Editorial

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Biographical notes: Eugenia Smyrnova-Trybulska is an Associate Professor at the University of Silesia (Poland), Head of Department of Humanistic Education and Auxiliary Sciences of Pedagogy, Faculty of Ethnology and Sciences of Education in Cieszyn, University of Silesia in Katowice. She is a coordinator of the Faculty Distance Learning Platform (http://el.us.edu.pl/weinoe). She chairs the 'Theoretical and practical aspects of distance learning' conference (www.dlcc.us.edu.pl). She is a coordinator and researcher for several scientific and educational projects, in particular international IRNet project (www.irnet.us.edu.pl). She is the author of more than 150 scientific papers and monographs in the field of E-learning methodology, ICT in Education, multimedia, teacher training in ICT, and so on.

Piet Kommers is an Associate Professor at the University of Twente at the Department of Media, Communication and Organization. He chairs the IADIS conferences and the e-society conference and web-based communities conference in particular. In his work for UNESCO, he brings forward the blend between the nature and the culture of learning. He distinguishes the 'new' media as catalytic to communication and awareness. In his view, learning gradually embeds in every aspect of life pertaining to the delicate question if learning can be orchestrated essentially. Similarly, we may question if communication can be 'arranged' as we ought to believe at the dawn of the social web.

Margriet Simmerling is a Peer Consultant/Senior Manager for R&D projects in the area of e-society and web-based communities. She participated in the advisory board for the Dutch Ministry of Economic Affairs and is active as a Reviewer for the European Commission. She designs and moderates e-learning modules and workshops' e-learning modules and workshops in the domain of education technology and psychology at the PhD level.

E-learning and lifelong learning in the globalised world

E-learning and continuous higher education seem to be in an ideal partnership since communities of practice emerged two decades ago. One fascinating aspect is the way technology evolves: social media that prompt practitioners not only to synchronise more seamless all the time, but also it trigger to rethink the essence of learning. For a long time, we have optimised the transfer role of learning and teaching. Continuously we realise that the transfer from experts to novices is very much needed, however not enough to vitalise domains in respect to high speed worldwide competition like industry, services, care and education. That is why we need to complement learning in the transfer mode with co-creation: self-improving experts who guide novices in the slip stream and who become even better experts as they teach. In this sense, we see web-based learning as an awareness process that stimulate practitioners to absorb new methods and techniques even quicker and more vigilant than before. This special issue offers you eye-catching examples from key projects in the European Union.

Altbach, Reisberg and Rumbley (2009, p.7) state: "Globalization, a key reality in the 21st century, has already profoundly influenced higher education. (...) We define globalization as the reality shaped by an increasingly integrated world economy, new information and communications technology, the emergence of an international knowledge network, the role of the English language, and other forces beyond the control of academic institutions (...). Internationalization is defined as the variety of policies and programs that universities and governments implement to respond to globalization."

The 'Europe 2020' strategy for smart, sustainable and inclusive growth calls for the development of knowledge, skills and competences for achieving economic growth and employment. The accompanying flagship initiatives 'Youth on the Move' and the 'Agenda for new skills and jobs' emphasise the need for more flexible learning pathways that can improve entry into and progression in the labour market, facilitate transitions between the phases of work and learning and promote the validation of non-formal and informal learning (Council Recommendation, 2012). In this context, it is important to emphasise that not only formal education but also non-formal and informal education, based on e-learning, will be of crucial importance for lifelong learning, and so will the identification and analysis of contemporary solutions to priority questions regarding theoretical, methodological and practical aspects of e-learning.

In the course of the last 20 years, we have witnessed great economic changes, economic, social, political and technological developments in all European countries and around the world that require adequate systems, accompanied by fast and permanent measures to effectively adapt to new challenges. At the international and national levels,

several documents have been written to address these issues: *White Paper on Education and Training Teaching and Learning Towards the Learning Society European Commission COM(95) 590, November 1995; - eEurope 2002; - The White Paper on Youth policies* (2002); *The Copenhagen Declaration (30 November 2002) and the Council Resolution (19 December 2002); The Digital Agenda for Europe 2013–2014 (2013); Strategy of Information Society Development in Poland for the years 2007–2013. Other documents have also been prepared that* describe in detail all challenges for contemporary states, economies, society and citizens. Among the priorities is the *lifelong learning* (LLL) (Smyrnova-Trybulska 2013).

For example, in Lisbon, it was made clear that achieving full employment would require a radical transformation of the economy and skills to match the opportunities of the new economy.

The first challenge is education and training. Education will make a major contribution to developing new skills but its results will inevitably only be realised in the longer term. More needs to be done (eEurope, 2002)

First of all this concerning jobs for information technology professionals. The Digital Agenda for Europe 2013-2014 (https://ec.europa.eu/digital-agenda/en/news/digital-do-list-new-digital-priorities-2013-2014) analyses and describes in particularly 5) Entrepreneurship and digital jobs and skills and in this documents has stressed, that "The Commission signals that by 2015 700,000 to 1 million ICT jobs will not be filled in Europe, due to lack of skilled personnel" (Digital Agenda for Europe, 2013-2014).

However, the challenge is wider than just meeting the demand for information technology professionals. Digital literacy is an essential element of the adaptability of the workforce and the employability of all citizens. In this context, the responsibility of enterprises for training 'on the job' will be of crucial importance for *lifelong learning.* An award for enterprises that is particularly successful in developing human resources could be envisaged.

The Special Issue Special Issue "E-learning and lifelong learning in the globalised world" includes some papers, prepared and presented by authors that participated in the scientific conference entitled *"Theoretical and practical aspects of distance learning"*, subtitled: *"E-learning & lifelong learning"*, which was held on 14-15.10.2013 at the Faculty of Ethnology and Sciences of Education in Cieszyn, University of Silesia in Katowice, Poland. The authors include first of all well-known scholars, as well as young researchers, academic lecturers with many-years' training and experience in the field of e-learning, PhD students. The articles in this special issue are revised and expanded versions.

Magdalena Roszak, Barbara Kołodziejczak, Wojciech Kowalewski and Anna Ren-Kurc, authors of the article 'Implementation of e-learning portal for academic education and lifelong learning' from Poland, stressed that distance education is entering the area of university education with increasing strength, particularly including lifelong learning, which is or will become an important field of educational activities of universities. Simultaneously, distance education requires a well-structured organisation and resource management tools, namely an e-learning portal. At the moment, most universities have an education portal that can be used accordingly for lifelong learning purposes. Other universities which are still at the beginning of the portal implementation process may encounter numerous technical and organisational issues. The article was

created with such educational centres in mind. The authors point to several key issues, such as analysis of the school's needs in terms of distance education server resources, choice of portal in terms of technology, supported standards or functions necessary for proper course and user management. The article further mentions an often underestimated aspect of portal management. The authors further present the capabilities of computational clouds, their deployment in the academic environment and use in D-learning. This relatively new issue has recently become the subject of intensive research and analysis.

Next Polish research teams Barbara Dębska, Barbara Guzowska-Świder, Karol Hęclik, authors of paper "The benefits of using blended-learning methods in spectroscopy" marked that in 2003, the American Society for Training and Development identified blended-learning as one of the top ten trends to arise in the knowledge delivery trade. Seven years later, US Department of Education reported an updated meta-analysis because technology had evolved considerably. The study concludes that blended instructions have been more effective than pure face-to-face instruction-led training or pure internet-based learning.

At the same time, for several years, members of Department of Computational Methods in Chemistry at Rzeszow University of Technology create online courses. Mentioned courses support both teacher and student. Teacher - because of dynamic models of special devices that can be used during classroom lessons. Student - because of knowledge which is available all time, after normal lectures or laboratories. From e-learning courses at the beginning, it evolved to blended-learning courses at present. Chemical portal www.e-chemia.pl, created by authors, consists of several courses, including spectroscopy course. The possibilities to teach the basics of spectroscopy and the possibilities of spectral data processing by advanced chemometric methods were presented in the paper.

The paper titled "CLIL instruction in online interactive multimedia: a case study of Polish middle school learners of English" elaborated by Jarosław Krajka, Zbigniew P. Możejko, Agnieszka Gadomska, authors from Poland stressed that integration of foreign language instruction and content learning has become a reality of several learning contexts. The phenomenon of Content and Language Integrated Learning (CLIL) is becoming more widespread, though, at the same time, it finds its different realisations. However, there is still a need for language teaching materials that would be designed according to sound pedagogical principles, be appealing to adolescent learners and effective in terms of the integration of language and content.

The aim of this paper is to discuss the application of e-learning materials development in addressing diverse competences of middle school learners. After the literature review into the characteristics of CLIL and the elaboration on possible models of designing content-rich e-learning sequences, evaluation data of E-Academy of the Future, an innovative multimedia-assisted learning project will be provided to substantiate the claims made.

Miroslav Hrubý - the Czech author of manuscript "Feedback improvement of question objects" - considers the possibility of the electronic questions improving with the goal to support the useful feedback for the teachers and subject guarantors. The proposal of enriching of the 'multiple choice - multiple correct' electronic questions is described and the practical example is given. The described approach can be widely used especially not only in the current distance learning but also in continuing engineering education and lifelong learning. The author assumes that there is also a chance for not

only gifted students' motivation support. The author offers the described approach for discussion. The text is a result of the author's current vision in this field.

Tatiana Noskova, Tatiana Pavlova, Olga Yakovleva, Nataliia Morze, Martin Drlík authors "Quality features of university information environment in its external indicators" international team of researchers from the Russia, Ukraine, Skovakia describe and present in their article preliminary results of the ongoing comparative study of information environments in frame of the European project IRNet. The aim of this study is to substantiate and verify a set of external indicators for virtual educational environment of the University, which allows to determine its quality and to identify concrete ways for its further improvement. This research phase was conducted within three universities: Borys Grinchenko Kyiv University in Ukraine, Constantine the Philosopher University in Nitra, Slovak Republic and Herzen State Pedagogical University of Russia. The research instrument contains three sections (dimensions): characteristic of open university resources; the questionnaire, detecting student's information behaviour and attitude towards different networking activities in university information environment; global ranking of university internet integration. The study shows that proposed set of indicators allows to determine the overall level of university virtual learning environment development and to identify specific areas for its improvement. For a more complete study of the university virtual environment, the developed set of tools must be supplemented by internal indicators, reflecting e-learning methodology, achieved educational outcomes, and so on. But it is the task of the next phase of the study. Effects of using a peer support system to optimise knowledge sharing in learning networks: a cognitive load perspective.

In the article "Differential effects of variations in problem-based and lecturing sequences" Martin Podges and Piet Kommers present a study that describes the best ways to integrate Problem Based Learning (PBL) with the traditional lecture of the professor. In the Conclusion section, recommendations for further research are discussed.

Lynne Humphries authors a manuscript "Let's play together: the design and evaluation of a collaborative, pro-social game for preschool children from United Kingdom", and describes in his article the study designed an interactive game that enables preschool children to play and practice a basic social skill of emotion recognition. Ninety-five preschool children have been tested from three schools playing two interactive games: a specially designed emotion game and a control game for a touch screen device. Researchers controlled for the effect of the game by testing one cohort of children with a non-emotion game of similar complexity. Qualitative analysis using the Talk Taken Down technique showed more egocentric than social dialogue but also more non-verbal expressions of cooperation and enjoyment than verbal interaction with the game. The game held their attention well. The study concludes by suggesting seven design considerations for designing prosocial, collaborative games.

We would like to thank all the reviewers for their wonderful contribution to improve the quality of the papers in this Special Issue. Also, we would like to say 'thank you' to the authors for the preparation and permission to publish their articles. We wish all readers a pleasant reading.

Thank you.

Eugenia Smyrnova-Trybulska, Piet Kommers and Margriet Simmerling

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