Editorial

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Biographical notes: Piet A.M. Kommers is an Associate Professor at the University of Twente, The Netherlands. His research interests are in the areas of media, communication and education. Since 1990, he has been increasingly involved in a broad range of European-based research projects in media supported and continuous learning. He holds a UNESCO professorship and is Honorary Doctor at Capital Normal University in Beijing, China. He is an Adjunct Professor in the Faculty of Computer Science at Joensuu University, Finland, Adjunct Professor at Curtin University in Perth (Australia) and Advisor to the Ministry of Education of Singapore.

Margriet Simmerling is 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 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.

The fields of education, training and technology are a vital triangle that not only resonate recent progress to the younger generation, it is also a transformer from incidental expertise into larger scale pillars of economic power. Regular higher education evolves more and more from academic thinking into professional orientation. Vocational training, however, seems to evolve slowly from skill-based via competence- into strategic thinking and problem-solving. Information and communication technologies (ICTs) infrastructures, as described in the underlying papers act as a catalyst in this transformational processes. Each of the papers demonstrates how both content, method and media are instrumental to scaffold an endemic trend towards integrating learning into one's individual style, personality and situational needs. Social media and massive open online courses (MOOCs) play a crucial role; motivation and ambition based on learners' prior experience, nature and ambitions.

The first paper 'Case study on means of information and communication technologies in teaching mathematics to distance and extramural university students' outlines theoretical and methodological foundations of teaching mathematics to extramural students in Ukraine. Gulesha et al. realise a pedagogical experiment during more than 10 years. They focus on the feasibility of the program-methodical complex (PMC). A questionnaire is used to collect students' opinions and several hypotheses are postulated. Finally, they analyse results using ordinary statistical methods.

Lean Six Sigma is a method to organise quality and efficiency improvements. It is widely used in industrial processes for controlling the quality and the stability of manufactured physical products.

Milosavljevic et al. presents a case study done in university courses where the results of exams performed by students have been analysed using the method of Lean Six Sigma. The paper 'Implementation of quality tools in higher education process' addresses an important topic which is the waste of resources, time and efforts during the educational processes, and investigates on the reason of high underperformances from students. The result can inspire innovative approach for improving the quality of Educational Processes.

The next paper 'The application of ADAMS/CAR in vehicle engineering teaching' is a tutorial for using ADAMS along with Matlab for teaching vehicle design and analysis for combined mechanical as well as electronic components. Fan and Sun introduce the basic characteristics of the virtual prototype software ADAMS and investigate the students' learning achievement. The positive results are outlined and many figures are included to illustrate several the simulation situations.

The link between industry and education is a challenge for the society and the government. More and more the ability to work in a team and contribute to innovation is needed. Are engineers well enough educated?

Kraisuth and Sawmong inform us about the new Strategic Education Plan of the Thai government and present a study that determines what level of capability (either perceived or real) Thai engineers have and what their 'needs' and 'gaps' in accomplishing their work are. In the paper 'An analysis of competency, needs, and gap on Thai engineering capabilities within ASEAN' the authors present a conceptual framework and show the result of more than 400 surveys.

Sankaran and Mohanty present the result of a study addressing the learning process of engineering students. Achieving technical and soft skills are discussed in detail. The paper 'Student perception on achieved graduate attributes and learning experiences: a study on undergraduate engineering students of India' present findings that are of value for engineering educators and governmental bodies.

The last paper, 'Digital training in intercultural education for teacher training: analysis of an innovative experience', contributes to intercultural education using rich e-learning opportunities. Alonso-Díaz et al. present the benefits of an online graduate training course at the University of Extremadura. The goal pursued throughout the study was to analyse the training provided in order to obtain answers to the success of the teaching offered and the potential variations in forthcoming courses.

In this thematic issue, researchers worldwide share with you their latest findings and results: from Russia, Ukraine, Italy, China, Thailand, Spain and India.

We wish you a most fruitful reading and application.