

Board Meeting
January 18, 2007

ESTABLISH THE PH.D. IN LEARNING SCIENCES,
GRADUATE COLLEGE, CHICAGO

Action: Approve the Establishment of the Ph.D. in Learning Sciences, Graduate College, Chicago

Funding: No New Funding Required

The Chancellor at Chicago, with the advice of the Chicago Senate and the Graduate College, recommends the establishment of a new degree program, the Ph.D. in Learning Sciences.

This proposal is for an interdisciplinary Ph.D. program whose primary objective is to prepare researchers with the knowledge and inquiry skills necessary to address how people learn specific subject matter areas such as mathematics or chemistry.

This program requires an understanding of three bodies of knowledge:

- General issues of learning, instruction, and assessment - typically the purview of cognitive and educational psychology;
- The instrumentality of technologies for enhancing and supporting learning, instruction, and assessment - typically the focus of computer scientists;
- The structure and content of the specific disciplines that people are learning - typically the purview of faculty in individual disciplines.

The Ph.D. program in Learning Sciences at the Chicago campus will bring together these three knowledge bases and methods of inquiry to create a community of scholarship and research that will focus on learning in the disciplines. In doing so, this effort reflects the existing interests and investment of faculty across the many colleges of the university.

Learning Sciences, as a field, emerged in the late 1980s and early 1990s as cognitive scientists, educational and instructional psychologists, and computer scientists attempted to move principles of learning and research methodologies based in laboratory research to research on learning in classrooms and work settings. Methodologies that worked in the laboratory and learning principles that were clearly demonstrated in the laboratory did not hold up in the classroom, however, and new theoretical and methodological orientations were needed to productively study learning, instruction, and roles for technologies in formal and informal educational settings.

Several major shifts in orientation from traditional paradigms marked the emergence of the Learning Sciences:

- From the passive learner to whom knowledge is transmitted to the active learner who consciously builds knowledge,
- From learning as an individual activity to learning as a social activity where interaction with others and the environment play a crucial role, and,
- From attempts to isolate and control variables extraneous to the experimental hypotheses to acceptance of the multiple dimensions and variables operative in naturally occurring learning environments and the creation of systematic ways to study and understand them.

Over the past 15 years, the theory and methods have coalesced and there is a recognized field called the Learning Sciences. According to a recent National Science

Foundation description of the field of Learning Sciences (National Science Foundation, 2004), it is “extending understanding of learning and connecting learning research to the scientific, technological, educational, and workforce challenges of our time.”

Participating program faculty will represent disciplines and areas of inquiry such as literacy, cognition, the natural sciences, instruction and assessment, linguistics, mathematics, measurement, computer science, communication, visual arts, and human development. The program will be directed by a coordinating committee of three faculty, selected by the core faculty in the Learning Sciences who represent the multiple colleges and disciplines contributing to the program and approved by the deans of the Graduate College, College of Education, College of Engineering, and College of Liberal Arts and Sciences. The coordinating committee, in consultation with the core faculty, will provide leadership, define the overall goals of the program, and encourage the submission of training and interdisciplinary grants that support the goals of the program.

The board action recommended in this item complies in all material respects with applicable State and federal laws, University of Illinois *Statutes, The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The University Senates Conference has indicated that no further Senate jurisdiction is involved.

The President of the University concurs, pending further review by the Illinois Board of Higher Education.