analysis problem for tabular and spatial data, exemplified by predicting housing prices using the California Housing Dataset – a well-known benchmark that includes information about more than 20000 residential districts in California. Each record contains both numerical and categorical features, such as geographic coordinates (latitude and longitude), median building age, number of rooms and households, population, and median household income. The subject of study is the application of Graph Attention Networks (GAT) to this dataset, where graph edges are constructed according to spatial proximity between districts

The methods include data preprocessing, k-nearest neighbors graph construction (with edge weights based on geographic distance), deep learning with GATConv layers, and comparison with classical machine learning models – namely, multilayer perceptrons (MLP) and random forest.

The developed model represents each housing district as a graph node with features such as geographic coordinates, building age, number of rooms, income levels, and population density. Edges connect spatially close districts, enabling the network to learn both individual and contextual dependencies. The architecture consists of an input projection layer, two sequential Graph Attention layers with multi-head attention and residual connections, and a regression head that outputs the predicted log-price of housing.

Experimental results show that the GAT model outperforms classical regression methods. On the test set, it achieved MAE = \$39,752 and RMSE = \$58,736, compared to MAE = \$40,837 and RMSE = \$61,648 for Random Forest and MAE = \$255,488 and RMSE = \$3,148,358 for MLP. The inclusion of graph structure significantly improved prediction accuracy and stability, highlighting the potential of graph neural networks in spatial-economic modeling.

The study demonstrates that GNNs can effectively capture hidden relationships in data and serve as a powerful alternative to traditional regression techniques. The proposed approach can be extended to other domains involving spatial or relational data, such as transport, healthcare, or social networks.

BATYUK, Liliya

<http://orcid.org/0000-0003-1863-0265>

ZHERNOVNYKOVA, Oksana

<http://orcid.org/0000-0002-5383-449>

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

CONCEPTS FOR DEVELOPING DIGITAL COMPETENCE OF HIGHER EDUCATION STUDENTS

The concept of developing digital competencies of higher education students of educational institutions of Ukraine provides for an analysis of the state of digital literacy, implementation of measures to develop digital competence, implementation of appropriate incentives for the digitalization of the university environment awareness of existing challenges, stimulation of the use and consumption of digital technologies in the learning process (Batyuk & Zhernovnykova, 2023).

Digital competence certainly includes the confident, critical, creative and responsible use by higher education students of digital technologies for learning in STEM education, inclusive education, etc. employment, work, leisure and participation in public life.

The Covid-19 coronavirus pandemic has accelerated the process of digital transformation of higher education in Ukraine and has identified both successful practices of transitioning education to virtual reality and risks. Each university in the state has acquired a unique experience of living in the situation, based on the characteristics of the vector of direction of its task in training students.

Digital technologies, on the one hand, are able to provide open access to knowledge, revolutionize the transfer of knowledge and bring education to a new level of quality, and on the other hand, the digitalization of higher education creates a virtual model of the educational process, devoid of university unity, discourse, scientific and pedagogical culture, the sacredness of knowledge.

The development of digital competence of students at the H.S. Skovoroda Kharkiv National Pedagogical University consists in implementing specific solutions, incentives, motivations to increase demand and form learning needs for the use of digital technologies in all areas of life. The expected results of the development of digital competence of students are:

- 1) the ability of education seekers to integrate into the digital education system;
- 2) the ability to apply digital education tools in their scientific and practical work;
- 3) to have a developed digital culture in the community due to an informed perception of digital reality, the acquisition of the necessary digital skills and competencies;
- 4) to implement the principle of «lifelong education» by using online learning technology with the use of digital educational resources;
- 5) to be able to apply digital technologies for their own needs;

- 6) to be able to implement preventive mechanisms regarding the emergence of a new type of discrimination caused by different levels of digital awareness of society in the field of using digital technologies and electronic community services;
- 7) to have a culture of personal safety online and when using digital technologies;
- 8) be able to be competitive in the labor market due to the ability to work with digital data and analyze it.

The formation of a virtual educational space of a «digital university» is necessary for the formation of digital competence of students. This becomes possible only with the creative use of digital technologies, preservation of the autonomy of the teacher, modernization of teaching methods and joint work of the subjects of educational activity of the university.

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BROSLAVSKA, Halyna

<https://orcid.org/0000-0002-9839-4604>

*Municipal Establishment “Kharkiv Humanitarian-Pedagogical Academy”
of the Kharkiv Regional Council, Ukraine*

THE USE OF SIMULATIONS IN THE STUDY OF MATHEMATICS AND PHYSICS IN EDUCATIONAL INSTITUTIONS

Nowadays many teachers in their classes, for the qualitative study of mathematics and physics, use computer simulations, namely virtual models of physical and mathematical education. Simulations contribute to the development of cognitive activity of participants in the educational process, the formation of experimental skills in them and providing a better understanding of students of education of mathematical transformations and physical processes.

Much attention should be paid to computer simulations due to the fact that they allow modeling mathematical constructions and physical phenomena in a virtual environment, which provides safe conditions for conducting experiments, while simplifying the perception of complex processes, developing skills of scientific knowledge and research.

Simulations open up many opportunities for obtaining physical and mathematical education, which is difficult or impossible to implement during traditional offline training. In fundamental education (the study of mathematics and physics) simulations perform demonstration, research and training functions.

The main applications of simulations in mathematics and physics are virtual laboratories, interactive demonstrations and project activities.

The author considers that the use of simulations in the classes on training of physical and mathematical educational components has advantages (safety of experiments, availability and efficiency, the possibility of studying abstract processes, interactivity and involvement, adaptability to individual needs) and disadvantages (insufficient development of practical skills, risk of superficial understanding, technical problems, the need for pedagogical support). It should be known that in order to be able to use computer simulations during the study of mathematics and physics, you need to know and be able to use software (PhET Interactive Simulations, Algodoo, Crocodile Physics), which will provide all participants in the educational process to improve the understanding of information, gain better skills and abilities, the ability to apply the acquired knowledge in practice.

The use of simulations by teachers during the teaching of mathematics and physics is a powerful tool for the modernization of the educational process, which contributes to improving the quality of education; development of educational process of cognitive activity and critical thinking among participants; formation of their research skills and modeling; preparing our students for the real challenges of the future.

We believe that this topic should be more deeply explored and studied and we see great prospects in this direction, namely integration of augmented and virtual reality, adaptive educational systems, common virtual environments, gamification of the learning process.

SOBCHENKO, Tetyana
BUTKEVYCH, Volodymyr

H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine

PRACTICAL AND INTERACTIVE METHODS IN MATHEMATICS TEACHING

Introduction. Education in the 21st century is rapidly changing under the influence of digital technologies. Traditional approaches are gradually giving way to interactive methods that engage students in active participation. The issue of implementing digital technologies in mathematics education has been studied by Ukrainian researchers, including N. Bakhmat, H. Zakharova, T. Zaporozhchenko, T. Sobchenko, and I. Berezina (Bakhmat, 2022; Zakharova, & Zaporozhchenko, 2022; Berezina & Sobchenko, 2024). Scientific findings demonstrate that the digitalization of education increases motivation and learning efficiency. The use of digital technologies helps make mathematics closer to real life and reveal its practical value.

Purpose. To investigate how the use of practical tasks and digital technologies enhances learning efficiency, as well as to compare the approaches that work better in senior and junior classes.

Results. The use of interactive teaching methods significantly increases students' cognitive interest and engagement. For example, platforms such as Kahoot and PhET Interactive Simulations create a playful yet educational atmosphere. Students actively participate in quizzes, compete, and grasp the material more quickly. In senior classes, practice-oriented tasks that demonstrate how mathematics can be applied in real life are more effective. Students in this age group are more interested in their future professions and therefore seek to see the practical value of knowledge.

Conclusions: Practical and interactive teaching methods complement each other. Interactivity increases motivation, while practical tasks help students realize the usefulness of mathematics. The combination of these methods develops logical thinking, independence, and the ability to apply knowledge in real-life situations.

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CHAIKA, Tetiana

<https://orcid.org/0000-0002-5980-7517>

Academy of Sciences of Technological Cybernetics of Ukraine, Ukraine

INNOVATIVE EDUCATIONAL PROGRAMS FOR SOIL FERTILITY RESTORATION IN UKRAINE IN POST-WAR RECONSTRUCTION

Purpose. The war in Ukraine has inflicted severe damage on the country's soil resources, which are critical to its agricultural sector. The destruction caused by explosions, fires, and the movement of heavy military equipment has exacerbated pre-existing challenges, such as soil erosion and degradation due to unsustainable farming practices. The impact is particularly profound in regions like the Donetsk, Luhansk, and Kherson areas, where fertile black soils have been severely compromised.

Results. Given the extensive degradation of Ukrainian soils, the post-war recovery of soil fertility requires not only environmental restoration but also the implementation of innovative educational programs. These programs aim to equip local farmers, agricultural workers, and policymakers with the skills necessary for sustainable soil management and the revitalization of agriculture in the war-torn regions.

Key components of these educational initiatives should include:

1. *Soil Health and Recovery Techniques:* Introducing sustainable farming methods, including agroecological practices, crop rotation, and the use of organic fertilizers to restore soil structure and fertility. Training programs must emphasize the use of bioremediation to address chemical contamination from military activities.
2. *Soil Monitoring and Technology:* Using modern technologies such as remote sensing, drones, and soil sensors to monitor soil conditions and track improvements over time. Educational programs should encourage farmers to adopt these technologies for better decision-making and resource management.
3. *Integration of Climate Change Adaptation:* With Ukraine experiencing rising temperatures and unpredictable rainfall, educational programs must incorporate strategies for climate change adaptation, focusing on soil moisture management and drought-resistant crops.
4. *Regenerative Agriculture:* Promoting practices such as reduced tillage, cover cropping, and the restoration of biodiversity to enhance soil fertility, prevent erosion, and ensure long-term agricultural sustainability.

Incorporating these strategies into comprehensive educational frameworks will help rebuild Ukraine's agro-industrial sector and ensure food security in the face of ongoing challenges. These programs should be developed collaboratively with academic institutions, government bodies, and international organizations to address the diverse needs of affected regions.

Conclusions. By focusing on education and skills development, Ukraine can not only restore its soil fertility but also build a resilient agricultural future that is both sustainable and economically viable.

DUDAR, Mykyta
LAMTIUHOVA, Svitlana

<https://orcid.org/0000-0003-3552-3795>

Kharkiv National University of Radio Electronics, Ukraine

R-FUNCTIONS METHOD FOR MATHEMATICAL MODELING OF STEADY VISCOUS FLOW AROUND AN ELLIPTICAL CYLINDER

Building on Rvachev's R -functions method as a constructive framework, the study presents a problem-oriented formulation and numerical implementation

for approximating the stream function $\Psi(x, y)$ in the steady viscous flow of an incompressible fluid past an elliptical cylinder. The point of departure is the classical behavior of planar slow flows (the Stokes paradox) and the expediency of applying the Oseen linearization for small and moderate Reynolds numbers as a verification benchmark. In this formulation, the stream function – velocity-potential approach eliminates the pressure from consideration and automatically satisfies the continuity equation, which makes it convenient for constructing the numerical scheme.

The **purpose** is to develop an R -functions-based numerical model that accurately represents viscous incompressible flow past bodies of elliptical cross-section.

Results. The central idea is an analytic-geometric representation of the boundaries and boundary conditions by means of R -functions: the ellipse $x^2/a^2 + y^2/b^2 = 1$ and the far-field boundary are combined through R -operations to generate smooth support functions that vanish on the prescribed contours and encode impermeability and no-slip, as well as the correct behavior

at infinity. The unknown stream function Ψ is represented in a structural approximation, where the indeterminate components are expanded in a finite basis and determined using a nonlinear Galerkin method (with the option to initialize from the Oseen solution).

We aim to obtain convergent approximations of the stream function Ψ with a controllable error by enriching the basis, and to construct isolines of the velocity magnitude $|u|$. Validation is planned along two lines: (i) comparison of drag and lift coefficients and the flow topology with analytical and asymptotic predictions of Oseen theory for an elliptical cylinder; and (ii) reproduction of the known trends for the circular cross-section as a special case, thereby demonstrating the correctness of the solution structure – most notably, the exact satisfaction of the boundary conditions both on the solid surface and at infinity.

Conclusions. The practical significance of the results lies in estimating the drag, flow separation patterns, and the influence of aspect ratio and angle of attack for bodies with elliptical cross-sections, such as cables, pipelines, heat exchanger components, and microfluidic elements. The constructive nature of the R -functions approach – based on Boolean compositions of contours and smooth “boundary equations” – makes the model readily extensible to multiply connected domains and modified geometries, and fully compatible with subsequent spectral or collocation refinement.

**KLOZ, Kateryna
HAIDUS, Andrii**

<https://orcid.org/0000-0001-8414-5765>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

COMPUTER MODELS AS A MEANS OF CROSS-CURRICULAR INTEGRATION OF EDUCATIONAL MATERIAL

The modern educational system is increasingly integrating digital technologies into the learning process, with computer modeling holding a special place among them. It serves as an essential tool for studying complex processes that are difficult or impossible to investigate experimentally within the realities of a school environment.

Computer models not only allow for the visualization of abstract ideas but also enable the analysis of phenomena in dynamics, the adjustment of system parameters, and the prediction of outcomes. A key advantage of modeling is its interdisciplinary nature, which contributes to the formation of a holistic scientific worldview in students.

In the school informatics curriculum, modeling is distinguished as a separate topic, where the main emphasis is on constructing algorithmic models of objects and events. Students acquire skills in developing models using flowcharts, program code, or simulations in a programming language (such as Python or Scratch). For example, they can model the process of a queue in a store, traffic at an intersection, or the spread of a disease among a population. Such practice not only imparts practical programming skills but also clearly demonstrates the fundamental scientific principles of systemic thinking and cause-and-effect relationships.

In mathematics courses, computer modeling is used to study functional relationships, geometric shapes, and statistical trends, utilizing software such as GeoGebra. Students can construct graphs of functions, changing their parameters in real-time, which facilitates a deep understanding of the concept of parametric dependence.

Physical processes often exhibit multifaceted dynamics, and it is computer modeling that allows students to track the development of events in a simulated environment. For example, in the "Mechanics" section of the Physics discipline, models are used to analyze the movement of objects under the influence of various forces, replicating the conditions of a real experiment.

In geography courses, computer modeling is applied to study climatic phenomena, landforms, the movement of air currents, and water systems – for example, to analyze the distribution of temperature, precipitation, and vegetation. The use of climate change models makes it possible to forecast future scenarios in specific regions based on data about greenhouse gas emissions.

The interdisciplinary application of computer modeling in the school curriculum significantly improves the effectiveness of the educational process, stimulates students' cognitive interest, and develops their critical thinking. The use of models allows students to conduct experiments, propose and test hypotheses, and see the immediate consequences of their actions.

Collectively, this not only deepens the understanding of individual academic topics but also promotes the formation of a systemic view of the surrounding world, aligning with modern educational standards.

KNYSH, Oleksandr

Kharkiv National University of Radio Electronics, Ukraine

THE IMPACT OF THE GELU ACTIVATION FUNCTION AND THE ADAM OPTIMIZER ON THE CONVERGENCE OF PHYSICS-INFORMED NEURAL NETWORKS (PINNS) IN HEAT CONDUCTION MODELING

The feasibility of using Physics-Informed Neural Networks (PINNs) to solve multidimensional dynamic problems is investigated, specifically focusing on the 2D heat conduction equation in a homogeneous medium. The purpose of the work is to research the optimal configuration of hyperparameters—namely, the activation function and the optimizer—that ensures high accuracy and stability of the PINN model during the solution of this dynamic partial differential equation (PDE). The process of heat conduction is modelled by a PDE with initial and boundary conditions, which are directly integrated into the PINN's loss function as residual terms. This approach eliminates the need for large pre-generated datasets.

The core of the methodology lies in constructing a fully connected PINN architecture utilizing the GELU (Gaussian Error Linear Units) activation function across all hidden layers and employing the Adam optimizer. The Adam optimizer was chosen for its adaptive learning rate, which provides stability and effective optimization, especially when dealing with the complex, non-linear loss landscape of physically constrained problems. The GELU function, described as a smoother ReLU, was implemented to enhance the stability of the automatic differentiation process required for computing the high-order derivatives in the PDE residual term.

The results of the computational experiment demonstrate that the combined use of GELU and Adam allows for effective minimization of all loss components (PDE, Initial Conditions (IC), and Boundary Conditions (BC)) and ensures high-quality approximation of the solution. For a representative case (where the thermal parameter $\alpha=0.5$), the network achieved an overall loss of 0.044502 and a PDE loss of 0.0185. The solution visually corresponded closely to the analytical solution and was confirmed with high L_2 norm quality metrics. A critical finding is the network's ability to handle different dynamic stiffnesses (various values of the thermal parameter, α). For high parameter values (e.g., $\alpha=2$), which induce rapid system dynamics and slower initial convergence, the PINN, with increased training epochs, successfully maintained high solution quality (Loss: 0.025166), proving the robustness of the chosen configuration. Furthermore, a comparison with the Finite Difference Method showed that PINN achieved a comparable accuracy with significantly fewer time steps (20 steps vs. 1444 steps for FDM to maintain stability), highlighting its computational advantage in specific dynamic scenarios.

In conclusion, the application of PINNs with the GELU activation function and the Adam optimizer is highly effective for solving multidimensional dynamic PDE problems like the heat conduction equation. The chosen configuration provides the necessary stability and convergence speed, validating the PINN approach as a promising, data-free alternative to traditional numerical methods in applied mathematics and physics.

KOLIADA, Anastasiia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

APPLYING EUROPEAN EXPERIENCE OF STEAM EDUCATION IN UKRAINIAN INFORMATICS LESSONS

The purpose of these theses is to identify opportunities for using European experience in implementing STEAM education in Ukraine in computer science classes. It is important to analyze the relevance of this technology, its advantages, and possible difficulties in implementing it in the educational process.

STEAM education provides a unique interdisciplinary approach to learning. This approach to education is actively developing in leading European countries. For example, in Finland, it is common to study robotics using LEGO training. This helps students understand the basics of algorithmization and programming in a playful way and develops teamwork. In Germany, it is common to study Arduino and Raspberry Pi. This helps students create mini-projects that are relevant to real life, develops logical thinking and teamwork, and lays the foundation for understanding the Python programming language. In Estonia, the basics of cybersecurity are added to programming lessons. This ensures the development of critical thinking and digital literacy in students. In Poland, Scratch and App Inventor are often used, with an emphasis on creative tasks and creative thinking.

After analyzing the European experience, we can say that it is relevant to implement this STEAM approach in Ukraine in computer science classes, as it develops key competencies and cross-cutting skills in students. In my opinion, the connection between computer science and natural sciences, technology, engineering, art, and mathematics helps develop practical skills and the ability to apply acquired knowledge in life, which is the goal of the modern New Ukrainian School.

Despite the above-mentioned advantages of implementing STEAM education, it is also worth mentioning the difficulties in ensuring this approach in schools in computer science classes. Often, the necessary components of STEAM education are paid for, and not all schools can afford to buy a LEGO set or Arduino boards, so support at the state level is needed. There is also a need to train qualified teachers who will be able to implement an interdisciplinary approach in their lessons. Perhaps a unified STEAM education curriculum is needed.

In conclusion, I would like to note that STEAM education is only beginning to develop in Ukraine, and it is necessary to cooperate with European countries and exchange experiences regarding the implementation of STEAM in the educational process. In computer science classes, this approach will be relevant for both primary and secondary school students, meaning that STEAM education must be systematically implemented throughout the entire school curriculum. This approach may even help students in the future to understand what profession to choose and enable them to participate in various projects, start-ups, and other initiatives organized in Ukraine and internationally.

BATINA, Nikol
KONDRATENKO, Oleksandr

<https://orcid.org/0000-0001-9687-0454>

National University of Civil Protection of Ukraine, Ukraine

ANALYSIS OF ASPECTS OF POLLUTION OF ENVIRONMENTAL COMPONENTS FROM FROM MEDICAL WASTE DISPOSAL

Relevance of the study topic is due to the following components. Compliance with the Order of the State Emergency Service of Ukraine № 618 dated 09/20/2013, the Decree of the President of Ukraine № 722/2019 dated 09/30/2019, the Resolution of the Cabinet of Ministers of Ukraine № 476 dated 04/30/2024, the Specialty Passport of 21.06.01 «Ecological Safety», the Law of Ukraine № 3769-IX dated 04.06.2024, the Standard of Higher Education in Specialty 183 «Environmental Protection Technologies» of the Third (Educational and Scientific) Level in the Field of Knowledge 18 «Production and Technologies», the Topics of Scientific Research and Scientific and Technical (Experimental) Developments for 2025-2029, the Civil Protection Code of Ukraine in its current version dated 12.09.2025.

Purpose of the study. To analyze aspects of pollution of environmental components from a medical waste disposal. **Object of the study.** Negative technogenic impact on environmental components from a medical waste disposal. **Subject of the study.** Qualitative and quantitative indicators characterizing the object of the study.

Results of the study. The study analyzed the most common methods of medical waste disposal in the world, including incineration, autoclaving, chemical disinfection and the latest environmentally friendly technologies. The world experience was studied, which demonstrates the effectiveness of integrated control systems, separate collection and processing in the disposal of medical waste. The problems of medical waste disposal in Ukraine were identified, in particular, the insufficient legislative framework, the lack of proper infrastructure and financing. Category B waste (epidemiologically dangerous) and rational ways of its treatment were considered in detail. The possible environmental and social consequences that arise in the event of improper handling of medical waste were described: from soil and water contamination to the threat of the spread of infections. A scheme for effective waste management was formed using the example of a specific medical institution, which allowed identifying both the strengths of the system and areas for its improvement. A comparative scheme of centralized and decentralized utilization was formed, which allowed to clearly identify the advantages, disadvantages and feasibility of using each model depending on the scale of the medical institution and local infrastructure. Prospects for the development of the medical waste utilization system were determined, in particular the introduction of automated accounting systems, new disinfection technologies, improvement of legislative regulation and raising the environmental awareness of personnel.

Conclusions. Thus, this study analyzed qualitative and quantitative indicators characterizing the negative technogenic impact on environmental components from a medical waste disposal.

LEVKIN, Dmytro

<https://orcid.org/0000-0002-1980-4426>

State Biotechnological University, Ukraine

RESEARCH ON KEY ASPECTS OF CYBER HYGIENE IN UKRAINE'S INFORMATION SPACE

Introduction. Since the start of the full-scale invasion of Ukraine by Russian Federation troops, distance learning has been introduced in secondary and higher education institutions to protect the lives and health of Ukrainians. Because learning takes place using interactive information platforms on digital gadgets, Internet traffic has increased several times over. Even before the introduction of quarantine restrictions caused by the spread of coronavirus infection, the information resources of the global Internet network were mainly used for self-development (online training, online professional development courses), leisure, and recreation. However, since 2022, education in secondary schools and higher education institutions in Ukraine has completely moved online.

Aim. The purpose of the paper is to study the key aspects of cyber hygiene to prevent cyber incidents, reduce the risks of data leakage, phishing and other online threats in the information space of Ukraine.

Results. Along with a full-scale invasion of Ukraine, the enemy has unleashed a full-scale cyberwar against Ukraine. The enemies cyberattack are directed at state and local authorities, military facilities, critical infrastructure, and the personal data of Ukrainians. The goal of the cyberwar unleashed by the enemy is cyber espionage, cyber sabotage, distortion and manipulation of information, cyberattacks, and fake news in Ukraine's information space to undermine the country's defense capabilities and stability, as well as to misinform Ukrainians. In order to prevent, avert, and overcome the consequences of enemy cyberattacks, Ukrainians need to be taught the key aspects of cyber hygiene:

- trust only information from government websites;
- have reliable antivirus protection on your digital device (computer, laptop, tablet, mobile phone);
- regularly update the software on your digital device;
- do not use personal data (full name, bank card details, passport details, date of birth, etc.) as passwords when turning on your digital device and connecting to the internet;
- do not disclose personal data to third parties.
- be responsible with information obtained on the internet and ignore shocking, sensational information on the internet;
- remember about internet safety when registering and communicating in messengers.

The purpose of cyber hygiene measures is to preserve the confidentiality of data belonging to legal entities and individuals, strengthen the ability to recover information after cyber-attacks, and overcome their consequences. Let's look at some cases of phishing. When working with information resources on the

Internet, Internet users often receive intrusive online lottery advertisements. After clicking on a malicious link, cybercriminals gain access to information from the Internet user's digital gadget, bank card numbers, passport details, and other personal confidential information. Another example of phishing is requests, even from subscribers in the Internet user's phone book, to vote for a particular person or support a certain event. After fulfilling this request, cybercriminals gain access to information from the digital gadget and personal information. You should also ignore requests from even acquaintances and relatives on the Internet to transfer money for the treatment of a loved one or to donate money. Calls from bank employees asking for bank card details, sensational news about winning millions, wills from distant relatives naming you as their heir – all of these are harmful actions by cybercriminals. If you receive such messages, you should delete them, contact the cyber police, and under no circumstances follow the links.

Conclusions. The transition to online learning has further increased Internet use especially among children and young people. It is important to remember that when working on the Internet, one must treat the information received responsibly and adhere to the rules of cyber hygiene and cybersecurity. At the same time, state and local authorities must organize training for the population on the basic rules of cyber hygiene and cybersecurity. In addition, if the security situation in the region where a person is located allows, in order to improve mental health, it is necessary to take breaks from studying and relaxing using digital gadgets, devote some time to physical activity and outdoor sports, communication, leisure, and offline recreation.

MUKHINA, Tetiana

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

MODELING AS A STEM TECHNOLOGY FOR DEVELOPING CREATIVITY IN PRIMARY EDUCATION STUDENTS

In modern education, there is a growing need to develop creative thinking in primary education students. Within the STEM approach, modeling serves as an effective means of fostering the creative potential of future teachers. Research by Ukrainian scholars (A. Drokina, O. Spivakovskiy, N. Morse, et al.) confirms that STEM modeling develops systems thinking, imagination, and the ability to construct new knowledge.

Theoretically, modeling is grounded in the constructivist approach, which emphasizes the active role of the student in creating and exploring models. In the works of J. Piaget and J. Bruner, it is considered a tool for developing cognitive structures and critical thinking. In the Ukrainian context, these ideas are expanded by O. Pometun, I. Zaitseva, and O. Huzik, highlighting the activity-based approach, STEM competencies, and pedagogical design. Modeling combines scientific inquiry, construction, and creative thinking, making it an effective instrument for developing creativity.

In STEM modeling, primary school students learn to formulate hypotheses, test them, and visualize ideas, which contributes to the development of creative thinking. By creating new representations, seeking non-standard solutions, and experimenting with forms, modeling stimulates creativity. Practice shows that the use of LEGO, digital simulators, and 3D modeling fosters imagination, engineering thinking, and problem-solving skills. According to E. Torrance, creativity encompasses originality, flexibility, and the ability to transform – qualities that are developed in students through modeling.

The professional training of future primary school teachers should include a methodological system that integrates modeling into the content of pedagogical disciplines, employs the case method for analyzing educational situations, involves project-based activities to develop educational models, and utilizes digital platforms (Tinkercad, Scratch, GeoGebra) for creating educational simulations. These approaches contribute to developing future teachers' capacity for pedagogical design, encompassing modeling of content, forms, and teaching methods.

The practical implementation of modeling as a STEM technology is possible through educational cases and projects. For example, the «Ecological House» case involves creating a model from sustainable materials, calculating energy consumption, and presenting solutions. In the «Solar System Model» project, students create three-dimensional models of the planets, explore their characteristics, and present their findings. Such tasks develop creativity while fostering teamwork, critical thinking, and technical literacy skills.

Thus, modeling as a STEM technology is an effective tool for developing creative thinking in primary education students. Its integration into the professional training of future teachers allows for the cultivation of innovative pedagogical thinking capable of responding to the challenges of modern education.

OLEFIRENKO, Nadiia

<https://orchid.org/0000-0002-9086-0359>

KURHANSKYI, Andrii

<https://orcid.org/0000-0003-4354-2742>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

DEVELOPMENT OF A MOBILE APPLICATION FOR TEACHING SCHOOLCHILDREN THE BASICS OF GEOMETRY

One of the challenging sections of the school geometry curriculum that requires special attention is the section “Cartesian Coordinates and Vectors,” studied in basic secondary school. The content of the section is fundamental for the further study of analytical geometry, algebra, physics, game and animation application programming, 3D graphics programming, and so on, as well as for the development of spatial thinking and skills.

The developed mobile application, “Geometry. Coordinates and Vectors,” contains systematized interactive tasks designed to develop various student skills via manipulating objects, experimenting, drawing geometric primitives, completing test, solving problems or writing code in Python.

An advantage of the application is the automatic generation of task data, which allows for task variety and ensures their uniqueness, making it impossible for students to memorize answers mechanically. Particularly valuable is the generation of geometric figures for specific task conditions – for example, random points on the plane with coordinates that are integers or rational numbers with a given precision; lines passing through points with certain coordinates and so on.

Automatic data generation enables the inclusion of tasks that truly allow students to develop skills through repeated practice without fear of rejection, negative comments, or penalties. To consider a solution correct, we deemed it appropriate to require three correct answers. Thus, the result of each task is instantly checked and evaluated. A distinctive and particularly convenient feature of the application is that students can enter answers in different ways without worrying about strict formatting rules.

Determining the topics for the interactive exercises, we considered the need for practice, the necessity of visualizing certain actions, and the possibility for students to engage in experimental activities to make their conclusions. Each section is presented by a series of topics with about 10–15 diverse exercises. Additionally, each section is supplemented with topics that offer real-life or applied problems as well as topics oriented towards using the acquired knowledge in programming and writing code.

With features such as task generation, support for various answer input methods, automatic result checking, and the ability to track individual user progress, the application has significant potential for use in both formal and informal learning environments. The created application enables the implementation of a competency-based approach to teaching geometry, particularly through tasks that have an applied focus and stimulate students’ cognitive activity.

**OSTAPETS, Nataila
PROKOPENKO, Iryna
TITUNOVA, Valentyna**

Pryluky Technical Vocational College, Ukraine

**MEDIA AND INFORMATION LITERACY:
A PATH TO SPIRITUAL GROWTH IN THE INFORMATION SOCIETY**

Introduction. A spiritual person cultivates their inner world throughout life, guided by universal values like love, compassion, honesty, and responsibility. However, in the 21st century, an era of unprecedented information flow, people are increasingly immersed in an oversaturated media space.

This leads to a new phenomenon – information overload – which negatively affects the quality of thinking, memory, and attention, and, most importantly, the spirituality and moral compass of an individual.

The objective is to substantiate the need to develop media and information literacy as a key tool for protecting a person's spiritual and moral values in an aggressive information environment.

Research Results. The challenges of the information society and information-psychological security highlight the crucial role of media literacy. It acts as a means of protection and development.

Media education aims to form not only theoretical knowledge about media but also to develop key abilities such as critical thinking, communication skills, and emotional reflection.

It cultivates the ability to independently analyze media texts, understand their purpose, and uncover their hidden meanings. This creates the conditions for the development of a creative, independently-thinking, and spiritually rich individual.

Conclusions. In today's world, where information is not only a resource but also a potential threat, media and information literacy becomes an integral part of a person's spiritual security and growth.

It is not just a skill but a vital competence that allows a person to consciously interact with the media space, resist manipulation, and protect their inner world from destructive influences.

PARKHOMENKO, Vladyslav

<https://orcid.org/0009-0008-7309-0875>

Kharkiv National University of Radio Electronics, Ukraine

USAGE OF METHOD OF TWO-SIDED APPROXIMATIONS FOR FINDING POSITIVE AXISYMMETRIC SOLUTION OF NONLINEAR ELLIPTIC DIFFERENTIAL EQUATION WITH HETEROTONIC NONLINEARITIES

In the paper we consider the first boundary value problem for a nonlinear elliptic differential equation:

$$-\Delta u = f(\mathbf{x}, u), \mathbf{x} \in \Omega, \quad (1)$$

$$u|_{\partial\Omega} = 0, \quad (2)$$

where Ω is a bounded domain in \mathbb{R}^2 ; $\mathbf{x} = (x_1, x_2)$; Δ is the Laplace operator; function $f(\mathbf{x}, u)$ is continuous and positive for $\mathbf{x} \in \bar{\Omega}$, $u > 0$.

The boundary value problem (1), (2) arises, for example, in the mathematical modelling of nonlinear heat conduction processes.

If the domain Ω is a circle of radius R , then the problem reduces to finding an axisymmetric solution of the equation. This problem depends only on $\rho = |\mathbf{x}|$. Upon transforming to polar coordinates, equation (1) is converted into an ordinary differential equation:

$$-\frac{1}{\rho} \frac{d}{d\rho} \left(\rho \frac{du}{d\rho} \right) = f(\rho, u), \quad (3)$$

and the boundary condition (2), given on circle $|\mathbf{x}| = R$, is transformed into the form $u(R) = 0$.

The point $\rho = 0$ is a singular point of differential equation (3), so for the function $u = u(\rho)$ it is necessary to set a boundedness condition:

$$|u(0)| < +\infty.$$

Then the boundary value problem (1), (2) is transformed into the problem:

$$-\frac{1}{\rho} \frac{d}{d\rho} \left(\rho \frac{du}{d\rho} \right) = f(\rho, u), \rho \in (0, R), \quad (4)$$

$$|u(0)| < +\infty, u(R) = 0. \quad (5)$$

Problem (4), (5) is equivalent to a Hammerstein integral equation. To obtain its solution, sequences of upper and lower approximations are constructed, the first being nonincreasing and the second nondecreasing (Пархоменко & Сидоров, 2015).

The two-sided approximation method for solving problem (4), (5) is applied to the case of a power-type heterotonic nonlinearity $f(\rho, u) = u^p + u^{-q}$, $p > 0, q > 0$.

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**POLISHCHUK, Kateryna
MUKHINA, Tetiana**

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

VIRTUAL AND AUGMENTED REALITY IN TEACHING NATURAL SCIENCES IN PRIMARY SCHOOL

In today's digital world, children are immersed in innovative technologies from an early age, opening up new horizons for learning and development. Thanks to VR and AR, they can “travel” into space, ‘observe’ dinosaurs, or “conduct” scientific experiments without leaving the classroom. The teacher's task is to channel this natural curiosity into cognitive development, forming a lasting motivation to learn.

Virtual reality (VR) and augmented reality (AR) technologies transform the study of natural sciences into an exciting, dynamic, and realistic process. Immersive learning combines visibility, interactivity, and safe modeling of complex phenomena. In a virtual environment, students can explore the structure of the human body, the structure of the Earth, the movement of planets, or the processes of the microcosm – things that are difficult or impossible to demonstrate in a regular classroom.

During such activities, younger students are not passive listeners: they interact with the learning material, conduct experiments, visit virtual laboratories and museums, and observe natural phenomena. This promotes the development of investigative thinking, the formation of hypotheses, and the ability to draw conclusions based on their own observations.

VR and AR also open up new opportunities for inclusive education, allowing the educational process to be adapted to the individual needs of students with special educational needs. This provides a comfortable environment and equal access to knowledge.

Modern VR and AR educational platforms that can be used when teaching science in elementary school:

- *MozaBook – MozaWeb* – an interactive platform with 3D presentations, videos, photos, and tools for modeling experiments. Students “live” the lesson in a three-dimensional format, exploring cells, animals, and natural phenomena.
- *Star Walk and Star Walk 2* – applications for studying astronomy, containing over 200,000 celestial objects and allowing you to observe space in real time.
- *Google Expeditions* is a tool for virtual excursions to different corners of the world: from the depths of the ocean to world-famous museums.

Thus, the use of virtual and augmented reality technologies in teaching natural sciences in primary school opens up new horizons for education. Familiar learning turns into an exciting journey full of discoveries and research. Immersive technologies not only stimulate students' cognitive activity, but also shape key NUS competencies: curiosity, the ability to observe, explore, formulate assumptions and conclusions, as well as learn about oneself and the world through research interaction.

RIZNYCHENKO, Margaryta
MUKHINA, Tetiana

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

THE USE OF ARTIFICIAL INTELLIGENCE IN THE PROCESS OF TEACHING MATHEMATICS IN PRIMARY SCHOOL

Integration of Artificial Intelligence (AI) into educational activities is an important component of the global process of digitalization of society.

As a powerful tool, AI contributes to the improvement of education quality while simultaneously influencing the enhancement of students' cognitive activity. In particular, within the context of mathematics education, it opens new perspectives for the personalization of learning and the development of logical and analytical thinking.

The main goal of the study is to determine the specific features of using AI in the process of teaching mathematics at the primary school level. In particular, the task is to identify the potential benefits of AI and to assess its impact on the organization and outcomes of learning activities among younger students in mathematics lessons.

Analyzing the scientific works of O. Asmolov, F. Bartlett, A. Verbitsky, V. Davydov, and others, the integration of AI into mathematics education demonstrates a number of key advantages, among which are:

1. Accessible explanation of complex concepts. Thanks to interactive features, visualization, and step-by-step explanations, material becomes more comprehensible even for younger schoolchildren.
2. Automation of routine tasks. AI takes over checking various exercises, generating test materials, and performing other types of repetitive activities. This allows primary school teachers to focus more on creative and methodological aspects of their work.
3. Stimulation of analytical thinking. AI systems can detect mistakes made by primary school students and provide recommendations for overcoming them, thereby fostering critical reflection on mathematical operations.
4. Personalization of the educational process. The use of AI makes it possible to adapt the learning pace to the individual characteristics of younger students, providing support precisely in those areas where difficulties arise.

Thus, the integration of AI into the educational process enables primary school teachers to focus on supporting students and guiding their cognitive activity. AI should be viewed as a promising tool for enhancing the quality of mathematics education at the elementary level. With proper and balanced implementation, AI is capable of combining the advantages of modern digital technologies with traditional approaches to teaching.

In conclusion, the use of AI in the context of mathematics education in primary school opens new horizons for the development of modern pedagogy. Through interactive solutions, personalized learning, and the automation of a range of repetitive tasks, artificial intelligence makes the learning process more accessible and understandable for younger schoolchildren.

OBJECT TRACKING USING UNMANNED AERIAL VEHICLE

The purpose of this work is to find algorithm for geographical localization of objects on video taken from unmanned aerial vehicle (UAV). Trained deep learning model for object tracking. Implemented software application for processing of video records and telemetry data.

The relevance of the topic is due to the widespread use of UAVs in civil and military tasks. One of the possible applications is the creation of terrain maps.

YOLO architecture was chosen to train the object tracking model. It stands out for its speed and simplicity of programming library. BoT-SORT was used as tracking algorithm.

Objects geolocation calculation was done using:

- 1) coordinates of object on image (tracking model results);
- 2) geographical coordinates of the UAV provided by GPS sensor (longitude, latitude);
- 3) altitude value provided by altimeter;
- 4) azimuth value provided by compass (direction of flight of the UAV);
- 5) camera parameters (sensor dimensions, focal length, image dimensions).

UAV sensors can provide inaccurate telemetry data, especially while moving and steering, so data requires additional pre-processing. Moving average algorithm was used for noise smoothing of GPS sensor data:

$$SMA_t = \frac{\sum_{i=t-n+1}^t P_i}{n}$$

To simplify calculations, camera is fixed in a direction strictly perpendicular to the ground surface.

The first step is to calculate the distance l from the image center to the object using the ground sampling distance:

$$GSD_w = \frac{FlightHeight * SensorWidth}{FocalLength * ImageWidth}$$

$$GSD_h = \frac{FlightHeight * SensorHeight}{FocalLength * ImageHeight}$$

$$l = \sqrt{(\Delta x * GSD_w)^2 + (\Delta y * GSD_h)^2}$$

Then the Python library `geographiclib.geodesic` is used to resolve direct geodesic problem and determine geographic coordinates of the object:

$$Geodesic.WGS84.Direct(latitude_{uav}, longitude_{uav}, \alpha, l)$$

where α – azimuth from UAV to the object.

Detected objects tracks were plotted on map to visualize results.

SHARAI, Kate

Kharkiv National University of Radioelectronics, Ukraine

INTELLECTUAL DATA ANALYSIS OF THE RESULTS OF FINAL EXAMS FOR ASSESSMENT THE QUALITY OF SECONDARY EDUCATION

Secondary education forms the basis for the personal and professional growth of every individual. Accordingly, it is extremely important to monitor the quality of education in schools. The results of final examinations: external independent Evaluation (EIE) or national multi-subject test (NMT) – are one of the key indicators of the effectiveness of the educational process. Their intellectual analysis using machine learning methods will reveal non-obvious patterns in the academic achievements of graduates and assess the level of teaching in secondary education institutions.

The aim of the study is to examine the leading trends in EIT and NMT scores in mathematics for 2021 – 2024 and compare them to determine the quality of secondary education and develop measures to improve it. Another important aspect of the study is to examine the impact of the crisis conditions caused by the pandemic and war on the effectiveness of school education.

The data under consideration contains information on the distribution of EIE and NMT scores for 2021 – 2024 in secondary education institutions in Kharkiv. A comprehensive analysis of the dataset is conditionally divided into two stages.

At first, the data array is pre-processed: duplicates and errors are removed, all features of its objects are brought to the same scale by means of standardization, and then its dimension is reduced using the principal component analysis. Two principal components that characterize the elements of the data set with the maximum preserved proportion of the variance of their original features are selected for clustering analysis.

The second step is to cluster the data using non-hierarchical methods: k -means and k -median. The results of procedure are the division of all schools in Kharkiv into 5 groups, each of that is formed from secondary education institutions with similar EIE and NMT scores and levels of academic preparation. Among the clusters formed, there are strong specialized and general education schools, as well as schools with an average level of training and a couple of categories of schools with predominantly low test results.

Thus, the analysis revealed a trend towards a decline in average EIE and NMT scores from year to year in each of the clusters. This fact indicates deterioration in the quality of secondary education and low level of preparedness for effective work in extreme circumstances. The introduction of more effective teaching methods adapted to today's complex realities, the organization of courses to improve teachers' qualifications, and attempts to motivate students to learn and support them in stressful conditions can help to raise the current level of the academic preparation and improve the industry of secondary education.

TYMOSHCHUK, Oleksandr

<https://orcid.org/0000-0002-4367-4692>

Rivne State Humanitarian University, Ukraine

FORMING RADIATION LITERACY OF NATURAL SCIENCE TEACHERS IN THE CONTEXT OF THE DIGITAL EDUCATIONAL ENVIRONMENT

The development of technologies based on the use of nuclear energy necessitates revision and strengthening of safety requirements for their safe use. A modern person should be trained in radiation literacy at all stages of their education. In a secondary school, the role of radiation literacy is assigned to a science teacher who can form a holistic view of radiation safety in students.

At the same time, the development of digital technologies is radically changing the educational process, which requires consideration of the formation of radiation literacy of future science teachers from a new perspective.

The purpose of the study is to outline the conditions for the effective formation of radiation literacy of future science teachers in the digital educational environment.

Achieving the effective formation of radiation literacy of future science teachers requires the implementation of a set of specific organisational and pedagogical conditions, including the targeted integration of thematic content into the educational process, the use of interactive teaching methods and the introduction (adaptation) of specialised digital learning tools. The rationale for choosing the digital learning environment as a platform for implementing the above conditions is based on its significant didactic potential, which provides visualisation of complex processes, modelling of radiation phenomena and personalisation of the educational trajectory of students.

Based on the competence and systemic approaches, it is advisable to design an integral system for the formation of radiation literacy, which is built on a modular principle. In the context of the development of modern digital technologies, artificial intelligence tools should not be neglected, which allow for the personalisation of educational trajectories, while ensuring the acquisition of a minimum level of skills of students.

Describing the structural components of such a system, it is worth highlighting the target, content-process, diagnostic and resultant blocks, which are interconnected and ensure the consistency of pedagogical influence. We see the assessment of the effectiveness of the designed system in the diagnosis of radiation literacy, at least according to cognitive, motivational, value and activity criteria that correspond to the structure of the competence itself.

Therefore, the effective formation of radiation literacy of future science teachers is possible through the implementation of a comprehensive educational system in the digital educational environment, based on a competence-based approach and the integration of modern digital technologies, including artificial intelligence, which in turn allows for the personalisation of learning and the achievement of predictable results that are diagnosed according to certain criteria.

VASYLIEV, Oleksii

<https://orcid.org/0009-0009-3506-1405>

V.N. Karazin Kharkiv National University, Ukraine

IMPROVING SPEAKING SKILLS USING VOICE-BASED AI TOOLS ALONGSIDE GAMING ACTIVITIES

Introduction. Improving speaking skills is a key area of humanities education and is relevant for foreign and native languages. Voice-based AI tools make it possible to practice speaking skills without a live tutor. This allows learners to practice for hours and consult a specialist only when necessary. However, voice-based AI tools cannot provide the emotional interaction that humans do, making it difficult to sustain prolonged conversations. A feasible solution is the parallel use of a gaming activity that can serve as a stimulus to extend the duration of productive speaking practice.

The **purpose** of the study is to theoretically substantiate the feasibility of using voice-based AI tools alongside gaming activities to improve speaking skills, and to outline the conditions for the effective implementation of this approach.

Results. Several voice-based AI tools are free and accessible to a wide range of learners, such as ChatGPT Voice Mode, Gemini Live, and Microsoft Copilot Voice. These tools enable spoken interaction with AI platforms, allowing for focused speaking practice. They offer the opportunity to train in both native and foreign languages across any subject area, at any time. However, when a learner aims to practice continuously for an hour or more, they inevitably face a lack of emotional connection in the interaction with a voice-based AI tool, making it difficult to maintain the dialogue. This raises a key question: How can we initiate and sustain effective communication with a voice-based AI tool for an hour or more while keeping engagement high?

As a solution, we propose that engaging in a parallel gaming activity can facilitate extending the time of spoken interaction with a voice-based AI tool. The key is to select a gaming activity that ensures optimal distribution of attention between tasks. Overly dynamic computer games can overload cognitive resources, while complex puzzles can completely absorb attention. An effective compromise could be round-based tactical team computer games, such as Counter-Strike 2. In this game, players who are eliminated early must wait until the round ends, creating natural "windows" for up to 2 minutes of speaking practice. It should be noted that despite the presence of virtual violence elements in some games, it is important to understand their conditional nature and limit gaming sessions to reasonable time frames (1-2 hours). Notably, the gaming process primarily engages visual and motor functions, while language practice uses auditory and speech faculties; therefore, these activities minimally impede each other.

Conclusions. The integration of voice-based AI tools with gaming into the learning process opens new prospects for enhancing learners' speaking skills. This approach addresses the main problem of existing voice-based AI – the lack of emotional engagement with the AI during prolonged practice. The gaming activity acts as an "attention anchor" that transforms normal language practice into an engaging process. However, for maximum effectiveness, it is necessary to carefully select the type of gaming activity, taking into account the individual characteristics of the learners, thereby ensuring a balance between speaking practice and gaming activity.

**VIUNNYK, Sofiia
YAKUNIN, Anatolii**

<https://orcid.org/0000-0002-0635-1755>

O. M. Beketov National University of Urban Economy in Kharkiv, Ukraine

GAUSSIAN INTEGERS IN CYBERSECURITY TASKS OF COMPLEX INFRASTRUCTURE FACILITIES

Ukraine's energy, information, and transport infrastructure systems are functioning under significant external disturbances due to the state of war. Using cryptographic methods alongside other measures provides reliable protection against a wide range of cyber threats. Analyzing the opportunities, challenges and potential for moving from real to complex numbers in mathematical objects – of which Gaussian integers are particularly significant for cryptography – is the research's **purpose**.

Results. The set of Gaussian integers $Z[i]$ consists of all complex numbers whose real and imaginary parts are ordinary integers, which they resemble in properties, although they have significant differences. Specifically, it is impossible to introduce an order relation in the set $Z[i]$. Division of whole complex numbers is defined in the usual way using traditional terminology. Every Gaussian integer z , other than zero and the divisors of unity, can be factored into prime factors. To perform the factorization, the following can be used: all divisors of a Gaussian integer z are also divisors of its norm $N[z]$. However, the norm $N[z]$ contains “extra” prime factors corresponding to the complex conjugate number \bar{z} .

In the set $Z[i]$, you can define division with a remainder by any non-zero Gaussian integer, with the requirement that the norm of the remainder is less than the norm of the divisor. A Gaussian integer can be taken as the quotient, which is the closest to the quotient from ordinary division of complex numbers. The set $Z[i]$ is partitioned into disjoint residue classes, where each class contains all Gaussian integers that are congruent to each other. For these classes, addition and multiplication operations are defined based on ordinary integers. The classical results of modular arithmetic are modified accordingly: Fermat's little theorem, properties of residue classes of modulo, Euler's function and theorem, etc. The Hermitian scalar product serves as a generalization of the scalar product for the case of matrices with complex elements.

Elliptic curve encryption and cryptanalysis use scalar and matrix calculations, which can involve complex integers. By applying modular operations on objects with Gaussian integer, one can create efficient cryptographic keys. Linear algebraic methods are used in cryptographic attacks that break ciphers like AES. Transitioning from integers to Gaussian integers in these ciphers will increase their reliability.

Conclusions. Improving cryptographic methods by replacing integer objects with structures with Gaussian integers will increase their robustness. This requires adapting the apparatus of complex numbers and functions to the problems of cryptography. Further research involves optimizing computational procedures for vectors and matrices with Gaussian elements and implementing them using modern software environments used in organizations within Ukraine's energy, information, and transport infrastructure.

ARTISTIC SECTION

KDYROVA, Inesh

<https://orcid.org/0000-0003-2717-904X>

*Communal Higher Educational Establishment of Kyiv Regional Council
“Pavlo Chubynsky Academy of Arts”, Ukraine*

MUSICAL TURKOLOGY AND THE KAZAKH SONG TRADITION: FROM INTONATIONAL ARCHETYPES TO POST-FOLKLORIC TRANSFORMATION

Musical Turkology has developed into an interdisciplinary domain within the humanities, uniting ethnomusicology, cultural studies, and the semiotics of art in exploring the sonic landscape of the Turkic world. Its focus lies on the intonational system that integrates modal structures, rhythmic-melodic formulas, timbral-articulatory nuances, and poetic archetypes encoding the collective memory of the people. In this framework, sound functions as both an aesthetic and cultural phenomenon – a mediator between the past and the present, a bearer of identity, and a medium of intercultural communication. Within this paradigm, Kazakh song folklore occupies a central position in the Turkic musical heritage. It reveals three dominant archetypes: the heroic-lyrical (“Құсни-Қорлан”), the feminine-intimate (“Япурай”), and the interethnic dialogical (“Дударай”). Each represents a distinct modality of musical thought – epic narration, emotional introspection, and cultural hybridity – reflecting the multidimensional soundscape of the Great Steppe, where intonation embodies both emotional gesture and ethical utterance.

A particular focus is placed on the *stage transformation* of Kazakh folklore in the twentieth and twenty-first centuries. The article conceptualizes this process through the category of *post-folklorism*, defined as the creative interaction between authentic melos and modern musical languages. In this context, traditional monody is reinterpreted through symphonic, jazz, and pop-folk adaptations, which preserve the core intonational semantics while expanding the expressive possibilities of the original. The symphonic reconstruction of “Құсни-Қорлан” demonstrates the effect of *intonational reversion*, transforming linear melody into harmonic verticality, whereas the ethno-jazz adaptation of “Япурай” introduces chromatic alterations and improvisational phrasing reminiscent of the *aitys* tradition. “Dudarai” embodies the postmodern synthesis of folklore, pop aesthetics, and theatrical performance, symbolizing the East–West cultural dialogue through musical hybridity.

The results substantiate that Kazakh song folklore constitutes a dynamic system of intonational semiotics, maintaining its archetypal invariants while undergoing continuous aesthetic and structural evolution. The stage recontextualization of traditional song operates not as a rupture of authenticity but as a hermeneutic and semiotic extension – an act of acoustic reconstruction of collective memory that redefines folklore’s function from ritual embodiment to reflective interpretation.

KONONENKO, Maryna

<https://orcid.org/0009-0007-5458-7926>

MUKHINA, Tetiana

<https://orcid.org/0000-0002-1758-882X>

Berdiansk State Pedagogical University, Ukraine

VISUAL ART AS A MEANS OF FORMING INTERCULTURAL COMPETENCE OF PRIMARY SCHOOL STUDENTS IN THE EUROPEAN EDUCATIONAL SPACE

In Europe, where the educational system is increasingly oriented toward a universal language of understanding, visual art emerges as a unique form of comprehending the world. It helps students experience the spiritual unity of humanity through shared aesthetic ideals. In primary school, art opens the way to accepting cultural diversity, shaping a child's worldview and value system. Through creating and interpreting artistic images, a primary school learner acquires the ability to see unity in diversity, understand others, and become aware of their own cultural identity. The relevance of this research stems from the need to find effective pedagogical means for developing intercultural competence among younger students in the context of European values and the humanistic orientations of education.

Visual art is an effective tool for nurturing intercultural openness, empathy, and tolerance. By combining emotional experience with cognitive activity, it promotes the understanding of the shared humanistic content of different cultures. In the process of artistic activity, younger students become familiar with the cultural heritage of European peoples, compare it with Ukrainian traditions, and find points of intersection in visual symbols and themes. Such activities stimulate the development of reflection, aesthetic taste, and social sensitivity. Scholar O. Lokshyna notes that the effectiveness of forming intercultural competence increases when comparative analysis of artistic traditions is used. This includes collective creative projects, an atmosphere of open dialogue and mutual respect in the classroom, and the integration of artistic activity with interdisciplinary learning.

In this context, visual art becomes not only a means of developing aesthetic abilities but also a pedagogical mechanism of sociocultural education that forms the ability to understand, accept, and appreciate cultural diversity. Through artistic activity, younger students not only acquire knowledge about other cultures but also develop an emotional and value-based attitude toward them – the foundation of tolerance and cultural interaction. The European experience of integrating art into the educational process demonstrates that art education creates a space for intercultural communication, spiritual growth, and respect for human diversity. Implementing visual art as a means of developing intercultural competence in primary school is an essential condition for realizing European educational values and shaping in students a worldview of global citizenship, creativity, mutual understanding, and harmonious coexistence.

KOSENKO, Pavlo

<https://orcid.org/0000-0001-5979-4763>

Higher Educational Establishment of Kyiv Regional Council

"Pavlo Chubynsky Academy of Arts", Ukraine

USING THE MUESCORE EDITOR FOR TEACHING THE DISCIPLINE "INSTRUMENTATION"

The study of the discipline "Instrumentation" in higher music education institutions presents complex challenges for students, as it requires combining knowledge of the expressive and technical capabilities of musical instruments with the skills to fully utilize this knowledge when working with a score. Digital technologies, particularly score editors, are capable of increasing the effectiveness of this process because they allow for the simulation of the sound of a real musical ensemble, shifting the very procedure of creating a score to an interactive level. Among these, MuseScore deserves special attention, appealing with its accessibility, being free of charge, while simultaneously having sufficiently powerful functionality.

The objective of the work is to substantiate the relevance and demonstrate the advantages of using the MuseScore editor in the process of teaching the discipline "Instrumentation."

The results of testing MuseScore in the real teaching process of the "Instrumentation" discipline showed that MuseScore's functionality can be used by the instructor: as a tool for developing practical assignments and demonstrating illustrative examples; as a virtual laboratory for students to complete individual assignments and a means of assessing the results of their creative work; as an environment for interaction (real or distance) between the subjects of the educational activity, etc.

The implementation of MuseScore in the teaching process of the "Instrumentation" discipline showed a number of positive outcomes:

Students gained the ability to compare the expected sonic result with the actual one in real-time, which allowed for better identification and correction of errors in the distribution of functions among instruments to achieve the necessary timbral and dynamic balance and the expressiveness of melodic lines.

Due to the available option for note entry from the computer keyboard (including in the alto or tenor clef) and automatic key changes for transposing instruments, the speed and accuracy of working with the musical text significantly increased.

MuseScore provides equal access to its full functionality for all students, regardless of their financial status, as it is free and generally accessible.

There is an ability to create audio and PDF files of finished scores and individual parts of students' original works for subsequent reproduction.

Conclusions. The MuseScore score editor can be characterized as an accessible and highly effective tool for modernizing the teaching of the "Instrumentation" discipline, capable of transforming the teaching process into an interactive and practice-oriented one. MuseScore not only simplifies the technical work with the musical text but, most importantly, develops comprehensive musical thinking in students – the ability to perceive the score's actual sound behind its graphical representation.

KRAVCHENKO, Kateryna

*Communal Higher Educational Establishment of Kyiv Regional Council
"Pavlo Chubynsky Academy of Arts", Ukraine.*

Scientific supervisor:

OVSIIANNIKOV, Viacheslav

*Communal Higher Educational Establishment of Kyiv Regional Council
"Pavlo Chubynsky Academy of Arts" Kyiv, Ukraine.*

SOUND ENGINEERING IN THE CONTEXT OF TRIBUTE CONCERTS

The **purpose** of the article. Tribute concerts are rapidly developing in today's music industry. Contemporary performers strive to convey the spirit and atmosphere by recreating the image and sound of the corresponding period. The concept of tribute concerts involves imitating the musical style, performance manner, and image in the form of performing the band's creative work (Ovsiannikov, 2024).

For example, many listeners and fans of The Beatles, The Doors, ABBA, and Queen miss the live performances and melodies of the second half of the 20th century, so they often attend tribute concerts performed by contemporary young musicians. This work is devoted to considering the key aspects of sound engineering for the successful implementation of tribute concerts.

Results. The main task of the sound engineer is to correctly and professionally realize the sound of the musicians and immerse the audience in the atmosphere of the past, conveying authenticity with the help of modern technical means of sound engineering.

The successful implementation of a tribute concert, like any concert, depends on many factors: the acoustics of the venue, original musical instruments, the professional skill and interaction of the musicians with the audience, acting skills, as well as the image, and stage behavior of the singer of the band whose songs are being performed. The sound engineer's ability to convey and reproduce a coherent musical idea deserves special attention.

Let's consider the main points of implementing tribute concerts. When imitating the sound of popular music from the second half of the 20th century, it is worth considering the specifics of reproducing the original sound. For example, in the past, concert performances were not accompanied by the use of such a large number of spatial and dynamic sound treatments, there were no monitor lines, and the quality of the equipment often did not produce the desired result, as is the case in the modern concert industry.

However, the sound was richer and more saturated in terms of timbre due to the skill of the musicians, although not as "sterile" as it is now. When working with a tribute band, the main task is to bring out all the instruments and vocals, select subtle spatial processing, equalization, and compression, and gate in accordance with the concept and creative vision.

Based on my own practical experience with tribute bands, it is worth noting that when it came to amplifying the drum kit, the question arose of selecting microphones, choosing cymbals, and the drummer's personal preferences. In addition, at one of The Doors tribute concerts, it was decided not to use microphones for the drum kit in order to preserve the authenticity of the sound

and showcase the drummer's skill. This way, we got the sound as close to the original as possible. The key to a successful tribute concert is watching live performances and listening to audio recordings of the band you're planning to tribute to really get into the vibe.

Conclusions. Summarizing this work, we can say that tribute concerts convey the atmosphere of the respective band, preserving authenticity in the conditions of the modern music industry.

The role of the sound engineer and the key aspects of the band members for the implementation of a successful tribute concert have also been determined. The practical experience gained in sound engineering for tribute concerts has been analyzed. However, sound engineering in the context of tribute concerts requires more in-depth research.

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MYROSHNYCHENKO, Oleksandr

<https://orcid.org/0009-0003-2229-5102>

Kulyash Bayseyitova Kazakh National University of Arts, Republic of Kazakhstan

FEDORENKO, Oleksandr

<https://orcid.org/0009-0005-8140-115X>

L. Revutsky Kyiv Children's Art School no. 5, Ukraine

JAZZ ART IN THE CONTEXT OF THE EURASIAN MUSICAL SPACE

The contemporary musical culture is in a state of active transformation, balancing in a dialogue between tradition and innovation. One of the key vectors of this process is the integration of jazz principles into academic music. The phenomenon of the synthesis between jazz and symphonism – from “progressive jazz” to the “third stream” – has become one of the defining features of musical postmodernism, which blurs the boundaries between genres and styles.

The phenomena of progressive jazz (Stan Kenton, Robert Graettinger) and the third stream (Gunther Schuller, Bill Evans, Maria Schneider) laid the foundations of musical polystylism, where academic form is complemented by improvisational technique and jazz elements.

In the second half of the twentieth century, jazz became an important factor in the cultural modernization of Central Asia. Jazz art in this region emerged as a result of the interaction between European, American, and Turkic musical traditions, giving rise to a Eurasian model of jazz thinking – integrative, experimental, and open to intercultural dialogue.

The development of jazz in Kazakhstan is a striking example of cultural hybridization, in which local intonational archetypes are synthesized with the universal language of jazz. In the twenty-first century, jazz festivals in Almaty, Astana, and Shymkent – such as the «Eurasian Jazz Festival» and «Big Sky Jazz» – have created a platform for intercultural dialogue, demonstrating how the language of jazz adapts to local ethnic contexts.

The establishment of the «Kazakhstan International Jazz Festival» in 2001 became a key stage in the institutionalization of this genre. Its founder, pianist and educator Tagir Zaripov, not only created a platform for international cultural exchange but also, in 2003, opened the first jazz school for children in Central Asia, marking the beginning of systematic jazz education.

The youth orchestra «Almaty», founded by him, became a performing center where the essential competencies of stage improvisation, ensemble thinking, and stylistic flexibility were developed. The participation of this collective in prestigious events – such as the «Youth Jazz Ensembles Concert» at the «Apollo Theater» (Harlem, USA, 2018) and the International Conference in Long Beach (California) – emphasized Kazakhstan's entry into the global jazz scene and its inclusion in the transcultural space of musical dialogue.

Similar processes are taking place in other Asian countries. In Japan (Toshiko Akiyoshi, Hiromi Uehara), jazz merges with minimalism and the visual elements of Kabuki theatre. In China (Tan Dun, Lang Lang), it intertwines with traditional pentatonic structures, forming the phenomenon of *East Asian fusion*.

In South Korea, jazz is integrated into pop culture (*K-Jazz*), using vocal techniques close to the popular singing school.

Thus, unlike European postmodernism – where jazz appears primarily as an aesthetic play with styles and genres – in Asian countries, particularly in Kazakhstan, it acquires an ethnocultural dimension. Here, the improvisational paradigm of jazz interacts with folk traditions that preserve archaic intonational models and ritual-imagery symbolism.

As a result of this synthesis, unique acoustic spaces of post-folkloric jazz emerge, where Western instruments coexist with the *dombra*, *kobyz*, and *zhetygen*, while vocal stylistics integrate throat singing techniques and other traditional modes of sound production. This combination gives rise to a Eurasian type of jazz artistry, in which traditional intonation does not lose its authenticity but transforms into a carrier of cultural memory within a new musical language.

OVSIIANNIKOV, Viacheslav

*Communal Higher Educational Establishment of Kyiv Regional Council
“Pavlo Chubynsky Academy of Arts”, Ukraine.*

ONLINE AUDIO SERVICES IN TODAY'S MUSIC SPACE

The **purpose** of the article. Contemporary music culture is actively developing thanks to digital technologies that influence the creation, processing and distribution of music. Online services are becoming accessible tools for shaping individual musical space outside recording studios. Their role is particularly important for the development of creative abilities and the formation of skills in young musicians. The aim of this work is to describe the functional capabilities of modern online audio services and determine their impact on the individual creative and educational activities of musicians.

Results. Let's take a look at five modern online services: Strofe, National Gallery Mixtape, Soundgym, BBC Sound Effects, and Vocalremover. For a better understanding of their functionality, they are divided into two categories.

Creative and gaming services (Strofe, National Gallery Mixtape) are focused on creativity and combining artistic practices with generative artificial intelligence algorithms. They shape a new experience of musical creativity, combining an element of surprise and a playful approach.

The online service Strofe allows users to create individual musical compositions using artificial intelligence algorithms that take into account the selected style, rhythm, and instruments. An interesting combination of two art forms can be found in the National Gallery Mixtape online service, which combines visual art and music.

This online audio service offers an interactive experience in which selected paintings are transformed into sound images, promoting associative thinking and inter-artistic interaction.

Innovative and practical services (Soundgym, BBC Sound Effects, Vocalremover) are aimed at developing hearing, acquiring sound engineering skills and providing practical support for rehearsals or performances. In particular, Soundgym offers an interactive environment for ear training; BBC Sound Effects is a multi-layered archive of cultural value; Vocalremover provides the ability to create background tracks and is used in both professional and educational practice.

Conclusions. Online audio services are becoming an integral part of modern music culture. They facilitate the development of creative and auditory skills, the formation of individual musical space, and practical support for educational and rehearsal processes. This study proposes a classification of online audio services into creative-gaming and innovative-practical categories, highlighting their growing role in shaping modern musicianship.

The presented abstracts reflect the main provisions of the study, the full text of which is being prepared for publication in a scientific journal (in print). However, further research may focus on comparing Ukrainian and foreign innovative platforms, as well as studying their impact on the professional training of musicians.

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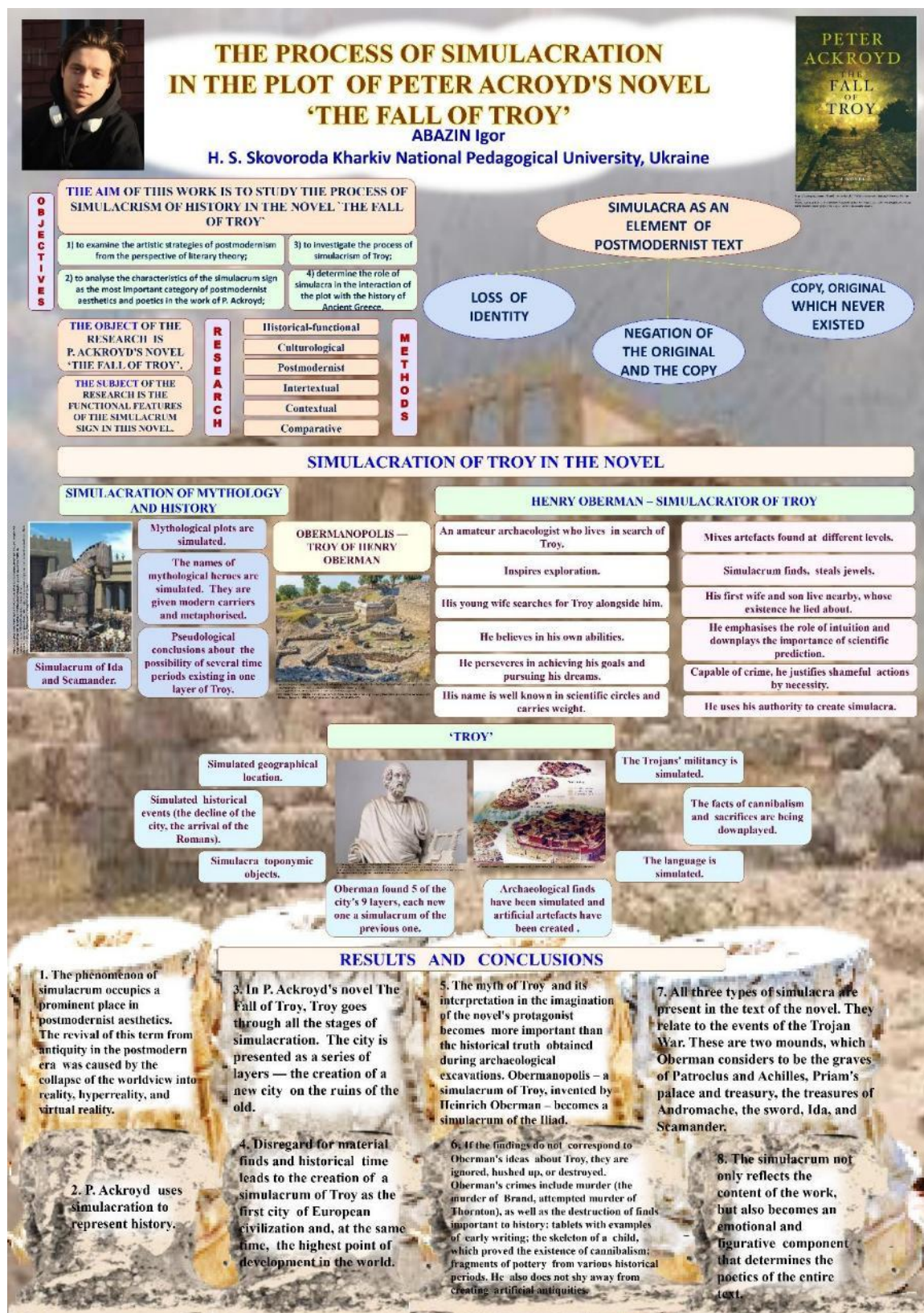
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POSTER SECTION

ABAZIN, Igor

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE PROCESS OF SIMULACRATION IN THE PLOT OF PETER ACROYD'S NOVEL 'THE FALL OF TROY'



PORTFOLIOS AS A MULTI-PURPOSE TOOL FOR FORMING THE COMPETENCE OF FUTURE MARKETING SPECIALISTS IN THE UNITED STATES



AI INFLUENCE & UNCERTANTY

The marketing education and industry are facing challenges. Rapid adoption of Artificial Intelligence (AI) creates significant challenges and anxiety for the next generation of marketing specialists. To be more specific:

- 36% of professionals report that AI is infused into their daily workflows, with 15% stating they “couldn't live without AI” (Marketing AI Institute, 2024);
- Decline in overall entry-level hiring and a 75% concern rate among workers that AI will make certain jobs obsolete (ADWEEK, 2025);
- Traditional education often fails to produce a verifiable proof of competence.

A MULTI-DIMENSIONAL SOLUTION

The goal of this work is to position the portfolio not as an addition to the CV or a resume, but as a multi-purpose tool that serves both professional capability and psychological strength. Thus, the portfolio can be viewed in two dimensions. Dimension A: a career asset to form professional competence. Dimension B: a resilience tool to overcome the constantly changing environment.

- A portfolio is a verifiable proof of high employability (portfolio-schools report 85-95% placement rates);
- It builds self-efficacy and adaptability in the face of job market uncertainty.

DIMENSION A: A CAREER ASSET

“Show, don't tell” principle is one of the core principles of the portfolio. It requires the student to document the process, challenge, and results of their work, directly validating their marketing competence.

It is the ideal platform for demonstrating the unique human skills that AI cannot replicate: creative conceiving, strategic thinking, and empathy.

Portfolios also scale well for niche-specific projects for roles like copywriter, art director, or strategist, moving beyond generalist degrees of a traditional marketing education.

DIMENSION B: A RESILIENCE TOOL

The process of successfully completing and documenting work serves as a “mastery experience”—the most powerful source for building self-efficacy and confidence (Bandura, 1997).

Portfolio creation and updating require students to verbalize and reflect on their achievements, encouraging them to take responsibility for their learning journey.

By documenting their capacity to learn new tools (including AI) and adapt to project demands, students replace job anxiety with concrete self-belief.

EDUCATIONAL INTEGRATION

The portfolio's mandatory creation must be fully integrated into the academic curriculum to maximize its potential. A specific course on the topic should be created.

This course should cover key areas like career planning, niche-specific portfolio creation, practical case study narratives, and legal/ethical preparedness.

KOMAR, Yuliia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

THE EDUCATIONAL IMPORTANCE OF MODERN CRYPTOGRAPHY

THE EDUCATIONAL IMPORTANCE OF MODERN CRYPTOGRAPHY

Introduction

Cryptography is the science of encrypting and protecting information, ensuring data confidentiality, integrity, and authenticity. In today's digital world, understanding the basics of cryptography is crucial for information security. Learning cryptography also helps students develop logical thinking, analytical skills, and practical programming abilities.



Results of Implementation and Development

- Algorithms – learning symmetric (AES) and asymmetric (RSA) encryption methods;
- Programming – hands-on implementation in Python or other programming languages;
- Mathematics – applying mathematical concepts to real-world encryption challenges;
- Critical thinking – developing problem-solving skills and digital literacy;
- Preparation – preparing students for practical work in digital and cybersecurity environments.

Conclusions

The integration of cryptography into education already shows tangible results: students better understand mathematical concepts, develop analytical and logical skills, and practically apply encryption algorithms while appreciating the importance of data protection. Hands-on programming exercises, modeling of encryption processes, and use of cryptographic algorithms make learning interactive and engaging. In the future, the role of cryptography in education is expected to grow further, as digital technologies become an integral part of life and knowledge of information security becomes a critical competence for modern professionals.



PRESENT BY: YULIIA KOMAR

**UNDERGRADUATE STUDENT, H. S. SKOVORODA
KHARKIV NATIONAL PEDAGOGICAL UNIVERSITY**

KONOVALENKO, Viktoriia

Kharkiv Lyceum No.152 of the Kharkiv City Council, Ukraine

DEVELOPMENT OF AN EMOTIONALLY POSITIVE ATTITUDE TO THE EDUCATION OF PRIMARY GRADE STUDENTS TO ENSURE THE QUALITY OF EDUCATION

TOPIC: “DEVELOPMENT OF AN EMOTIONALLY POSITIVE ATTITUDE TO THE EDUCATION OF PRIMARY GRADE STUDENTS TO ENSURE THE QUALITY OF EDUCATION.”

AUTHOR OF THE REPORT: VIKTORIIA KONOVALENKO, PRIMARY SCHOOL TEACHER AT KHARKIV LYCEUM NO. 152 OF THE KHARKIV CITY COUNCIL, UKRAINE.

PURPOSE.

Investigate how the foundation for the development of each student's emotional intelligence is laid in the early grades.

RESULTS.

Practical experience and analysis of successful pedagogical cases have made it possible to determine that the interaction between teachers and students and their parents at the first—adaptation—stage of schooling occurs in the following areas:

- 1) development of emotional self-awareness in a tangible reserve of time for communication (“emotion screen,” “my smiley face,” “what makes me smile?”). In this area, the teacher primarily listens, observes, asks questions, and clarifies;
- 2) self-regulation of emotions through regular practices (breathing exercises for calming down, magical objects that absorb sadness, class rules, etc.);
- 3) development of empathy through association with a fortress, in which each brick is an example or story of understanding, positive reflection, and helping another person experience emotions;
- 4) the formation of an active perception of the school, the educational process as a space of emotional comfort, benevolence (the “2,1” rule, when you must praise twice before commenting, form a box of joy in class).

CONCLUSIONS

Basis for the development of emotional intelligence in each student in the primary grades requires the most valuable - time of the teacher's attention to detail, understanding and acceptance of each child, his parents, as well as - self-understanding of the emotional map of the teacher himself. Self-awareness and self-regulation of emotions are the basis for the development of empathy. Empathy serves as a platform for an emotionally stable and emotionally positive atmosphere in school.

“People will forget what you said, they will forget what you did, but they will never forget how you made them feel.”
Maya Angelou

KOSTOCHKA, Igor

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

**DIGITAL TOOLS FOR LANGUAGE & LITERATURE EDUCATION
IN THE NEW UKRAINIAN SCHOOL**

<p>DIGITAL TOOLS & APPLICATIONS</p> <p>This study analyzes digital tools within the educational environment. The approach is based on a review of platforms, including:</p> <ul style="list-style-type: none">• Virtual Classrooms: Google Classroom, Moodle• Interactive Content: Prezi, Canva• Gamification: Kahoot!, Wordwall• AI Integration: ChatGPT for personalized learning	<p>DIGITAL TOOLS & APPLICATIONS</p> <p>This study analyzes digital tools within the educational environment. The approach is based on a review of platforms, including:</p> <ul style="list-style-type: none">• Virtual Classrooms: Google Classroom, Moodle• Interactive Content: Prezi, Canva• Gamification: Kahoot!, Wordwall• AI Integration: ChatGPT for personalized learning
<p>OBJECTIVE</p> <p>The analysis of the role and impact of digital technologies on the language and literature educational domain within the New Ukrainian School. This study aims to identify key tools and best practices for modern teachers to enhance learning and foster student development.</p>	<p>OBJECTIVE</p> <p>The analysis of the role and impact of digital technologies on the language and literature educational domain within the New Ukrainian School. This study aims to identify key tools and best practices for modern teachers to enhance learning and foster student development.</p>
<p>RESULTS & BENEFITS</p> <ul style="list-style-type: none">• Individualizing Learning: Students can learn at their own pace, adapting to their unique needs and learning styles.• Fostering Critical Thinking: Interactive and gamified platforms encourage active engagement and problem-solving skills.• Providing Equal Access: Digital resources offer greater access to quality educational content for all students, regardless of location.	<p>RESULTS & BENEFITS</p> <ul style="list-style-type: none">• Individualizing Learning: Students can learn at their own pace, adapting to their unique needs and learning styles.• Fostering Critical Thinking: Interactive and gamified platforms encourage active engagement and problem-solving skills.• Providing Equal Access: Digital resources offer greater access to quality educational content for all students, regardless of location.
<p>CHALLENGES</p> <p>Implementation faces obstacles, including:</p> <ul style="list-style-type: none">• Technical Limitations: Unstable internet connection and a lack of proper equipment access• Digital Literacy: The need for professional development for educators.	<p>CHALLENGES</p> <p>Digital tools are essential for modernizing the New Ukrainian School. Specifically, the findings show that the digital tools can significantly enhance learning by providing personalized education, fostering critical thinking, and ensuring equal access. To realize this potential fully, it is important to overcome the challenges with technical support and professional development for educators, ultimately preparing students for the modern world.</p>

DIGITAL TOOLS FOR LANGUAGE & LITERATURE EDUCATION IN THE NEW UKRAINIAN SCHOOL

The New Ukrainian School faces the challenge of adapting to modern educational standards. This poster explores the critical role of digital technologies in enhancing the efficiency of language and literature education, focusing on how these tools can support and individualize learning.

Igor Kostochka
PhD Student at H.S. Skovoroda Kharkiv National Pedagogical University
<https://orcid.org/0009-0004-7528-2214>

KRAVCHENKO, Marharyta

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

VISUAL ARTS AND SPEECH THERAPY: THE INFLUENCE OF DRAWING ON THE DEVELOPMENT OF COHERENT SPEECH IN YOUNGER SCHOOLCHILDREN



**Visual arts and speech therapy: the
influence of drawing on the development
of coherent speech in younger
schoolchildren**

INTRODUCTION

When working with younger students with severe speech impairments, teachers may encounter the following difficulties:

- shyness or excessive activity;
- fear of mistakes or indifference to failure;
- inability to complete tasks;
- difficulties with self-regulation and self-assessment;
- emotional and volitional disorders;
- low performance in activities;
- underdeveloped thinking and speech self-control;
- pronounced speech disorders.

EXAMPLE AND RESULT

- Drawing an object and describing its characteristics—developing vocabulary, the ability to select adjectives, and construct simple sentences.
- Collective drawing of a picture and a shared story—developing communication skills, the ability to negotiate, and create coherent dialogues.
- "Emotional drawings" and verbal explanations of moods - enriching emotional vocabulary, overcoming shyness, developing self-expression.



WHY IS ART IMPORTANT?

It should be emphasized that proper speech development is a key condition for the harmonious development of a child. Combining speech therapy with elements of visual arts, in particular drawing, opens up additional opportunities for the development of coherent speech in younger schoolchildren and contributes to their comprehensive development.

CONCLUSION

Art helps children with speech disorders:

- develop imagination and thinking;
- relieve fear and tension;
- learn to express themselves;
- develop speech through creativity.



Present by: Kravchenko Marharyta

**Master's degree, H. S. Skovoroda Kharkiv National Pedagogical
University, Ukraine**

KUCHERESHKO, Roman

<https://orcid.org/0009-0000-0457-2135>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INDUSTRIALIZATION RESHAPED TRADITIONAL CRAFTS IN SLOBOZHANSKYIA, TURNING FAMILY WORKSHOPS INTO MODERN ENTERPRISES AND REDEFINING THE REGION'S SOCIAL AND ECONOMIC IDENTITY

Roman Kuchereshko

H.S. Skovoroda Kharkiv National Pedagogical University
ORCID <https://orcid.org/0009-0000-0457-2135>

Transformation of Traditional Crafts into Family Entrepreneurship in Slobozhanshchyna during Industrialization

Introduction

During the Industrial Revolution, Ukraine experienced major economic restructuring. Slobozhanshchyna, one of the leading industrial regions, transitioned from **manual crafts** (blacksmithing, pottery, weaving, glassmaking, carpentry) to **mechanized production**.

Crafts, traditionally maintained within families since Kyivan Rus', evolved into organized guilds and later factories.



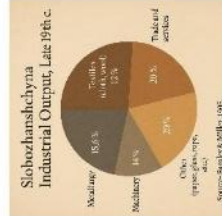
Purpose

To investigate how the Industrial Revolution transformed traditional family crafts in Slobozhanshchyna into entrepreneurial enterprises, redefining the region's economic and social landscape.

Results

By the late 19th century:

- **Industrialization intensified:** family crafts were replaced by capitalist factories.
- **Slobozhanshchyna produced 15.6%** of Ukraine's industrial output.
- Traditional crafts such as brewing and cloth-making declined, while **metallurgy, machine-building, and trade expanded**.
- Merchants and entrepreneurs integrated into industrial networks, investing in mills, glass, textile, and metal industries.



Conclusions

Industrialization radically changed social and economic life. While many artisans could not adapt to the new system, some — notably **the Alchevsky, Tereshchenko, and Kharitonenko families** — built successful family enterprises that symbolized Ukraine's modernization. These families combined inherited craftsmanship, capital accumulation, and social initiative to create lasting industrial and philanthropic legacies.

- Key Outcomes:**
- Growth of industrial infrastructure
 - Expansion of social mobility and education
 - Decline of craft guilds, rise of capitalist enterprises



Industrialization reshaped traditional crafts in Slobozhanshchyna, turning family workshops into modern enterprises and redefining the region's social and economic identity.



From handicraft to factory — from artisans to entrepreneurs.

SNIHUROVA, Iryna

<https://orcid.org/0000-0002-9637-2428>

National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Kharkiv National University of Internal Affairs, Ukraine

ASPECTS OF DEVELOPMENT OF PROFESSIONAL LANGUAGE AND COMMUNICATION SKILLS IN FUTURE CYBERSECURITY SPECIALISTS AT HIGHER EDUCATION INSTITUTIONS



Aspects of Development of professional language and communication skills in future cybersecurity specialists at higher education institutions

Presenter:

Snihurova Iryna - senior lecturer of the Ukrainian language department of the National Technical University “Kharkiv Polytechnic Institute”, PhD student of the Kharkiv National University of Internal Affairs, specialty 011 - Educational, Pedagogical Sciences.

ORCID: <https://orcid.org/0000-0002-9637-2428>. E-mail: irinasnihurova71@gmail.com

Introduction

A competency-based approach is a set of methodological and paradigmatic components aimed at developing competencies and skills based on theoretical knowledge, abilities, skills, professional balance, and an optimal balance of personal qualities. In light of the formation of professional linguistic and communicative competence in future cybersecurity specialists in higher education institutions, we note that it is the result of both professional and socio-cultural development of the future specialist throughout the entire period of study.

Results

Thus, the formation of professional linguistic and communicative competence in future cybersecurity specialists can be represented as follows (see Fig. 1).

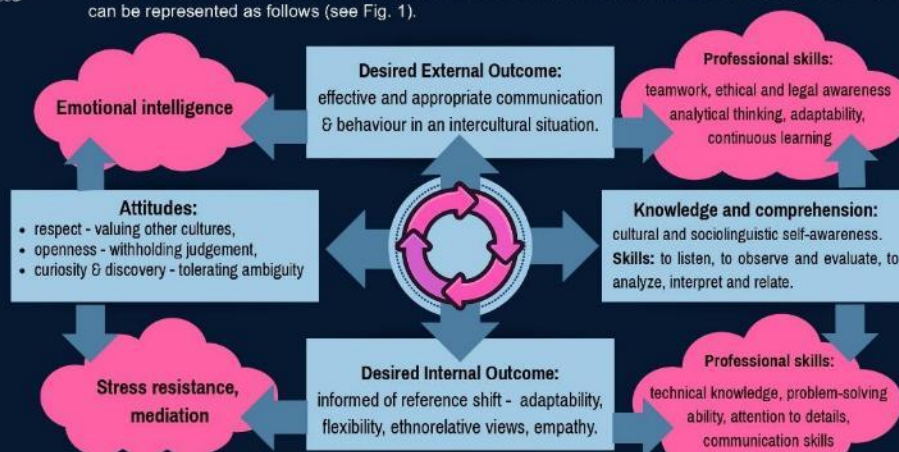


Figure 1: Model of professional language and communicative skills formation in future cybersecurity specialists within higher educational institutions.

Conclusion

We haven't any argues concerning words of Audrey Azoulay, Director-General of UNESCO that "... all societies in our contemporary world are the result of multilevel intercultural communication". But in the same time we should add that knowledge and ability to study along life are the most important competences for prospective cybersecurity expert.

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SOLIAR, Viktoriia

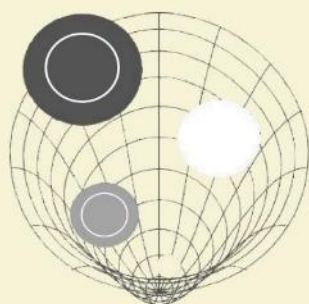
<https://orcid.org/0000-0002-2093-6303>

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

INNOVATIVE LANDSCAPE OF UKRAINE'S INSTITUTIONAL ECOSYSTEM

INNOVATIVE LANDSCAPE OF UKRAINE'S INSTITUTIONAL ECOSYSTEM

Innovative-integrated institutes are one of the key entities in stimulating innovative entrepreneurship, which highlights the need for a detailed consideration of their activities, functions performed and tasks solved. Educational and scientific institutions make a special contribution to supporting innovative activity, influencing both the formation of general socio-economic conditions and being centers of scientific and technological development, the formation and improvement of the expert community.



AUTHOR SOLIAR, Viktoriia
<https://orcid.org/0000-0002-2093-6303>
H. S. Skovoroda Kharkiv National
Pedagogical University, Ukraine

INTRODUCTION

Modern higher education institutions in Ukraine carry out a continuous process of innovation activity, stimulate innovative growth, increase the number of innovators. However, as a result of the imperfection of the system of commercialization of university innovations and support for entrepreneurial activity, the innovation infrastructure does not receive the necessary development, is poorly integrated into the system of support for innovation activity. In this regard, the relevance of the study is due to the need to consider the problems that arise in the system of support for innovation activity, where one of the key roles belongs to innovation-integrated structures.

OBJECTIVE

Development of theoretical and methodological provisions for supporting entrepreneurial activity in an innovative economy based on the activation of innovative and integrated structures and development institutions.

METHODOLOGY

Theoretical-empirical, retrospective and systemic approaches, general scientific approaches and methods of theoretical and empirical knowledge, dialectical approach to the study of processes and phenomena, economic and statistical methods and SWOT - analysis.

ANALYSIS

- Innovative integrated structures, as an element of innovative, social and production infrastructure, provide support for innovative business, development of investment and innovative activities, provision of a wide range of services of an informational, legal and organizational and economic nature. Support for innovative activities of enterprises requires constant systematization of knowledge about the specific roles and functions of individual development institutions.

- The logical structural and functional scheme of the system of institutes reflects the role of production and technological structures (technological parks, technopolises, innovation and technological centers, business incubators, technology transfer centers, etc.), which perform specific functions of supporting innovative activities at the stage of emergence and commercialization of innovations, as well as the formation of effective mechanisms for managing the innovative development of regions.

RESULTS

- Theoretical and methodological provisions on supporting innovation activities at the meso- and macro-levels, including the identification of the role of commercial and state institutions in performing individual functions of development institutions: socio-economic, financial, innovation, consulting, promotion, and business functions, made it possible to propose state innovation policy instruments that stimulate innovation processes and the development of innovation infrastructure.

- The SWOT model of innovation support is characterized by the integration of public and private development institutions into the innovation management system, which recognizes the mechanisms of organizational, informational and resource support for the innovative scientific and educational environment and promotes the active involvement of higher education institutions in regional and national innovation systems.

CONCLUSION

The development of innovation infrastructure (innovation-integrated structures) depends on the level of economic and technological development of the national economy and the economy of the regions. Joint efforts of the state, municipalities, the business community, and the scientific community are also needed to create a modern innovation infrastructure at the meso-level in connection with the macro- and micro-levels, taking into account the economic characteristics of the regions and the country as a whole.

KEY WORDS

innovation, innovation activity, entrepreneurship, business, innovation-integrated structures, innovation policy, state support

TODOROVA, Kseniia

H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

RIISING THE AWARENESS OF AVIATION SPHERE STUDENTS ON NOISE POLLUTION



Scientific Publication

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Contact Details of the Organizing Committee:

kaf-theory-practice-english-lang@hnpu.edu.ua
conferences.dtpel@gmail.com

H. S. Skovoroda Kharkiv National Pedagogical University
Alchevskyh Str., 29, Kharkiv, 61002, Ukraine

Харківський національний педагогічний
університет імені Г.С. Сковороди
Україна, 61002, м. Харків, вул. Алчевських, 29.

