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An Architecture for Collaborative Knowledge-Building

Abstract:

Conscious, cooperative development of shared knowledge is the focus of the CSILE (Computer Supported Intentional Learning Environments) project. Results to date, both from our own work and from similarly-motivated work, convince us that elementary school students can profitably make knowledge construction the focus of their efforts, although it is a novelty to them (and to their teachers) and requires a great deal of support. On the basis of what has been learned from four years of experimentation with an initial version, CSILE 1.0, we are designing a much more powerfully supportive system, which will be embodied in a second generation of CSILE. A major change in CSILE 2.0 will be the inclusion of distinct environments for different kinds of knowledge-building operations. In this paper we set out the principal features of the new knowledge-building architecture and the design principles that are guiding its development--principles that we believe are applicable to any technology aimed at restructuring classrooms as places for sustained, collaborative inquiry.

Keywords: Knowledge-building, collaboration, computer-supported learning, interactive learning environments, hypermedia