

## Methods of Designing Computer Technologies Helping to Develop Symbolic Information Processing Skills, Creativity, and Broad Mental Outlook (Guest editorial)

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The four articles in this Special Issue of *Educational Technology and Society* are modified and extended versions of a part of the papers included in the Second International Workshop "Developing Creativity and Broad Mental Outlook in the Computer Age – CBMO'2002". The workshop was held in conjunction with the 8<sup>th</sup> Conference of the International Society for the Study of European Ideas (ISSEI'2002) 'European Culture in a Changing World: Between Nationalism and Globalism', 22 - 27 July, 2002, The University of Wales, Aberystwyth, England.

The purpose of the workshop was to contribute to the progress of Cognitive Science, Education, and Educational Technologies in the world by means of creating a new synergy between the specialists in Cognitive Linguistics, Cognitive Psychology, Philosophy, Education Theory and Practice, Artificial Intelligence, Intelligent Computer and Communications Technology.

This Special Issue continues the line of the Special Issue published in the Journal of Educational Technology and Society, 4 (2), [http://ifets.ieee.org/periodical/vol\\_2\\_2001/v\\_2\\_2001.html](http://ifets.ieee.org/periodical/vol_2_2001/v_2_2001.html).

The paper “GLOBETROTTER: Words with their travel-bags” by G. Turrini, A.Paccosi, L.Cignoni (Pisa, Italy) describes the first prototype of a multimedia software destined for making the study of the lexicon of a foreign language (English in the considered case) more efficient and less boring. This computer system is child-centered, highly interactive, open and flexible; it can be used, first of all, by the teachers and pupils of the primary and junior high schools.

The article “A New Paradigm for Constructing Children-Oriented Web-sites of Art Museums” by O.S. Fomichova and V.A. Fomichov (Moscow, Russia) sets forth the central ideas of a new approach to creating Web-sites of art museums; it is proposed to take into account the peculiarities of the child's cognitive-emotional sphere. The central idea is that now the way information is provided on the Web-sites of art museums is based on the expected background of the possible users and on possible motivation.

In case of children, everything is different: information acquisition is to be based on strong interest. The significance of the discussed Web-sites for creating cognitive foundations of sustainable development and the role of natural language processing systems are discussed.

The starting point for the paper “HILBERT & PATRIC: Hybrid Intelligent Agent Technology for Teaching Context-Independent Reasoning” by P. Bello and S. Bringsjord (Troy, NY, U.S.A.) was the following observation. As American university education becomes more ‘electronic,’ the educators are moving away from the one kind of learning that we know to be most effective, namely, one-on-one instruction. However, this traditional way of teaching has proved to be very effective as concerns producing students who are able to successfully employ context-independent reasoning in technical domains. With respect to this observation, the authors envisioned an automated logic instructor as adaptable and fully available to each student at all times. They developed a suite of intelligent agents, including PATRIC and HILBERT, that marries the cutting edge in artificial-intelligence-driven tutoring with the state-of-the-art in proof construction courseware.

In the fourth paper “A WWW Information Seeking Process Model” by S. Loeber and A.Cristea (Eindhoven, The Netherlands), the authors describe the World Wide Web (WWW) navigation and search processes as sub-categories of a generalized information seeking process. They present a generalized ISP model and discuss the additional relevant features needed for extending it towards a better interpretation of WWW user behaviour. The main focus of this paper is the integration of the user needs in the WWW ISP modeling.

Both the Guest Editor and the authors of the papers greatly appreciate the kind invitation of Prof. Kinshuk to prepare a CBMO'2002-based Special Issue of the ETS-Journal. Many thanks also to the reviewers of the papers for their time and work in helping to prepare this Special Issue.