Global Resources for On-line Education (GROE)

Vision of the Workshop in Tempe AZ – April 23-26, 2009

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> **…**to engage leaders from several disciplines (primarily computer science and education) in a creative conversation that casts computation as a basis for education, in core ideas as well as simulations and data management, and recommends a research agenda for federal funding.

Our intention is to expand computer research, encourage large-scale deployment, and assure real educational impacts. This process is intended to provide the rationale for increased government funding to solve the education challenge, to identify big ideas that are not being pursued, and to target computational models, reasoning, experimentation and implementation of mobile and ubiquitous pedagogical software. Issue topics addressed at the workshop include:

Assessing and Enhancing Learning. Improving human capabilities; building cognitive partnerships; develop instructional databases and digital libraries; educational data mining.

Social Learning. Distributed cognition, learning communities, networking, collaboration, mobile and ubiquitous computing to create seamless social learning.

Intelligent Virtual Environments. Customized instruction; user-models; intelligent tutors; gaming environments; adaptive hypermedia.

Rich Computer Interfaces. Intelligent agents; multimedia; learning companions; teachable agents; detecting and responding to student emotion.

Policy. Institutional and governmental principles and guidelines for support and encouragement of education, and the use of technology therein.