

Guest Editorial Preface

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The culture of studying and how teaching is arranged is changing, with learning extending beyond the classroom and online collaboration creating more opportunities between educators, students and other stakeholders. Social media is an established phenomenon today and its effect on studying can be observed – educators, industry stakeholders and students can connect with each other online to create more opportunities for all participants. However, the use of social media for education varies between institutions and countries, and is usually the responsibility of the individual teacher, who might receive only little support in their use. As the field evolves, more research will create guidelines and shared best practices for online and social learning environments.

In this special issue researchers involved in the European Thematic Network on Future Education and Training in Computing (FETCH) present recent research, recommendations, surveys and case studies in the field of social media and online student collaboration. Some of the objectives of the FETCH project are to raise the quality of education through introducing modern information and communication technologies in education, provide new knowledge to educators and curriculum designers, and to develop new didactical theories and learning models for using online tools in education. The papers are a part of the ongoing scientific discourse on e-Learning and will hopefully be of use for everyone working in or researching the changing landscape of modern education.

In their paper “e-Analytics for e-Learning,” by Dafinka Miteva, Krassen Stefanov and Eliza Stefanova explore how analytics can be used to improve the results of e-Learning. They present a novel method for cross-systems data collection. After presenting the results from two years of experiments they also give recommendations on improving teaching and learning processes.

In the paper “Student Projects and Virtual Collaboration in IT Degrees - Incorporating Entrepreneurship into Study Programmes” by Markus Helfert, Igor Lyutak and Howard Duncan describe a framework for the inclusion of entrepreneurship into computing study programs. The framework takes a process-oriented view of innovation and entrepreneurship, presenting an approach that combines existing online tools with more traditional methodologies. They also present a case study of a course developed with the approach presented in the framework.

The paper “MMT – a Tool for Observing Metrics in Software Projects” by Pekka Mäkiäho, Katriina Löytty and Timo Poranen present a collaboration tool for project participants. It can support project members and managers in reporting and monitoring software metrics. The paper covers the design science research process, software features and the evaluation assessment.

In their paper “User Click Modeling on a Learning Management System” by Antonio Maratea, Alfredo Petrosino and Mario Manzo describe an approach for modeling user click behavior in learning systems. They describe the detected patterns of access and relate the patterns to main behavioral stages.

The paper “Affective Didactic Models in Higher Education” by Leon Rothkrantz presents both well-known and new didactic models with special attention for affective components, and a system to assess the emotional state of students. Such a diagnostic instrument is important for the wellbeing of

students, and has possibilities to also have an effect on learning outcomes, such as dropping out. The paper also describes a case study where the system was used, along with the results of the case study.

The paper “Social Media in Bulgarian Higher Education: An Exploratory Survey” by Rositsa Doneva and Silvia Gaftandzhieva survey the state of social media use in Bulgaria and clarify the development of the trend in Bulgaria. It assesses the extent to which the use of social networking of educational purposes was formally accepted by students and teachers, and to what degree its use is still informal. The study shows that the trend is towards more formal acceptance in the academic community.

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