Project Summary

The goals of the *Disciplinary Commons in Computing Education* are to fundamentally transform computing education, develop educational leaders to drive this transformation, and build regional and national communities of computing educators. Transformation does not happen by fiat: the way to transform computing education is to transform computing educators. We believe that transformative change occurs from the bottom up, emerging from the active exchange of ideas between computing educators at a variety of institutions, from research universities to community colleges, even high schools. Opportunities for these exchanges do not spontaneously emerge, however, and education-focused communities seldom have the mix of skills and resources to sustain themselves: they need organization and leadership. That leadership and that organization are what we propose to create.

In the proposed CPATH: Community Building project, we will run four *Disciplinary Commons* in different regions of the US, with groups of computing educators from a variety of institutions. In each region, 10-15 educators will meet face-to-face for half-day meetings monthly throughout the academic year, where they will discuss the teaching and learning that occurs within their classrooms. This shared, critical engagement will be driven by the development of individually-constructed course portfolios. The course portfolio focuses on a single course, connecting course objectives, instructional design, and design rationale to actual student performance, and is a well-known method for advancing reflective teaching practice and improving student learning. By meeting monthly, working together on a common task, having paired site-visits, and sharing and criticizing materials and resources, these educators will build a community within each region, as well as having connections to the educators with the shared experiences in the other regions.

This approach was piloted and evaluated in the 2005-6 academic year: in the US with 10 educators by Josh Tenenberg, and in the UK with 17 educators by Sally Fincher.

Intellectual merit: This model has intellectual merit both in its theoretical grounding and its empirical validation. It is theoretically based in the reflective practices associated with individual development and professional artistry as described by Dewey and Schön. Documenting teaching practice and reflections in the form of course portfolios is likewise grounded in the Scholarship of Teaching and Learning literature. Empirically, this model has been piloted and evaluated twice.

Broader impacts: The specific outcomes will include an Internet-accessible archive of course portfolios produced by regional participants in the *Disciplinary Commons*. The existence of a rigorous, peer-reviewed, and publicly available archive of portfolios across a range of courses will have a broad impact on the culture of computing education. The more important impacts, however, are on the regional participants. Participants in a *Disciplinary Commons* create a community with a shared experience, shared interests in education, and a heightened awareness of educational computing issues. They have a broad perspective about other institutions (in the region and/or disciplinary area) and knowledge of differences between student populations at a deeper level than it is possible to obtain in any other way. This unusual breadth of knowledge means participants are well-positioned to be the driving forces behind significant reform in computing education: they will know what to look at, they will have a community to work with, and they will have the broader perspective to move toward systemic change on a regional and national scale. Impact will also be broadened through the dissemination of the *Disciplinary Commons* model as a means for building communities of engaged and innovative computing educators. Impact will be broadened as well by connecting this project to a parallel *Disciplinary Commons* proposed by Sally Fincher to the UK National Teaching Fellowship Scheme initiative.