Chapter 18
Using Activity Theory to Guide E–Learning Initiatives

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EXECUTIVE SUMMARY

This case documents how activity theory can be used as a tool to help educators understand the issues behind deploying online learning programs. Faculty members in higher education are accustomed to teaching online, but are new to the development of online academic programs. This case chapter provides a background to the academic setting and a discussion of activity theory. The specific context of an academic department is described, followed by how activity theory was used to represent the overlapping goals of faculty, students, and administrators, and to understand the contextual issues of roles, community of practice, and division of labor to reach the desired goal, which was to implement their academic programs online. Guidelines for using activity theory are provided.

BACKGROUND

Organizational Issues

Higher education institutions historically have been slow to adjust to changing pressures and environments. Administrators now push for E-Learning initiatives, which increase student enrollments through online or blended learning courses. E-Learning, of course, can be used in a face-to-face environment or in blended instruction. However,

E-Learning is defined in this case as the use of digital and networked technologies for online instructional programs.

Faculty who teach courses, conduct research, and contribute to service activities are increasingly called on to develop plans to market, recruit, and retain students in new online programs, tasks that are new to them. In addition to taking considerable time to design, faculty groups work with little organizational experience to implement and manage E-Learning initiatives. Traditional models of **curriculum development** take too long and are linear in nature, ill-suited to the needs of institutions to

make decisions faster than they are accustomed to. Faculty members typically discuss program objectives, program features, courses, and assessment, while administrators deal with the issues of student recruitment, course staffing, and program coordination and evaluation. E-Learning initiatives, however, require academic departments to address issues of both curriculum and organization simultaneously.

To involve faculty, students, and administrators in making faster and more responsive curricular and organizational decisions, academic institutions must understand the complex contexts surrounding fast-changing market conditions. This case documents the use of **activity theory** as a tool to help faculty members of an academic department understand the issues of developing their online academic programs and making decisions. Viewing E-Learning initiatives through "activity" acknowledges the different constituencies that have a stake in such programs, including faculty, students, and administrators. An activity perspective acknowledges the context of both curriculum (what is to be taught) and organizational needs (how to implement and manage).

Activity theory has been used to analyze educational settings ranging from computer-based training to better understand the workplace in which the training was used (Pang & Hung, 2001), as well to acknowledge teachers' beliefs about teaching and the power issues between teachers and administrators in public schools (Robertson, 2008). Activity theory has been used in higher education strategic E-Learning initiatives (Salomon, 2005) and to look specifically at asynchronous learning networks (Li & Bratt, 2004).

Activity Theory as a Tool

Activity theory is a socio-cultural perspective on understanding the interconnections of people, organizational rules and culture, and tools, all directed to some outcome or goal (Bertelsen & Bodker, 2003; Cole & Engeström, 1993). To

achieve E-Learning in higher education involves different human constituencies including faculty, students, administrators, and the influence of social and cultural norms, values, language, and tools on these humans (Vygotsky, 1978). Activity theory is represented in Figure 1 as a collective image of several components or nodes (Engeström, 1987).

The top triangle in the visual involves users, goals, and tools. The goal node in the activity system visual itemizes how human activity is directed. These goals are accomplished with the help of tools, such as a learning management system in E-Learning. The bottom half of the triangle identifies three categories of contextual issues that involve all human activity. The community of practice is made up of individuals and groups who share the same goals and have developed specific ways of working. The division of labor node refers to the roles and tasks of the community members and a division of responsibility and control. Rules and norms refer to the explicit and implicit regulations, norms, and conventions that constrain actions and interactions within this activity system.

On a pragmatic level, activity theory can be used as a tool of **analysis** to examine the interconnected activity of faculty, students, and administrators. Analysis is a distinct feature of human-computer interaction design where systems analysis, the gathering of data on the information needs of a unit (e.g., data flow diagrams, entity-relationship diagrams), leads to a system design which meets those needs. In education instructional design includes analysis as a front-end activity in a cyclical systematic process, which proceeds to design, implementation, and program evaluation/revision. Instructional design taps many analysis methods, including task analysis, content analysis, instructional needs analysis, and knowledge elicitation techniques, features which attempt to identify what is to be learned before the actual performance (Jonassen, Tessmer, & Hannum, 1999). Activity-based approaches assume that

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