



Editorial

Modern science undergoes enormous changes and transformations. Science 2.0 is a term used to refer to processes, trends, and phenomena related to the use of new technologies, and information and communication technologies in science, in particular tools, services, and online resources. This trend stresses the benefits of increased collaboration and cooperation between researchers and scientists. However, it refers primarily to the consequences of using these technologies. The authors of this volume analyse and discuss some important topics and try to find the answers on current research questions.

This volume includes seven articles gathered in four chapters. Chapter I – “Evaluating the Effectiveness of Teaching Information Systems Courses” – includes an article entitled “Evaluating the Effectiveness of Teaching Information Systems Courses: A Rasch Measurement Approach” prepared by Allaa Barefah and Elspeth McKay, researchers from the RMIT in Melbourne, Australia. In their paper, the authors stress that systems analysis and design (SAND) is an information systems course that is taught around the world in most higher education management of information systems programmes. However, the theoretical nature of this type of course presents challenges for instructors as they devise instructional strategies to convey the abstract concepts that are necessary for their students to understand, such as, how to draw data flow diagrams to correctly represent the informational specifications of an IS. Evidence suggests that one of the factors of the low success rates of many information systems design projects in the workforce is due to the graduate recruits’ failure to acquire basic SAND knowledge. While a considerable amount of literature focused on integrating technology into the teaching practices to facilitate the knowledge acquisition, a few investigated its effectiveness to fulfil this particular purpose. This paper reflects on such challenges and proposes an evaluation approach to assess the effectiveness of technology integration in teaching an information systems course like SAND. The empirical interpretations represented in this paper are gathered through a series of quasi-experimental 2x3 factorial experiments that were conducted at four higher education institutions and based on the Rasch item response theory and measurement analysis. The preliminary analysis from this study provides reliable evidence to delineate key

instructional strategies when designing higher education information systems courses.

Chapter II, “ICT Literacy and Intercultural Competencies Development,” includes two manuscripts. The authors of the article “The Impact of Online Services on Developing Students’ Media Competence” are Irina Simonova, Tatiana Ustiugova, and Olga Yakovleva from the Herzen State Pedagogical University of Russia, Saint Petersburg. In this article, the authors describe their experience of introducing students to online services for developing electronic educational resources with multimedia content. The sample of research included pedagogical education students from different years of first degree (bachelor) studies. The article presents the results obtained in the Herzen State Pedagogical University of Russia. The authors developed an e-environment for a training module, with all the content and interaction algorithms. In the experiment, the authors measured various indicators of students’ media competence development: informational, perceptual, motivational, contact, and interpretation (based on A. V. Fedorov’s approach). After students had studied the proposed module, the analysis of their projects were made. The other paper, entitled “Internet Blogs’ Potential in Education” was prepared by the authors Kateryna Poznanska, Maryna Romaniukha, and Liudmyla Sorokina from the Dniprodzerzhinsk State Technical University, Ukraine. This paper is devoted to general aspects of an Internet blog as an educational instrument and its prospects in education. The authors touch upon the connection between demographic challenges and the current educational trends, showing the main skills of Generation Z. A blog as a teaching tool can be broken down into a number of categories. The paper also discusses in short a few popular blogging platforms.

Chapter III – “Methodological Aspects of E-learning Implementation” – includes two manuscripts. The first paper, entitled “Use of Information Technologies in Upper Secondary Education – Practical Inspirations from Karol Miarka Upper Secondary School Complex No. 2 in Pszczyna,” is elaborated by Natalia Maria Ruman from the University of Silesia in Katowice, Faculty of Ethnology and Educational Science in Cieszyn, Poland. In the foreseeable future multimedia will not replace natural teaching tools. However, there are a number of didactic situations where the use of indirect forms of reality description is advisable or even necessary. The article aims to present elementary pedagogical practice in the field of contemporary learning technologies and to show the creative quest and reflexive enrichment of the pedagogical style of teaching, in which particular skills are used. The presented problems contribute to future research into the analysis of teachers’ skills development in terms of the use of computer programmes in school management. What presents a challenge to the Digital School is education in cyberspace, e-learning, new technologies and solutions, accompanied by simultaneous prevention of media-related risks. Schools need to keep abreast of the rapidly changing reality – only in this way can they produce beneficial educational results for society in the 21st century. The authors of the second article, “The

Influence of Personality on the Peculiarities of Going through Professional Crises in Workers of Trading Companies,” are Olga Filatova and Nikolay Shamanin from the Vladimir State University named after Alexander and Nikolai Stoletovs, Russia. The article is devoted to the study of professional crises and their conditioning with the qualities of a person. The article presents the results of an empirical study of the influence of personal qualities on professional crises of employees of trading companies. It is assumed that in the process of professionalisation employees of trading companies go through a crisis of professional growth. Personality qualities influence the degree of dissatisfaction with basic needs and the level of general social frustration. During the crisis of professional growth, different qualities of a person, such as dominance, high intellect, normative behaviour, courage, as well as sensitivity, dreaminess and anxiety, radicalism and nonconformism, are influenced. This influence affects almost all the basic needs and spheres of life of employees of the trading company: the need for security and self-expression, and social needs, which are manifested in discontent with the relationships with people, their social-economic status, and social status. A particular influence on the transactions in the group of subjects is provided by such personality traits as anxiety, suspiciousness, and intellect. Depressiveness, bad mood, and gloomy feelings intensify the crisis of professional growth, provoking discontent with relations with colleagues. Due to the developed intellect, employees of trading companies feel the discontent with the level of wages more sharply, which intensifies the crisis of professional development.

Chapter IV – “Reports” – contains two articles. “Report on the Implementation of Work Package 6 ‘Implementation of Methodology’ in the Framework of the IRNet Project,” prepared by an international team of researchers from different scientific areas connected with ICT, e-learning, pedagogy, and other related disciplines, focuses on the objectives and some results of the international project IRNet (www.irnet.us.edu.pl). Eugenia Smyrnova-Trybulska (Poland), Josef Malach and Kateřina Kostolányová (the Czech Republic), Nataliia Morze (Ukraine), Piet Kommers (the Netherlands), Tatiana Noskova (Russia), Paulo Pinto (Portugal), Sixto Cubo Delgado (Spain), Martin Drlík (Slovakia), Tomayess Issa (Australia), and Maryna Romanyukha (Ukraine) describe, in particular, research tools, methods, and a procedure of the Work Package 6 “Implementation of Methodology,” that is, objectives, tasks, deliverables, publications, and implementation of research trips in the context of the next stages and Work Packages of the IRNet project – International Research Network. The final paper, “Report from the International Scientific Conference DLCC2017 in Cieszyn and Katowice, Poland, 16–17 October 2017” is elaborated by Eugenia Smyrnova-Trybulska, Maria Stec, and Anna Studenska. It is devoted to the 9th edition of the International Scientific Conference DLCC2017: Theoretical and Practical Aspects of Distance Learning (www.dlcc.us.edu.pl), with the theme “Effective development of teacher’s skills in ICT and e-learning” and reports from the IRNet project. The conference was

held on 16–17 October 2017 in Cieszyn and Katowice. It was organised by the Faculty of Ethnology and Educational Science at the University of Silesia in Cieszyn with cooperation of ten other universities and organisations. More than sixty researchers from ten countries and more than twenty universities participated in this conference. It is worth noting that the conference favoured exchange of experiences, strengthening international cooperation, common problems solving, implementing innovative methodologies, and creating a global educational space. During the conference, numerous themes were discussed: further directions in international cooperation, new common scientific and didactic projects, and internalisation of development in the conditions of digitalisation and globalisation. More information concerning the conference can be found on the website www.dlcc.us.edu.pl

Eugenia Smyrnova-Trybulska