Chapter 27

The Tools at Hand:
Agency, Industry, and Technological Innovation in a Distributed Learning Community

Charles Underwood
University of California, USA

Leann Parker
University of California, USA

ABSTRACT

This chapter presents an anthropological case study of the response to rapidly changing technologies by members of a distributed network of 35 technology-based afterschool programs throughout California. University-Community Links (UC Links) is a collaborative effort among university campuses and local communities to develop a network, both physical and virtual, of afterschool program sites for underserved youth in California. While each UC Links program is a physical setting with its own set of learning activities developed in response to the cultural, linguistic, and educational concerns of the local community, the UC Links network as a whole serves as a larger virtual context for defining and pursuing shared goals and objectives and communicating information about effective uses of new digital technologies for afterschool learning. Using a cultural historical perspective, the authors approach UC Links as a sociotechnical activity system engaged in joint activity, and examine and assess its long-term adaptability and the differential capabilities of its local member sites to innovate in response to successive transformations of emerging technologies.

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INTRODUCTION

Over the past three decades, new digital technologies have proliferated rapidly and transformed the character of both public and interpersonal communications. The use of these new technologies in educational settings has been both promising and problematic, especially in addressing issues of educational equity and providing sustainable innovative learning experiences for underserved youth (Cole, 1996, 2006; Parker, 2008; Underwood, 2000, 2003; Vasquez, 2003). This chapter looks at the use of diverse technologies by the University-Community Links (UC Links) network of afterschool program sites. The network is both physical and virtual. It includes 35 physical sites in schools or community organizations that offer afterschool activities for youth in urban communities throughout California; yet it also represents a network of partners who interact virtually to share ideas about implementing innovations and responding to challenges. Most of the work of providing engaging educational activities for underserved youth takes place in physical space, but the interaction of key UC Links partners across sites takes place in both physical and virtual space.

In this sense, this chapter represents a study of distributed cognition among dispersed university and community partners and the emergence of a sense of community out of their joint activity—their collective attempts to create and sustain innovative afterschool learning environments for underserved youth in low-income neighborhoods. This perspective on the development of UC Links shows that while local programs and the network, both jointly and individually, have developed innovative educational uses of differentially available technologies, the programs have been limited in their capability to take full advantage of the rapidly growing possibilities of new technologies for teaching, learning, and collaboration.

University-Community Links

The UC Links network is a dispersed organization of local community-university collaborations operating afterschool programs for underserved youth in low-income communities throughout California. Each collaboration operates at least one physical afterschool site and involves university faculty, staff and students working with community and school partners (teachers, parents, community leaders). These programs also collaborate with similar sites in other states and nations. University faculty affiliated with this network teach discipline-based university courses that link theory with practice in real-world settings by placing their undergraduate students at local afterschool sites. At each physical site, university and community partners use available digital media and other hands-on resources to create face-to-face collaborative learning activities for local children and youth. Guided by undergraduates, these activities promote literacy and technology skills development, academic preparation and enrichment, and enthusiasm for higher learning among local youth. As a statewide network of programs active since 1996, UC Links has grown from 14 physical sites in 1996-97 to 35 sites in 2008-09. Led by 21 university faculty and their school and community partners, UC Links in 2008-09 served over 3,500 P-12 youth from low-income backgrounds and almost 1,100 college students. The university and community people involved in running local programs also constitute a virtual network of communicating partners working to maintain local and cross-site collaboration and coherence both within and among the programs. UC Links’ assessments consistently indicate positive program impact of technology-based activities both on K-12 student participants’ literacy and digital skills and knowledge, and on undergraduate students’ attitudes, aspirations and learning (Underwood & Parker, 2010).

As a collaborative network of professionals and practitioners, UC Links pursues various ap-
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