Chapter II

Active Learning in Higher Education: A Model and Roadmap

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In this chapter, we present lessons learned from 10 years’ instructional experience with active learning through our classes at Syracuse University. As reflective practitioners of active learning, we have refined our instruction over the years, in the process conceptually extending and augmenting extant theories of experiential learning and related approaches. Our model is built around four principles: client-centered work in natural settings, task design that is attentive to the motivational properties of the active learning stimulus, learning as social participation, and community service learning. Learning through prototyping, with its emphasis on design and the making of artifacts, functions as a background to the extended model and informs each of its principles. We then present a brief history of the Center for Active Learning and the Community and Information Technology Institute, both of which, in slightly different ways, implement our active learning method.

INTRODUCTION

We report research and reflection on 10 years of practice with active learning in the local community. Over the years, we have developed a model of active learning that augments experiential learning approaches with insights from client-centered practice, task design, learning-as-participation, and service learning. We have used what we term the “field consulting project” as the
primary instructional vehicle. Students work in small teams (three or four members) to provide a consulting service to a real client in the local community facing a real problem or opportunity. This service is provided free of charge to public institutions, under which we include government agencies, healthcare institutions, as well as social sector non-profits and grassroots community institutions; public institutions are the only clients we serve through our classes. The subject matter of our teaching is information and communications technologies (ICTs), computer-based systems and software applications, telecommunications and networks. Our classes cover ICT planning and design as well as training users on use of ICTs.

By locating active learning in local community institutions, we wish to sensitize our students to the social context within which ICT applications are developed and used. We are just as concerned that our students get a sense of the larger social question: the inequality in access to ICTs. A sizable number of institutions we serve through our classes have little in the way of technology or technical expertise. Working with such clients gives our students a first-hand appreciation of the divide between the technology haves and have-nots. Such institutions are also often the ones that work most directly with low-income residents. Enabling institutional access to ICTs in such cases can also mean that, directly or indirectly, the neediest individuals in the community get the benefit of technology.

As a necessary step in the training of the socially aware systems professional, we need to balance the technical with the social in educating the new workforce. Computing is a social technology (see Iacono & Kling, 1988). Students must understand that technology choices have social implications for the adopting organization. Such an understanding is part of our expanded view of “relevance” in professional education. A professional-in-training must learn to consider technology not only within the context of work practices, but also within that of organizational culture and power. We differentiate such an awareness (the holistic “micro-social”) from a broader, extra-organizational consciousness that embraces social and societal issues. Both the micro- and macro-social are constitutive aspects of relevance in our use of the term in this chapter.

We need to adopt a holistic view of ICT application, to go beyond what Schon (1983) called “technical rationality” in our approach to systems education. Consider the case of a class project that drove this point home to our students (and, powerfully, to us). The recently appointed office manager of a government agency approached the first author for advice on migrating from a mainframe-centric to a PC-based LAN environment in his office. His office was part of the District Attorney’s office, and had about 30 staff members. The manager and the users “hated” the mainframe system that served many county
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