SYMPOSIUM

Tutorial Discourse

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Participants:
Barbara Fox, Ph.D., University of Colorado
Correction in face-to-face tutorial dialogues.
Arthur C. Graesser, Ph.D., Memphis State University
Dialogue patterns and feedback mechanisms during naturalistic tutoring.
Johanna Moore, Ph.D., University of Pittsburgh
Large scale structure in tutorial discourse.
Martha Evens, Ph.D., Illinois Institute of Technology
Synthesizing tutorial discourse.

Discussant: Susan F. Chipman

Abstract

The striking effectiveness of one-on-one tutorial instruction by human tutors has sparked great interest in efforts to emulate that effectiveness with artificially intelligent computerized instructional systems. Despite some success in that endeavor, present intelligent tutoring systems circumvent, evade, and finesse the problem of natural language interaction in various ways because the demands of tutorial interaction are really beyond the state of the art in computerized natural language. This symposium presents research relevant to overcoming that limitation. Human tutorial interaction is being studied from the perspectives of linguists (Fox), psychologists (Graesser), and computational linguists (Moore, Evens) who aim to emulate it in artificial systems. Among the issues that arise in these studies are the size or scope of the discourse organization imparted by the tutor, the balance between the tutor's agenda and immediate responsiveness to the student, the extent to which tutors revise their plans dynamically, the nature and breadth of knowledge required to support these interactions, the relationship between tutorial interaction and normal conversational patterns, and the nature of repair and correction processes, including the use of positive, neutral and negative feedback. The ease or feasibility of emulating these features of human tutorial discourse certainly varies, but it is also true that the introduction of a computer as a conversational participant is a significant change: what is the perceived social status or role of a computer? Similarly, it is possible that ideal computerized tutorial discourse might differ from what is observed among humans. The diverse research perspectives required to address these issues typify the interdisciplinary character of cognitive science.