

Towards Effective Computer-Related Learning Environments for Primary School Students' Creative Thinking Development

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Abstract

In this paper, we report selected results of a survey on the use of ICT apparatus among Greek primary school students. The key findings reveal that personal computers play a significant role in students' everyday lives and that a gap exists between computer use in and out of school.

Based on this data, we point out the recent demand for a more creative primary education, and we emphasize the creative dimension of ICT apparatus in general and personal computers in particular. We adopt the *creative cognition approach* which declares that creativity utilizes ordinary cognitive processes - even in its most remarkable forms - and that it can be taught.

In addition, we present the generations of computer-related learning environments and probe their correlations with learning theories as well as teaching and learning process improvement. Moreover, we suggest criteria for the evaluation and development of educational software and computer-related learning environments. Finally, we propose the development and realization of constructivist virtual reality learning environments in primary education in order to bridge the gap between computer use in and out of school, to facilitate students' creative thinking and learning, and to enhance accessibility and availability of learning resources.