Activity Theory (A Hitchhiker's Guide to Learning Theory)

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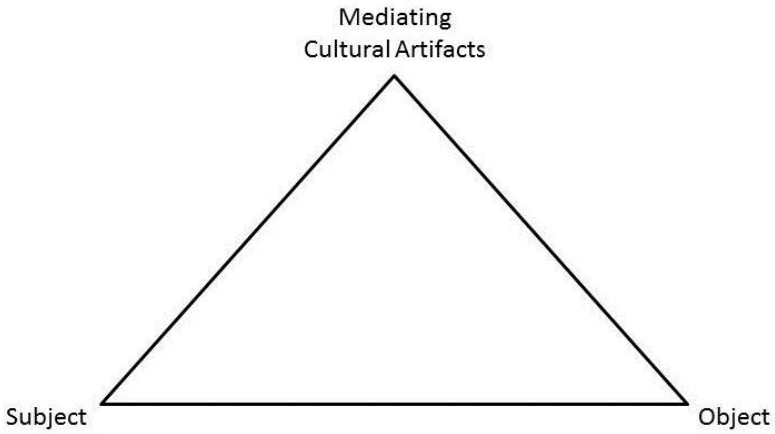
Background

Activity theory has some overlap with constructionism, but it offers probably the broadest definition of human learning of the theories we've discussed so far.

Traditional, psychological learning theories assume that knowledge is somewhat stable, and that there is a teacher available who knows what should be learned and how to teach it. The ecological theories however, because they describe knowledge that is forever evolving in both its content and its utility, make no such assumptions. They assume that only the community, or "activity system," is knowable in advance, and that what needs to be learned may not be definable until the system begins to show signs of stress under evolutionary changes.

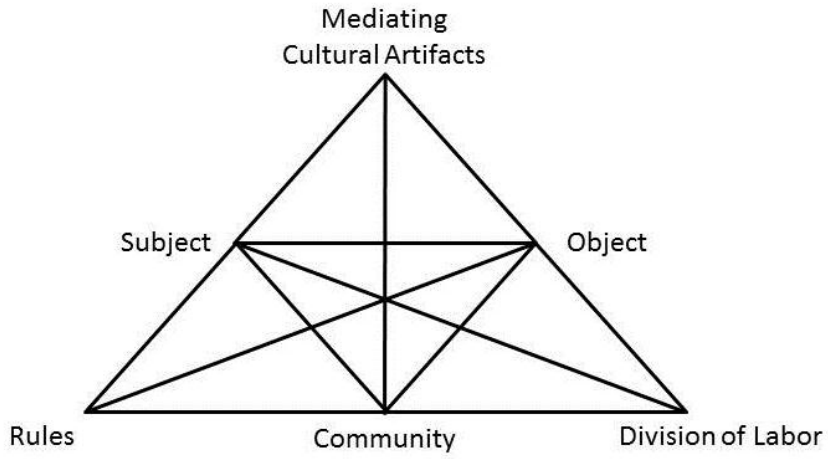
Activity theory evolved from the recognition by Russian psychologist Lev Vygotsky that people always learn and perform in the context of a sought objective, and always with intermediating cultural artifacts, as shown in the diagram. This humble origin of the theory is a way of demonstrating that learning is always culturally based.



Cultural artifacts can be tangible things, like hard technologies, books, and tools, or soft technologies, like theories, procedures, or even language—all of which impose constraints and provide certain affordances for achieving the objective. Objects can also be either tangible or soft, from manufactured products and services provided to others, to a personal goal or sense of meaning.

As Activity Theory evolved with the ideas of other theorists it grew more complex and expanded the initial notions of mediated action to include more components. Today it has developed into a mature and practical theory through the work of Yrjö Engeström, of the University of Helsinki. Activity theory borrows from systems theory the idea of highly interacting and interdependent systems of components, in which a change in any component, or its relationship to another component, changes the entire

system. The uniqueness of the theory is in its power to describe all kinds of human systems with a few basic concepts.



In addition to the Subject, Object, and Mediating Cultural Artifacts, a full activity systemtheory includes Rules that guide govern the actions and operations, a Community that defines the active members of the system working toward the common object or goal, and the Division of Labor, which represent the social structure, organization, and responsibilities of individuals, as well as lines of communication.

If one element of the Activity System changes, or one connection between any two of the elements changes, this creates what is termed a “contradiction.” Within Activity Theory, it is contradictions that create the necessity or opportunity for learning to take place. Each individual is a different subject in the system, and so for that person, the system is at least subtly, if not dramatically, different. For each change in the cultural artifacts, like new tools or techniques, changes ripple through the entire system. If an organization change forces changes in rules, community, or division of labor, again, the entire system needs to change.

In some cases, the object of the system itself changes. For example, the service provided to the community has to evolve in response to larger-scale or competing activity systems, creating profound changes in the system. This can create what is called expansive learningchanges in the activity system.

As described by Engeström (2009), Activity Theory has five basic principles. First, the system itself is the primary unit of analysis. The individual elements are independent, but also subordinate and understandable only in the context of the entire system.

Second, every system has multiple voices, or points of view, with multiple histories and interests. This is the way in which each element (subject, artifact, rule, community, division of labor, and object) has a unique influence on the system based on its derivation. This uniqueness of elements demands negotiation and at times, change or learning.

Third, an activity system has a history. It comes into being over time, and it evolves over time, and can be fully understood only in reference to its history.

Fourth, contradictions, or tensions between elements and their connections, are the sources of learning needs.

And fifth, there is the possibility of expansive learning, or transformations of the entire activity system, which can result either from accumulative smaller changes, or from radical reconceptualization of the object, purpose, or motive for the activity.

Applications

Unlike the previous learning theories we've looked at, Activity Theory offers no directly-related instructional theory to guide the selection of training and education strategies. Instead, Activity Theory is useful more for analyzing evolving organizational contexts rather than as a way of describing how people learn or can be taught. But it is still very relevant as a learning theory because it can be used to describe how organizations learn and to diagnose organizational changes that may point to learning needs. For example, Activity Theory tells you where to look for the full range of organizational impacts and potential training needs from the introduction of new technologies in an organization, or from a flattened change in organizational management structure.

Because it' is a tool for analyzing work or other activity environments, it can also provide guidance for creating authentic learning environments. For example, if you want to create a rich simulation that includes the complex decisions people make on the job, you can use activity theory to identify the tools used, the varieties of roles people play, the constraints that rules impose, and the lines of communication that exist—all of which you may want to represent in a simulation to enhance its authenticity.

Limitations

Activity theory accounts for individual needs and goals only in the context of an activity system, which, while it' is a powerful reminder of how each individual is embedded in a social context, and even multiple social contexts, does little to describe how individuals develop the knowledge they need to perform within them. So, in a way, it sees individual minds a bit like athe black box, like behaviorism. It is a powerful analytical framework for its purposes, but insufficient to help trainers and educators make their instructional decisions. The fact that it stresses the ecological nature of learning and performance tends to suggest the application of communities of practice and other informal learning approaches, but it also does not deny the value of formal learning interventions like courses and simulations and the use of self-directed learning resources.

References

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Jonassen, D. H. and L. Roher-Murphy (1999). Activity Theory as a Framework for Designing Constructivist Learning Environments. *Educational Technology Research & Development,* 47(1), 61-79.