

AERA'2006 Symposium

Integrating Self-Directed Learning and Contextualized Tutoring — **A Research Agenda for Educational Reform**

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Objective: Beyond Binary Choices

- ♣ Jerome Bruner: *“students need enough **freedom** to become cognitively active in the process of sense making, and students need enough **guidance** so that their cognitive activity results in the construction of useful knowledge”*

- ♣ **basic assumption:** **self-directed learning** and **tutoring** both have their strength and weaknesses

- ♣ objective / vision: **integrating** the two approaches including
 - providing support mechanisms for self-directed learning and
 - contextualizing tutoring to the task at hand and
 - supporting this approach with effective media, technologies, and human infrastructure,
- ◇ powerful learning environments can be constructed fitting the needs of the learning societies of the future

Some Distinctions and Complementarities

	Tutoring	Self-Directed Learning
strengths	focuses on organized body of knowledge; pedagogically and cognitively structured	focuses on real interests, personally meaningful tasks, high motivation
weaknesses	possibly limited relevancy to the interests of the learner or the task at hand	coverage of important concepts may be missing; demand driven, unstructured learning episodes; lacking coherence
planning versus situated responses	advanced planning of learning goals and content; problem selected by the teacher or system; prescriptive	learning needs arise from situational context; problem is based on personal goals of the student; permissive
importance over lifetime	in progression from k-12 school to university to lifelong learning, need for tutorial guidance decreases in importance	from k-12 school to university to lifelong learning, self-directed learning increases in importance
some unique research challenges	presentation of organized bodies of knowledge; responsiveness in the teacher-defined context to individual differences	task identification; context awareness; need for large number of situation-specific tutoring episodes

Organizers/Speakers, Speakers, and Discussant

♣ Organizers/Speakers

- Sharon Derry, University of Wisconsin-Madison
- Gerhard Fischer, University of Colorado

♣ Speakers

- Allan Collins, Northwestern University
- Ken Koedinger, Carnegie Mellon University
- Mitchel Resnick, MIT Media Lab

♣ Discussant

- Roy Pea, Stanford University