Chapter XIV

Online, Offline and In-Between: Analyzing Mediated-Action Among American and Russian Students in a Global Online Class

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Abstract

Online collaborative learning is a situated activity that occurs in complex settings. This study proposes a sociocultural frame for theorizing, analyzing, and designing online collaborative-learning environments. The specific focus of this study is: learning as situated activity, activity theory as a theoretical lens, activity system as an analytical framework, and activity-guided design as a design framework for online learning environments. Using data gathered from a naturalistic investigation of a global online collaborative-learning site, this study reveals how these lenses and frameworks can be applied practically. The study also identifies the importance of design iterations for learning environments.
Introduction

In 1992, Salomon (1992, p.62) had this to say about the design and analysis of effective CSCL, “Given a reasonable of minimum of technological capability, the success or failure of cooperative learning is accounted for by entirely different and far more complex factors.” Four years later, Salomon and Perkins (1996) made two more observations:

First, computers in and of themselves do very little to aid learning...[a]lthough it may make the enterprise more efficient and more fun. [L]earning depends crucially on the exact character of activities that learners engage in with a program, the kinds of tasks they try to accomplish, and the kinds of intellectual and social activity they become involved in, in interaction with that which computing affords. [S]econd, it has also become evident that no single task or activity, wondrous as it may be, affects learning in any profound and lasting manner in and of itself. Rather, it is the whole culture of a learning environment, with or without computers, that can affect learning in important ways. (p.113)

In the decade since Salomon made his first observation (1992), there has been a tremendous growth in computing technology and its implementation and use in educational settings. Computer-Supported Collaborative learning (CSCL) has been hailed as an emerging paradigm of instructional technology (Koschmann, 1996), and there is a profusion of literature related to CSCL and online/distance learning (Bonk & King, 1998; CSCL, 1997; EuroSCSL, 2001; Hoadley & Roschelle, 1999; Stahl, 2002). A close examination of this literature reveals that to a large extent the studies have focused solely on the technology and have paid little or no attention to the context in which the technology was implemented.

Online collaborative learning settings are places of complex interactions and outcomes, and I believe that sociocultural theories of learning, particularly Activity Theory (Engeström, 1987; Leont’ev, 1978; Vygotsky, 1978), can be a valuable theoretical lens to study such settings. Moreover, Activity System can be used as an analytical tool to analyze the setting (Cole & Engeström, 1993), and Activity-Guided Design can be used as a framework to design such environments. A common thread running through this chapter is that of mediated-action or activity. As this concept is discussed in detail later, I’ll just give a quick introduction here. The primary concept is that cognition takes place as people are engaged in an activity that has a purpose and an object. The activity is mediated by artifacts that they use to act on the object to reach a desired outcome. As Pea (1993) explains,

While it is people who are in activity, artifacts commonly provide resources for its guidance and augmentation. The design of artifacts, both historically by others and opportunistically in the midst of one’s activity, can advance that activity by shaping what are possible and what are necessary elements of that activity. (p.50)
Portraits of the Activity Systems of International Higher Education Students in Online Learning

(2014). *Activity Theory Perspectives on Technology in Higher Education* (pp. 172-204).

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