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Preface

This year the 8th WSEAS International Conference on Educational Technologies (EDUTE '12) was held in Porto, Portugal, July 1-3, 2012. The conference provided a platform to discuss advanced educational software and hardware, corporate training, curriculum design and development, digital libraries and education, educational software and applications, interactive learning environments, primary and secondary education, reliability issues in education, standards in learning and teaching, televised courses and telecommunications, virtual classroom etc. with participants from all over the world, both from academia and from industry.

Its success is reflected in the papers received, with participants coming from several countries, allowing a real multinational multicultural exchange of experiences and ideas.

The accepted papers of this conference are published in this Book that will be sent to international indexes. They will be also available in the E-Library of the WSEAS. Extended versions of the best papers will be promoted to many Journals for further evaluation.

Conference such as this can only succeed as a team effort, so the Editors want to thank the International Scientific Committee and the Reviewers for their excellent work in reviewing the papers as well as their invaluable input and advice.

The Editors

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Plenary Lecture 1

Website on English Learning

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Abstract: Our objective is to present a website which can be used as traveler's conversation guide in order to help the tourists. We are focused on the followings:
-Vocabulary – different lists of words with phonetic transcription for singular and plural (as tool for pronunciation learning), common and short phrases. A big part of language guides contain lists of words grouped by categories: for example, the 15-Minute series of language guides or European phrase book from Dorling Kindersley, Inglese in viaggio (English in travel)- Istituto Geografico De Agostini, European Conversation Dictionary from Thomas Cook Publishing, etc. The approach using lists of words in order to learn a foreign language is also currently common for some of very famous dictionaries. We recall the Visual Dictionary by Jean-Claude Corbeil and Ariane Archambault from Merriam Webster (see http://visual.merriam-webster.com), which has also a multilingual version and the Visual Dictionaries and Encyclopedias from Dorling Kindersley, UK.
-Grammar - we are focused on words and phonetic transcriptions. For example, in the website, if you select an adjective you can view the degrees of comparison: positive, comparative, superlative, with phonetic transcription. When you select a verb, you can see the entire conjugation, also with phonetic transcription.
The benefit of the website is that it can increase unlimitedly (a travel conversation guide, generally is a book in small size), can be used by everyone (using list of worlds- all in English, people can use tools for translation, e.g. http://translate.google.com/#). It is designed for those who will travel soon and they need to know the English travel conversation. Our new results will be focused on algorithms for word database exploration and the website model.

Brief Biography of the Speaker: Mirela-Catrinel Voicu was born in Romania. In 1995, she graduated from the Faculty of Mathematics and Computer Sciences, West University of Timisoara. She received the MSc degree in Applied Mathematics, Informatics in Economy and Computer Sciences from the West University of Timisoara. She followed a training course for PhD thesis at the National Institute for Statistics and Economic Studies, Paris, France. She received her PhD in 2001 from the University of Timisoara, Romania (with the "Cum laude" distinction) and from the University of Paris 13, France (with the "Tres honorable avec felicitations" distinction). Currently she is a Professor at the Department of Economic Informatics, within the Faculty of Economics and Business Administration, West University of Timisoara, Romania, where, since 1995, she has held several academic positions. Her activity includes Programming and Internet Programming, Informatics in Economy, Databases, OOP, Data structures. Through the collaboration program between the Faculty of Economics and Business Administration and the Faculty of Mathematics and Informatics of the West University, she has held classes with international participation, in postgraduate education, in the section of "Mathematic modelling in economics and applied sciences" Exchange Rate Evolution Models subject introduced within the program due to the original contributions in her PhD. During the collaboration between the Faculty of Economics and Business Administration, West University of Timisoara and CUOA Italy, she has taught a postgraduate class for the section of "Management of Business and Public Administration", regarding the Internet. She has 79 papers in conference proceedings or refereed journals (from these papers, 26 have been presented or published abroad). She has published 8 books (1 book in France, 1 book in Germany and 6 books in Romania). She is a reviewer and a member in international program committee of various WSEAS conferences from abroad, reviewer at "Journal of Knowledge, Communications and Computing Technologies", member in the teams of 9 research projects (one of which is international) and project manager for one research project. Since 2002, she is a member of INFOREC (Romanian Association for Economic Informatics Training Promotion), since 2005, she is a member of WSEAS (World Scientific and Engineering Academy and Society) and since 2009, she is a member of SCT (Society for Computing Technologies).

Plenary Lecture 2

Game Based Learning - How Efficient It Might Be?

Associate Professor Boyan Bontchev
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Abstract: Modern technology enhanced learning methods approach more and more non-traditional instructional paradigms. Game based learning is probably the most promising one of them thanks to its high immersion, motivational power and potential for efficient teaching. In last decade, the interest in game-based learning has grown incredibly - on one hand, fueled by successful professional training by games and simulations in many industrial and military domains and, as well, encouraged by recent research and field trials proving the cognitive benefits of playing educational games. Pupils, students and adults learn from computer games in an informal way while playing them alone and/or collectively. Unlike traditional education, here learners acquire knowledge and practical skills in game domain by pursuing a goal in given context by choosing appropriate actions and taking the risk of their consequences. Educational games offer virtual environments closed to real life and facilitate learning by practice and mistakes. Thus, they keep learners motivated in acquiring skills and knowledge and engaging them by practicing in situations closed to real life.

Game-based learning represents a branch of serious games which relies on game play for increasing learning outcomes by retaining knowledge and skills and applying them to the real world. It has started by simple non-digital games and evolved highly by applying computer games in educational context. The talk will reveal possible types of educational computer games, from simple single-user games up to complex, collaborative social multiplayer games. It is going to bring results of many surveys about efficiency of practical field trials of applying these types of educational games.

Mass invasion of educational games worldwide is still not possible due to the lack of cheap and effective implementations of e-learning games of various types making use of domain content of given course. For streamline usage of educational games in future technology enhanced learning, teachers need software tools and frameworks for an effective game construction using course content of particular domain. The talk will explain how semantic structuring of educational content might facilitate its usage in game design and may help rapid and more facile creation of games appropriate for e-learning purposes.

Finally, the talk will refer to some important aspects of educational games development such as usage of intelligent agents participating games as tutors, collaborators and opponents. Agents are very promising in embodying innovative strategies for courseware presentation and various interdisciplinary approaches dealing with complexity. There will be shown how intelligent agents may act alone or in cooperative mode in adaptive way by extracting cognitive, affective, learning/gaming style and social characteristics of individual learner.

Brief Biography of the Speaker: Boyan Bontchev has obtained MSc degree in Computer Engineering in 1988 at Technical University of Sofia, Bulgaria, and PhD degree in Parallel Processing at Bulgarian Academy of Sciences (BAS) in 1993. During his PhD study, he has specialized in RWTH, Aachen and University of Vienna. Between 1993 and 2000, Dr. Bontchev has been researcher at BAS in the area of dataflow models and architectures and, at the same time, followed a career of software engineer and consultant within the OBLOG project initiated by CERN. He has acted as project manager at many private entities in Portugal, Spain, Italy and Bulgaria. Since 2001 he runs as managing director of Bonea Ltd, and since 2003 he is Associate Professor at Dep. of Software Engineering at Sofia University. He has participated in many research and industrial projects, both national and in the scope of EC FP5/6/7. Currently, he is project coordinator of the ADOPTA project dealing with adaptive e-learning platforms for edutainment and game based learning. Dr. Bontchev is author of more than 90 scientific publications and runs as invited speaker at European conferences and PhD schools.

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Plenary Lecture 3

Interactive e-Learning Material Helps to Motivate Learners in a Self-Learning Environment

Associate Professor Cittoor Girija Navaneedhan
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Abstract: Interactive learning comprises an active learning which has evolved by the use of digital technology providing a virtual communication to the students. Therefore, digital media in education has led to an increase in the use of reliance on interactive learning, which in turn has led to a revolution in the fundamental process of education. In interactive learning environment students and teachers rely on each other to access sources of knowledge and share their information, expanding the general scope of the educational process leading to the expansion of knowledge. This paper discusses the importance of interactive learning material preparation which would eventually lead to self- motivation providing a self learning environment.

Brief Biography of the Speaker: I completed M.Sc chemistry from Madras University in the year 1981 joined as Assistant professor of Chemistry in a private arts and Science college and later joined Government College. Completed M.phiL Chemistry in the year 1992 and worked as Chemistry teacher, got my ph.D (Education) awarded in 2010 Education from Madras University. Currently working as Associate Professor of Education in Rajalakshmi College of Education, Chennai .Since 2006, I am engaged in research work in the field of Education Psychology and would like to continue my research in order to understand how learning could be promoted by adopting strategies involving mind tools.

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