

GUEST EDITORIAL PREFACE

Social and Personalized Learning in Web-Based Environments

Elvira Popescu, University of Craiova, Romania

Sabine Graf, Athabasca University, Canada

The advent and omnipresence of information systems has a great impact on society in general and the education in particular. In the world of pervasive Internet, learners are also evolving: the so-called “digital natives” want to be in constant communication with their peers, they expect an individualized instruction and a personalized learning environment, which automatically adapts to their individual needs. In this context, the present special issue deals with new trends and challenges of social and personalization aspects in Web-supported learning communities.

The issue comprises extended versions of best papers from the 2nd International Workshop on Social and Personal Computing for Web-Supported Learning Communities (SPeL2009), held in conjunction with WI-IAT '09 (The 2009 IEEE / WIC / ACM International Joint Conferences on Web Intelligence and Intelligent Agent Technology), 15 – 18 September 2009, Milan, Italy. The workshop aimed to address research in the area of e-learning, social networks and Web personalization, focusing on the application of Web intelligence research paradigm to the next

generation of e-learning systems. It provided a successful forum for discussing new trends and initiatives in this area, including research about the planning, development, application, and evaluation of intelligent learning environments, where people can learn together in a personalized way.

The five papers selected for this special issue cover aspects related to: Adaptive and personalized learning environments, Social information retrieval, Knowledge community formation and support, Web 2.0 and social computing for learning, Web-based cooperative learning, and Social software for collaborative learning.

The first paper, “Formal and Informal Learning Flows Cohesion in Web 2.0 Environment”, by Malinka Ivanova and Anguelina Popova, presents the results of an exploratory study examining students’ learning experiences with a new generation learning management system (Edu 2.0). The authors discuss students’ perceptions of formal and informal activities within this environment, as captured through a collection of surveys, activities’ tracking and

assessment. The study highlights ways in which informal learning flows can complement and enrich the formal learning process and points out the positive effects on student engagement and achievements.

The second paper, “Global Teacher Training Based on a Multiple Perspective Assessment: A Knowledge Building Community for Future Assistant Language Teachers”, by Yuri Nishihori, Chizuko Kushima, Yuichi Yamamoto, Haruhiko Sato, and Satoko Sugie, presents a Web-based collaborative learning environment for novice Assistant Language Teachers (ALTs), i.e., young graduates from all over the world coming to Japan to teach English classes. The introduced system, called Forest Forum, facilitates building an online community where novice and experienced teachers can share professional knowledge and expertise, providing a good opportunity for future ALTs to undergo pre-training and enhance their professional development.

The third paper, “Creating a Personalized Artificial Intelligence Course: WELSA Case Study”, by Elvira Popescu and Costin Bădică, illustrates the use of WELSA adaptive educational system for the implementation of an undergraduate Computer Science course which is individualized to the learning style of each student. The focus of the paper is on the course authoring process, the adaptation mechanism, as well as the system validation. The results reported confirm the practical applicability of WELSA and its potential for meeting the personalization needs and expectations of the digital native students.

The fourth paper, “ELIXIR: Expertise Learning & Identification x Information Retrieval”, by Neil Rubens, Dain Kaplan, and Toshio Okamoto, deals with the problem of expert finding (i.e., matching available experts to given tasks). While most expert finding systems operate with either content-based or structure-based approaches, the authors

propose to convert structure-based data to a content-based representation and then use a content-based approach. The ELIXIR system can be widely applied in educational settings, where finding the peer and/or trainer with proper expertise for a particular learning task is of great importance.

The fifth paper, “SocialX: Reputation Based Support to Social Collaborative Learning through Exercise Sharing and Project Teamwork”, by Andrea Sterbini and Marco Temperini, deals with the social dimension of learning, based on a reputation system which captures students’ contributions to the group and the course as a whole. The authors focus on aspects such as sharing and reuse of (solutions to) single exercises and development of projects by group-work and social exchange. The reputation system is both a motivational tool for the student and a way to evaluate and understand learners’ critical thinking and self-judgment abilities.

ACKNOWLEDGMENTS

We would like to thank all authors who contributed to this special issue, as well as Professor John Wang, Editor-in-Chief of IJISSC, for his support and cooperation. We are also grateful to the following reviewers for their timely and valuable feedback, which significantly helped authors to improve their papers:

Malinka Ivanova, Technical University of Sofia, Bulgaria

Dain Kaplan, Tokyo Institute of Technology, Japan

Ioannis Kazanidis, University of Macedonia, Thessaloniki, Greece

Flavio Manganello, University Politecnica delle Marche, Ancona, Italy

Yuri Nishihori, Sapporo Otani University, Japan

Anguelina Popova, University of Utrecht,
Netherlands

Philippos Pouyioutas, University of Nicosia,
Cyprus

Neil Rubens, University of
Electro-Communications, Tokyo, Japan

Jirarat Sitthiworachart, Walailak University,
Thailand

Andrea Sterbini, Sapienza University of Roma,
Italy

Marco Temperini, Sapienza University of
Roma, Italy

Qingsheng Zhang, Athabasca University,
Canada

Jianhua Zhao, South China Normal University,
China

Elvira Popescu

Sabine Graf

Guest Editors

IJISSC

Elvira Popescu is Assistant Professor at the Software Engineering Department, University of Craiova, Romania and a member of the Multimedia Applications Development Research Center at the same university. She obtained her Ph.D. degree in Information Systems from the University of Craiova, Romania and the University of Technology of Compiègne, France (double degree) in 2008. Her research interests include technology enhanced learning, adaptation and personalization in Web-based systems, intelligent and distributed computing. She authored and co-authored more than 40 publications, including journal articles, book chapters and conference papers. She received several scholarships and participated in several national and international research projects. Dr. Popescu is actively involved in the research community by serving as program committee member and reviewer for numerous conferences, and co-organizing three international workshops in the area of social and personal computing for Web-supported learning communities.

Sabine Graf is Assistant Professor at Athabasca University, School of Computing and Information Systems, in Canada. Her research interests include adaptivity and personalization in information systems, user/student modeling, ubiquitous and mobile computing, artificial intelligence, and collaborative learning technologies. She has published more than 50 journal papers, book chapters, and conference papers, of which three conference papers were awarded with the best paper award. She is editor of the Learning Technology Newsletter, a publication of the IEEE Computer Society's Technical Committee on Learning Technology (TCLT). Dr. Graf has given invited talks at universities/companies in Austria, Canada, New Zealand, Taiwan, and UK and is involved in research projects dealing with mobile and ubiquitous learning, adaptivity and personalization in learning systems, student modeling, and the application of e-learning at universities.