

Chapter 3

Activity Theory

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ABSTRACT

The current chapter focuses on activity theory. The idea of activity theory is that the activity is a minimal meaningful context to understand human behavior. This theory, in short, highlights the relationship between an individual (subject) and an object of doing to achieve an outcome. This relationship between the subject and the object is impacted by the context (environment) and elements that were created during the development of an activity. The environment contains rules and organizations. Activity theory went through developmental stages, which are discussed in this chapter. The chapter provides definitions, introductions, background, and overview about the activity theory. In addition, this chapter presents the structure of activity theory. Examples are given. Importantly, the empirical use of the activity theory is presented and different research articles are discussed. Limitations and future research are discussed.

BACKGROUND

Activity theory was first born within Soviet psychology (Kuutti, 1995). At present, there is an emerging multidisciplinary and international community of scientific thought, a community reaching far beyond the original background, united by the central category of activity. We have seen many different definitions of activity theory. All provided similar meaning. As defined in Kuutti (1995), activity theory is broadly defined as a philosophical and cross-disciplinary framework for studying different forms of human practices as development processes on interlinked individual and social levels. Its approach offers “. . . bridges between imagined, simulated and real situations

that require personal engagement with material objects and artifacts (including other human beings) that follow the logic of an anticipated or designed future model of the activity” (Engeström 2007, 37)

Importantly, researchers need to understand the developmental stages of the theory before utilizing it in their research, regardless of the topic. Nussbaumer (2012) reported that activity theory has a growth or development pattern, which has been referred to as generational. Reviewing the history of the activity theory, Nussbaumer (2012) summarized the development of the theory into three generations with each building upon the previous one. The first generation was a team of Russian psychologists. They were Lev Vygotsky

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(1986, 1978), Alexander Luria (1976), and Alexei Leont'ev (1978). They developed activity theory in the 1920s as an alternative to the Western interest in psychoanalysis and behaviorism. They worked together in devising principles of the theory; hence, there were progressive changes. Instead of focusing on the direct impact of stimulus on response, the focus of the school of behaviorism, Vygotsky (1978) devised a new approach: the concept of mediation (also known as the first generation of this theory). Vygotsky noted that human beings are agents that react to and act upon mediating objects in the environment, such as tools, signs, and instruments, leading to an outcome. His idea was based on his studies of child development. Vygotsky's model of mediation is discussed later in this chapter. This first stage of theory development continued with the work of Luria (1976) and Leont'ev (1978). Luria (1976) found that formal schooling in written language and mathematical operations influenced the ability to categorize objects of the environment. Leont'ev went beyond the individual to collective activity by incorporating community and division of labor into Vygotsky's model, which made it more of a systems approach. Not only does this model account for the historical-cultural traditions and experiences but accounts for cognitive, rather than merely the physical processes. Leont'ev's contribution to the activity theory was adding different levels, such as activity driven by motive, action guided by a conscious goal, and automatic operations influenced by conditions and tools. The levels of the activity theory are discussed later in this chapter.

The second generation of activity theory is attributed to Engeström (1987). Taking into account the inter-relationships between the individual and the community, history, context, and interaction of situation and activity, he incorporated the first generation of activity theory into his ideas. He mentioned that the subject (a person or group) was working to reach an outcome by working on an object. Instruments, rules, community, and division of labor (located in the environment) mediate

or reciprocally influence the achievement of the object and the outcome. Engeström (2001) went further and detailed activity systems that included networks of interacting systems to address the tensions and contradictions that encourage collective learning through change. This latter model, known as the third generation of activity theory, may be perceived as applying to large systems, which evolve into institutions and organizations.

OVERVIEW

In the overview, a description of the three key principles of activity theory is presented. The structure and levels of activity theory are discussed following the description.

Activities: Activities are considered basic units of analysis in activity theory. Psychologists have studied human behaviors for a long time. The goal is to analyze a behavior to make it understandable in the context. However, many psychological theories use human action as the unit of analysis. For example, educational research has investigated students' behaviors in real classroom settings for decades (e.g., Al-Harthy, Was, Isaacson, 2010; Al-Harthy & Was, 2013). This research provided results and information about the investigated behavior or topic, but did not address the complete picture or the process involved in classroom activities. While this made it relatively easy to design laboratory experiments, the use of isolated actions to analyzing real-life situations outside a laboratory is much less fruitful. The reason is that actions always take place within a context and it is difficult to fully understand the action without the context. The solution proposed by activity theory is that a minimal meaningful context for individual actions must be included in the basic unit of analysis. This unit is called an activity, which includes context. In addition, in most cases, researchers have been interested in understanding an individual's behaviors or actions. However, such actions are intrinsically collective. An individual

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