

International Journal of Research in E-learning

Vol. 2 (1), 2016

Editor-in-Chief
Eugenia Smyrnova-Trybulska
University of Silesia in Katowice, Poland

Scientific Programme Committee

Xabier Basogain (University of the Basque Country, Spain), Sixto Cubo Delgado (University of Extremadura, Spain), Zenon Gajdzica (University of Silesia in Katowice, Poland), Bogdan Galwas (Warsaw Technical University, Poland), Tomayess Issa (Curtin University in Perth (CU), Australia), Jana Kapounová (University of Ostrava, Czech Republic), Piet Kommers (University of Twente, the Netherlands), Josef Malach (University of Ostrava, Czech Republic), Nataliia Morze (Borys Grinchenko Kyiv University, Ukraine), Tatiana Noskova (Herzen State Pedagogical University of Russia, St. Petersburg, Russia), Norbert Pachler (London University, United Kingdom), Tatiana Pavlova (Herzen State Pedagogical University of Russia, St. Petersburg, Russia), Paulo Pinto (The Lisbon Lusitana University, Portugal), António dos Reis (The Graal Institute, Portugal), Milan Turčáni (Constantine the Philosopher University in Nitra, Slovakia), Pedro Veiga (Lisbon University, Portugal), Halina Widła (University of Silesia in Katowice, Poland), Kazimierz Wenta (Koszalin Technical University, Poland), Miroslav Zhaldak (Dragomanov National Pedagogical University in Kyiv, Ukraine)

Editorial Board

Laura Alonso Díaz (University of Extremadura, Spain), Martin Drlik (Constantine the Philosopher University in Nitra, Slovakia), Prudencia Gutiérrez Esteban (University of Extremadura, Spain), Agnieszka Heba (University of Silesia in Katowice, Poland), Anna Gajdzica (University of Silesia in Katowice, Poland), Olga Iakovleva (Herzen State Pedagogical University of Russia, St. Petersburg, Russia), Theodora Issa (Curtin University in Perth, Australia), Kateřina Kostolányová (University of Ostrava, Czech Republic), Ewa Ogrodzka-Mazur (University of Silesia in Katowice, Poland), Tatiana Pavlova (Herzen State Pedagogical University of Russia, St. Petersburg, Russia), Marek Rembierz (University of Silesia in Katowice, Poland), David Richardson (Leaneus University, Sweden), Maryna Romanyukha (Dniprodzerzhinsk State Technical University, Ukraine), Magdalena Roszak (Poznan University of Medical Sciences, Poland), Iryna Sekret (Abant İzzet Baysal University, Bolu, Turkey), Urszula Szuścik (University of Silesia in Katowice, Poland), Jolanta Szulc (University of Silesia in Katowice, Poland), Małgorzata Bortliczek (University of Silesia in Katowice, Poland)

Editors of Thematic Issue

Nataliia Morze, Josef Malach, Tatiana Noskova, António dos Reis, Eugenia Smyrnova-Trybulska

Proofreaders

Iwona Mokwa-Tarnowska (Technical University in Gdańsk, Poland – English Language), Tatiana Pavlova, Olga Iakovleva (Herzen State Pedagogical University of Russia, St. Petersburg, Russia – Russian Language), Małgorzata Bortliczek (University of Silesia in Katowice, Poland – Polish Language), Sixto Cubo Delgado, Laura Alonso Díaz, Prudencia Gutiérrez Esteban, Gemma Delicado (University of Extremadura, Spain – Spanish Language)

Statistical Editor

Agnieszka Heba (University of Silesia in Katowice, Poland)

Indexed in

Central and Eastern European Online Library CEEOL (<https://www.ceeol.com>), Academic Resource Index (<https://www.researchbib.com>), Polska Bibliografia Naukowa (<https://pbn.nauka.gov.pl>), Google Scholar, CEJSH (<http://cejsh.icm.edu.pl>), BazHum (<http://bazhum.muzhp.pl>), The Journals Impact Factor (<http://jifactor.org>), ICI Journals Master List

Contents

	Editorial (Eugenia Smyrnova-Trybulska)	5
I.	ICT-tools and E-learning Methodology in Contemporary University	9
	Tomayess Issa, Theodora Issa, Touma B. Issa	
	Wiki Tool in Higher Education: An Australian Perspective	11
	Josef Malach, Kateřina Kostolányová, Milan Chmura, Ingrid Nagyová, Tatiana Prextová	
	Objectives and Content of E-module “Tools for Adaptive Learning. Learning Styles” within the MOOC Course “ICT Tools for E-learning”	28
	Nataliia Morze, Rusudan Makhachashvili, Eugenia Smyrnova-Trybulska	
	The Roadmap of Collaboration Skills from Programmed Teaching to E-learning	41
	Pavel Kapoun	
	Geolocation Services in Education Outside the Classroom	57
II.	Distance Learning Technologies in Different Countries	71
	Kateryna Yalova, Valerii Zavgorodnii, Ksenia Yashina, Oleksandr Sadovoy	
	Distance Learning Technologies in the Knowledge Transfer System of a Modern University	73
	Lucie Zormanová	
	The Comparison of Distance Learning Between the Czech Republic and Other European Countries	88
III.	ICT and Multicultural Competencies Developing Supported E-learning	105
	Andrea Kubalíková, Jana Trabalíková	
	Developing Students’ Information Competencies in the Context of Multicultural Education Using University E-learning Platform.	107

IV. Reports	127
António dos Reis, Sixto Cubo Delgado, Prudencia Gutiérrez-Esteban, Laura Alonso-Díaz, Eugenia Smyrnova-Trybulska, Tatiana Noskova, Nataliia Morze, Kateřina Kostolányová, Martin Drlik, Tomayess Issa	
Report on the Implementation of Work Package 4 “Selection and Testing New ICT Tools” in the Framework of the IRNet Project	129
Contributors	151
IJREL Reviewers	153
In the “E-learning” series	155



Editorial

The policy goal of the technology literacy approach is to enable learners, citizens, and the workforce to use ICT in order to support social development and to improve economic productivity. Related policy goals include increasing enrolments, making high-quality resources available to everyone, and improving literacy skills. Teachers should be aware of these goals and be able to identify the components of education reform programmes that correspond to these policy goals. Corresponding changes in the curriculum entailed by this approach might include improving basic literacy skills through technology and adding the development of ICT skills into relevant curriculum contexts (UNESCO, 2011).

The present volume includes eight articles gathered in four chapters. Chapter I, entitled “ICT-tools and E-learning Methodology in Contemporary University,” includes four articles. The first article entitled “Wiki Tool in Higher Education: An Australian Perspective,” prepared by Australian researchers Tomayess Issa, Theodora Issa, and Touma B. Issa, aims to examine the challenges and perceptions to promote students’ learning, communication, and interaction via the Wiki tool in the blackboard platform. Wiki intends to sustain and advance students’ professional and personal skills, the former ones including reading, writing, research, information, critical thinking, decision making, technology, digital oral presentation, drawing (i.e. concept maps), teamwork, and languages, and the latter ones including motivation, leadership, negotiation, communication, problem solving, time management, reflection, self-management, and self-appraisal. Additionally, integrating Wiki in teaching and learning will improve students’ work performance, productivity, and self-confidence: the skills needed for both the current study and the future workplace. The study results confirmed that using Wiki in a postgraduate unit at an Australian university enhance students’ personal and professional skills; in addition, students learnt and absorbed the new concepts and cutting-edge knowledge of the ITS65 unit, i.e. sustainability and Green IT.

The second article, “Objectives and Content of E-module ‘Tools for Adaptive Learning. Learning Styles’ within the MOOC Course ‘ICT Tools for E-learning’,” elaborated by Czech authors Josef Malach, Kateřina Kostolányová, Milan Chmura, Ingrid Nagyová, and Tatiana Prextová, describes some theoretical and practical aspects, objectives, and content of the preparation of the e-module “Tools for Adap-

tive Learning. Learning Styles” within the MOOC course which is being developed at the University of Ostrava as an outcome of the IRNet project. The main aim of the course is to provide both academic scholars and students with the theoretical foundation of adaptive learning that will allow them to acquire skills, use the existing courses in the existing adaptive e-systems, and/or create new courses and systems. The content of the course includes the following: defining basic constructs used in the course; overview of the development of adaptive learning with the use of educational technologies, its theoretical concepts, and representatives; presentation of the results of the previous researches and educational effects of adaptive (e-)learning; and chosen concepts of adaptive learning that have recently been developed at the University of Ostrava.

The international team of researchers from Ukraine and Poland – Nataliia Morze, Rusudan Makhachashvili (Ukraine), and Eugenia Smyrnova-Trybulska (Poland) – present the paper “The Roadmap of Collaboration Skills from Programmed Teaching to E-learning,” in which the comparative analysis of the basic principles of programmed teaching, and constructivism for their subsequent use in creating open learning didactics in view of the collaborative approach and collaboration oriented activities have been described. What is investigated is the fact that same idea forms the basis of the two paradigms (constructivism and personal learning): the humanistic character of education, taking individual characteristics into consideration, activity-based approach, and collaborative activity of a student.

A Czech author Pavel Kapoun proposes the article “Geolocation Services in Education Outside the Classroom,” in which he stresses that geolocation services such as Geocaching, Wherigo, or Foursquare are very popular all over the world nowadays. Millions of people are involved in these games, by means of which – in addition to entertainment – they learn about geography and history. Geolocation games can be used very effectively in instruction as well. The article contains analysis, design, development, implementation, and evaluation of educational games using the geolocation service Geocaching. Sometimes, the concept “educaching,” which was created by combining the words “education” and “geocaching,” is used.

Chapter II – “Distance Learning Technologies in Different Countries” – contains two articles. Ukrainian authors, Kateryna Yalova, Valerii Zavgorodnii, Ksenia Yashina, and Oleksandr Sadovoy, propose a paper entitled “Distance Learning Technologies in the Knowledge Transfer System of a Modern University,” which presents results of the research conducted within the European IRNet project. The research describes the place and role of distance learning technologies in the knowledge transfer system of a modern university. The main goal of the article is to describe results of the data domain analysis concerning a possibility of the academic Massive Open Online Courses (MOOC) platform development and introduction. The authors have identified the architecture and main functional

requirements of the academic MOOC platform as an effective tool to optimise the processes of knowledge transfer in the teacher–student system.

A Czech researcher, Lucie Zormanová, is the author of “The Comparison of Distance Learning Between the Czech Republic and Other European Countries,” which examines distance learning in several European countries and the Czech Republic. The article analyses and compares the development of distance learning, and the supply of study options in the form of distance learning in European countries; it also covers the conditions and history of distance learning in European countries. The carried out analysis shows that currently there is an emphasis on lifelong learning, and the development of distance learning has become a priority. It is further stated that there are significant differences in the development of distance learning in individual European countries, and in the Czech Republic the distance learning has only started to develop in the past twenty years.

Chapter III – “ICT and Multicultural Competencies Developing Supported E-learning” – begins with the paper “Developing Students’ Information Competencies in the Context of Multicultural Education Using University E-learning Platform,” prepared by Slovak authors Andrea Kubalíková and Jana Trabalíková. In this paper, the authors introduce their way of thinking about approaches to students in the term of e-learning use in the context of a multicultural society. Authors are focusing on the question of developing the information competencies in the environment of multicultural education. This paper also provides examples of good practice, especially when teaching via e-learning platform, LMS Moodle, at the University of Žilina.

Chapter IV – “Reports” – includes the article “Report on the Implementation of Work Package 4 ‘Selection and Testing New ICT Tools’ in the Framework of the IRNet Project,” developed by the international team of authors from several partner countries participating in the IRNet project. António dos Reis (Portugal), Sixto Cubo Delgado, Prudencia Gutiérrez-Esteban, Laura Alonso-Díaz (Spain), Eugenia Smyrnova-Trybulska (Poland), Nataliia Morze (Ukraine), Tatiana Noskova (Russia), Kateřina Kostolányová (the Czech Republic), Martin Drlik (Slovakia), and Tomayess Issa (Australia) – researchers from different scientific areas, connected with ICT, e-learning, pedagogy, and other related disciplines – focus on the objectives and chosen results of the international project IRNet (International Research Network). In particular, the article describes the research tools, methods, and some procedures of the Work Package 4 “Selection and Testing New ICT Tools”: Objectives, Tasks, Deliverables, and implementation of research trips. Researchers from partner universities have analysed the results of WP4 in the context of the next stages and Work Packages of the IRNet project.

In conclusion, it can be stressed that strategies of access to ICT resources are the essential elements of lifelong learning (UNESCO Incheon Declaration, 2016). Except for Web 2.0 and Web 3.0 technologies, MOOCs (Massive Open Online Courses) have continued to attract considerable media coverage, as governments

and universities respond to the open and online education movement. International teams and networks – such as the international consortium of the IRNet project – can make a fundamental contribution to the further development of strategies and methodologies of modern education.

Eugenia Smyrnova-Trybulska



Contributors

- Chmura Milan**, PhD, University of Ostrava, Pedagogical Faculty, Czech Republic (milan.chmura@osu.cz).
- Cubo Delgado Sixto**, PhD, professor, University of Extremadura, Faculty of Education, Spain (sixto@unex.es).
- Díaz Laura Alonso**, PhD, University of Extremadura, Faculty of Teacher Education, Spain (laulonso@unex.es).
- Drlik Martin**, PhD, Constantine the Philosopher University in Nitra, Faculty of Nature, Slovakia (mdrlik@ukf.sk).
- Gutiérrez Esteban Prudencia**, PhD, University of Extremadura, Pedagogical Faculty, Spain (pruden@unex.es).
- Issa Theodora**, PhD, Curtin University in Perth, Faculty Curtin Business School, Australia (Theodora.Issa@cbs.curtin.au).
- Issa Tomayess**, PhD, Curtin University in Perth, Faculty Curtin Business School, Australia (Tomayess.Issa@cbs.curtin.au).
- Issa Touma B.**, PhD, School of Engineering and Information Technology – Murdoch University, Murdoch Western Australia (t.issa@murdoch.edu.au).
- Kostolányová Kateřina**, PhD, RnDr, CSc. Doc., University of Ostrava, Pedagogical Faculty, Czech Republic (katerina.kostolanyova@osu.cz).
- Makhachashvili Rusudan**, PhD, hab., associate professor, Borys Grinchenko Kyiv University, Ukraine (r.makha chashvili@kubg.edu.ua).
- Malach Josef**, PhD, CSc. Doc., University of Ostrava, Pedagogical Faculty, Czech Republic (josef.malach@osu.cz).
- Morze Nataliia**, PhD, hab., professor, Borys Grinchenko Kyiv University, Department of Computer Science, Ukraine (nmorze@kubg.edu.ua).
- Nagyová Ingrid**, PhD, University of Ostrava, Pedagogical Faculty, Czech Republic (ingrid.nagyova@osu.cz).
- Noskova Tatiana**, PhD, hab., professor, Herzen State Pedagogical University of Russia, St. Petersburg, Faculty of Information Technology, Russia (noskovatn@gmail.com).
- Prextová Tatiana**, PhD, University of Ostrava, Pedagogical Faculty, Czech Republic (tatiana.prextova@osu.cz).
- Reis António Dos**, PhD, professor, The Graal Institute, Portugal (antioniodreis@gmail.com).
- Sadovoy Oleksandr**, PhD hab., professor, Dniprodzerzhinsk State Technical University, Ukraine (science@dstu.dp.ua).
- Smyrnova-Trybulska Eugenia**, PhD, hab., associate professor, University of Silesia in Katowice, Faculty of Ethnology and Educational Science in Cieszyn, Poland (esmyrnova@us.edu.pl).
- Yalova Kateryna**, PhD, Dniprodzerzhinsk State Technical University, Ukraine (yalovakateryna@gmail.com).

Yashina Ksenia, PhD, Dniprodzerzhinsk State Technical University, Ukraine (YashinaKsenia85@gmail.com).

Zavgorodnii Valerii, PhD, Dniprodzerzhinsk State Technical University, Ukraine (valeriizavgorodnii@gmail.com).



IJREL Reviewers

Sixto Cubo Delgado, PhD, Professor (University of Extremadura (UEx), Spain Faculty of Education, Director of Educational Sciences Department). Teaching and research. Lines of investigation: Research Methods, Data Analysis, New Technologies, ICT, Guidance or Counselling.

Agnieszka Heba, PhD (Higher School of Labour Safety Management in Katowice). She is a graduate of the University of Silesia, major in Mathematics. Since 2005 she has been a Lecturer of Mathematics, Statistics, Operational Research and Logics at the Higher School of Labour Safety Management in Katowice. She was a participant of international conferences with lectures from the field of e-learning in the Czech Republic and Poland. She realised in 2014 a doctoral thesis in Czech language on the subject: Development of mathematical competences with the use of e-learning at the Faculty of Pedagogy of the University of Ostrava at the major: Informational and Communication Technologies in Education.

Miroslav Hruby, PhD, Ing., CSc. (University of Defence, Faculty of Military Technology, Department of Communication and Information Systems (CIS), Brno, Czech Republic). He is in charge of the scientific projects of the CIS Department, and his interests focus on computer programming and ICT usage in teaching and learning processes.

Rusudan Makhachashvili, PhD, hab., Associate Professor (Head of Department of Romance Languages and Typology at Borys Grinchenko Kiev University, Ukraine). Areas of specialisation: linguistic philosophy, Germanic languages. Research activity and objectives: computer networks philosophic dimensions and linguistic parameters, language of the Internet, smart linguistics; modern English lexicon development, sociolinguistic aspects of English vocabulary development.

Tatiana Pavlova, PhD, Associate Professor (Herzen State Pedagogical University of Russia, Institute of Information Science and Technology Education). Employed at the Faculty of Information Technology. Developer of the master's programme Information Technologies in Education. Developer of the content and teaching methods courses Electronic resource base of the educational environment, Multimedia technology in the cultural and educational environment, Psychopedagogical foundations of virtual reality in education, etc. Participant of the International Cooperation. The teacher of the Intel – Teach to the Future.

Iryna Sekret, Dr, Professor (Abant Izzet Baysal University). In 1996 she graduated from Dnipropetrovsk State University as a specialist in Practical Psychology and Teaching English. In 2002 she defended her PhD dissertation on Educational Psychology in Kyiv. During that period she was teaching in Verkhnyodniprovsk Agricultural College, Dnipropetrovsk State University and

Dniprodzerzhinsk State Technical University. Since 2004 she has been heading the Foreign Languages Department and acting as a Vice Dean of the Philology and Sociology Faculty (2007, 2010–2011) in Dniprodzerzhinsk State Technical University. The defense of the dissertation for the degree of the Doctor of Pedagogical Sciences was held in 2012 in Kyiv. Her scientific interests are e-learning, methods of teaching, linguistics, educational psychology.

Jolanta Szulc, PhD, inż. (University of Silesia in Katowice, Poland, Faculty of Philology, Institute of Library and Information Science). Doctor of Humanities Sciences, specialty bibliography, engineer. Graduated from the University of Silesia Faculty of Philology (1991), Faculty of Theology at the John Paul II Catholic University of Lublin (1997), the Jagiellonian University Department of Management and Social Communication (2001), the Faculty of Mechanical Engineering (2008) and the Faculty of Automatic Control, Electronics and Computer Science (2012) at the Silesian University of Technology. Assistant professor (adiunkt) at the Institute of Library and Information Science at the University of Silesia in Katowice since 2006. Specialises in descriptive cataloguing, subject cataloguing and indexing, information systems, information languages, expert systems and e-learning. Author of several articles in books and journals. Member of the Polish Society of Scientific Information and the ISKO: International Society for Knowledge Organization, member of Association of Academic E-learning, honorary member of the Federation of the Polish Church Libraries FIDES.

Julia Tomanová, PhD (Constantine the Philosopher University in Nitra, Slovakia). Assistant professor at the Department of Computer Science, specialising in informatics. Author of scientific publications devoted to computer graphics, discrete mathematics, electronic testing, activating methods of informatics teaching and students' behaviour in e-environment. Attendance of conferences focusing on e-learning and fields mentioned above. Participant in projects on new competence in teaching and dealing with learning/teaching in virtual environment using e-learning courses: Further education of the teachers of primary and secondary schools in the subject of Informatics; A-CENTRUM FNS CPU in Nitra – Center of Innovative Education.

In the “E-learning” series

<http://weinoe.us.edu.pl/nauka/serie-wydawnicze/e-learning>

ISSN 2451-3644

(print edition)

ISSN 2451-3652

(digital edition)

1. *Theoretical and practical aspects of distance learning*. Ed. E. Smyrnova-Trybulska. Cieszyn: Wydawnictwo Uniwersytetu Śląskiego, 2009, 308p. ISBN: 978-83-925281-4-2.
2. *Use of e-learning in the training of professionals in the knowledge society*. Monograph. Ed. E. Smyrnova-Trybulska. Cieszyn–Katowice: Studio Noa for University of Silesia, 2010, 344p. ISBN 978-83-60071-30-4.
3. *Use of e-learning in the developing of the key competences*. Monograph. Ed. E. Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2011, 462p. ISBN: 978-83-60071-39-7.
4. *E-learning for societal needs*. Monograph. Ed. E. Eugenia Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2012, 557p. ISBN 978-83-60071-59-5.
5. *E-learning and lifelong learning*. Monograph. Ed. E. Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2013, 587p. ISBN 978-83-60071-66-3.
6. *E-learning and intercultural competences development in different countries*. Monograph. Ed. E. Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2014, 484p. ISBN 978-83-60071-76-2.
7. *IT tools – Good practice of effective use in education*. Monograph. Ed. E. Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2015, 405p. ISBN 978-83-60071-82-3.
8. *E-learning methodology – Implementation and evaluation*. Monograph. Ed. E. Smyrnova-Trybulska. Katowice–Cieszyn: Studio Noa for University of Silesia, 2016, 479p. ISSN 2451-3644 (print edition) ISSN 2451-3652 (digital edition) ISBN 978-83-60071-86-1.

Coursebooks on e-learning

1. *Wykorzystanie LCMS Moodle jako systemu wspomaganiania nauczania na odległość*. Podręcznik akademicki. Ed. E. Smyrnova-Trybulska, S. Stach. Authors: E. Smyrnova-Trybulska, A. Burnus, A. Szczurek. Katowice: Studio Noa for University of Silesia, 2012, 560p. ISBN: 978-83-60071-56-4 (<http://www.wydawnictwo.us.edu.pl/node/3721>).
2. *Zastosowanie systemów CMS w tworzeniu przestrzeni informacyjno-edukacyjnej w Internecie*. Podręcznik akademicki. Ed. E. Smyrnova-Trybulska, S. Stach. Authors: E. Smyrnova-Trybulska, S. Stach, B. Fuklin, D. Staniek. Katowice: Studio Noa for University of Silesia, 2012, 194p. ISBN: 978-83-60071-55-7 (<http://www.wydawnictwo.us.edu.pl/node/3731>).

Contact

International Journal of Research in E-learning
University of Silesia
Faculty of Ethnology and Sciences of Education
Bielska 62, 43-400 Cieszyn, Poland
phone: +48 33 854 61 13
fax: +48 33 854 61 01
email: esmyrnova@us.edu.pl

Copy editing

Anna Kisiel

Proofreading

Joanna Zwierzyńska

Cover design

Emilia Dajnowicz

Technical editing and typesetting

Hanna Olsza

Copyright © 2016 by
Wydawnictwo Uniwersytetu Śląskiego
All rights reserved

ISSN 2451-2583

(print edition)

ISSN 2543-6155

(digital edition)

Published by

Wydawnictwo Uniwersytetu Śląskiego

ul. Bankowa 12B, 40-007 Katowice

www.wydawnictwo.us.edu.pl

e-mail: wydawus@us.edu.pl

First impression. No. of copies: 50 + 50. Printed sheets: 9.8.

Publishing sheets: 10,5. Offset paper grade, 90 g.

Price 20 zł (+ VAT)

Printing and binding

„TOTEM.COM.PL Sp. z o.o.” Sp. K.

ul. Jacewska 89, 88-100 Inowrocław