Advances in Intelligent and Soft Computing

152

Pierpaolo Vittorini, Rosella Gennari,
Ivana Marenzi, Fernando De la Prieta,
and Juan M. Corchado Rodríguez (Eds.)

International Workshop on Evidence-Based Technology Enhanced Learning

Springer

Editors

Pierpaolo Vittorini
Department of Internal Medicine
and Public Health
University of L'Aquila
Italy

Rosella Gennari
Computer Science Faculty
Free University of Bozen-Bolzano
Bolzano
Italy

Ivana Marenzi
L3S Research Center
Leibniz University of Hanover
Hannover
Germany

Fernando De la Prieta
Department of Computing Science
University of Salamanca
Salamanca
Spain

Juan M. Corchado Rodríguez
Department of Computing Science
University of Salamanca
Salamanca
Spain

Preface

Research on Technology Enhanced Learning (TEL) investigates how information and communication technologies can be designed in order to support pedagogical activities. The Evidence Based Design (EBD) of a system bases its decisions on empirical evidence and effectiveness. The evidence-based TEL workshop (ebTEL) brings together TEL and EBD. The workshop proceedings collects contributions concerning evidence based TEL systems, like their design following EBD principles as well as studies or best practices that educators, education stakeholders or psychologists used to diagnose or improve their students' learning skills, including students with specific difficulties (e.g. poor/slow readers, students living in impoverished communities or families).

The ebTEL'12 workshop was launched under the collaborative frame provided by the European TERENCE project (http://www.terenceproject.eu). The TERENCE project, n. 257410, is funded by the European Commission through the Seventh Framework Programme for Research and Technological Development, Strategic Objective ICT-2009.4.2: ICT: Technology-enhanced learning. TERENCE is building an AI-based Adaptive Learning System (ALS) for reasoning about stories, in Italian and in English, through reading comprehension interventions in the form of smart games. The project also aims at developing innovative usability and evaluation guidelines for its users. The guidelines and the ALS will result from a cross-disciplinary effort of European experts in diverse and complementary fields (art and design, computers, engineering, linguistics and medicine), and with the constant involvement of end-users (persons with impaired hearing and their educators) from schools in Brighton (Great Britain), and from Veneto region (Italy).

The ebTEL workshop invited authors in the area of TEL, both from computer science as well as evidence-based medicine, educational psychology and pedagogy. In this manner, the international ebTEL'12 workshop wants to be a forum in which TEL researchers and practitioners alike can discuss ideas, projects, and lessons related to ebTEL. The workshop takes place in Salamanca, Spain, on March 28th-30th 2012.

This volume presents the papers that were accepted for the first edition of ebTEL. The full program contains 16 selected papers (3 in the Psychology and Pedagogy Track and 13 in the Information and Communication Technology Track) from 6 countries (Germany, Italy, Romania, Saudi Arabia, Spain, United Kingdom, USA). Each paper was reviewed by, at least, two different reviewers, from an international committee composed of 27 members of 5 countries. The quality of papers was on average good, with an acceptance rate of 76.2%.

We would like to thank all the contributing authors, the reviewers, the sponsors (IEEE Systems Man and Cybernetics Society Spain, AEPIA Asociación Española para la Inteligencia Artificial, APPIA Associação Portuguesa Para a Inteligência Artificial, CNRS Centre national de la recherché scientifique and STELLAR), as well as the members of the Program Committees, TERENCE members and the Organising Committee for their hard and highly valuable work. Special thanks are due to Wolfgang Nejdl of the L3S Research Center of the University of Hannover (Germany), invited speaker of the workshop with the talk "Web Science @ L3S – Interdisciplinary Research Challenges". The work of all these people contributed to the success of the first edition of the ebTEL'12workshop. Thank you all for your help, ebTEL'12 would not exist without your contribution.

<div align="right">

The Editors
Pierpaolo Vittorini
Rosella Gennari
Ivana Marenzi
Fernando De la Prieta
Juan M. Corchado Rodríguez

</div>

Organization

Steering Committee

Juan M. Corchado	University of Salamanca, Spain
Fernando De la Prieta	University of Salamanca, Spain
Rosella Gennari	Free University of Bozen-Bolzano, Italy
Ivana Marenzi	L3S Research Center, Germany
Pierpaolo Vittorini	University of L'Aquila, Italy

Program Committee

Fabian Abel	Delft University of Technology, Nederland
Tomaz Amon	AMNIN, Slovenia
Anthony Baldry	University of Messina, Italy
Juan M. Corchado	University of Salamanca, Spain
Fernando De la Prieta	University of Salamanca, Spain
Juan F. De Paz Santana	University of Salamanca, Spain
Dina Di Giacomo	University of l'Aquila, Italy
Tania Di Mascio	University of l'Aquila, Italy
Rosella Gennari	Free University of Bozen-Bolzano, Italy
Ana Belén Gil	University of Salamanca, Spain
Óscar Gil	University of Salamanca, Spain
Nicola Henze	L3S, Leibniz University of Hanover, Germany
Eelco Herder	L3S, Leibniz University of Hanover, Germany
Ralf Kerstel	L3S, Leibniz University of Hanover, Germany
Ralf Klamma	RWTH Aachen University, Germany
Rita Kupetz	Leibniz University Hanover, Germany
Fabrizio Maggi	University of Pavia, Italy
Ivana Marenzi	L3S, Leibniz University of Hanover, Germany
Maria Moreno Jaén	University of Granada, Spain
Stefano Necozione	University of l'Aquila, Italy
Emanuele Pianta	FBK-irst, Italy
Sara Rodríguez	University of Salamanca
Maria Grazia Sindoni	University of Messina, Italy
Marcus Specht	Open University of the Netherlands
Sara Tonelli	FBK-irst, Italy
Pierpaolo Vittorini	University of l'Aquila, Italy
Carolina Zato	University of Salamanca, Spain

Local Organising Committee

Juan M. Corchado (Chairman)	University of Salamanca, Spain
Javier Bajo	Pontifical University of Salamanca, Spain
Sara Rodríguez	University of Salamanca, Spain
Dante I. Tapia	University of Salamanca, Spain
Emilio Corchado	University of Salamanca, Spain
Juan F. De Paz	University of Salamanca, Spain
Fernando De la Prieta	University of Salamanca, Spain
Davinia Carolina Zato Domínguez	University of Salamanca, Spain
Óscar Gil Gonzalo	University of Salamanca, Spain

Contents