Computer Science Seminars on Pedagogical Techniques and Methods for Evaluation

by

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ABSTRACT

Interdisciplinary subject matter appropriate for computer professionals who will participate in the design of computer-based learning systems is discussed. Broad issues of computer-managed instruction are mentioned, but the potential contribution of computer techniques is assumed to be much greater in the direct use of computers in instruction and this type of use is emphasized. Primarily, computer professionals should be prepared to suggest techniques that will permit more imaginative uses of computers than those appropriate for workbooks or memory drums. Promising pedagogical techniques derived from a variety of disciplines and used successfully in computer-based learning systems are discussed. These techniques are roughly classified as drill and practice, tutoring, and dialogue on one dimension and as simulation, gaming, optimization, and student control on another dimension. The inter-dependence of these pedagogical techniques with evaluations of instructional effectiveness and with computer techniques associated with timesharing, formal language processing, natural language processing, information structuring, and varieties of terminal devices is emphasized and explicated.