

A Comparative Analysis of Three Unique Theories
of Organizational Learning
Carol C. Leavitt

Author Contact Information:

1131 Mesa Vista Drive

Ivins, UT 84738

Telephone: (435) 773-7337

Email: cleavitt@infowest.com

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Abstract

The purpose of this paper is to present three classical theories on organizational learning and conduct a comparative analysis that highlights their strengths, similarities, and differences. Two of the theories – experiential learning theory and adaptive & generative learning theory – represent the thinking of the cognitive perspective, while the third theory – assimilation theory – coincides with the behavioral school of thought on organizational learning. The three criteria to be used in the comparative analysis include: 1) the learning process, or how learning occurs in each theory; 2) the learning target, or who experiences the learning; and 3) the learning context, or the antecedents and conditions that promote a learning organization. Because theory building in this discipline has a history of approaches that fragment rather than assimilate new theory (Lähteenmäki, Toivonen, & Mattila, 2001, p. 113), a new prototype theory will be introduced that effectively integrates the important themes, principles, and practices of organizational learning into a more holistic model.

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Introduction to Organizational Learning Theory

There exists a tremendous amount of literature on the subject of organizational learning, and with each new research article comes a new framework or set of guidelines describing how organizational learning occurs, how to establish and maintain a learning organization, how to overcome the barriers to learning, and more. The phenomenon of organizational learning is a body of work that calls on multiple disciplines in both the natural and social sciences, including psychology, sociology, and anthropology, to name a few. It is a burgeoning branch of organization theory that has a direct connection to other major fields, including leading change, organizational communication, creativity and innovation, individual accountability and motivation, management and leadership development, systems thinking and mental models, organizational structure, shared vision and values, and much more. To offer a clear foundation, this paper begins with definitions that characterize the nature of organizational learning, and rationales that justify its existence and perpetuation.

Definitions of Organizational Learning

There exists a diversity of focus in organizational learning definitions. Of particular note are two distinctive schools of thought: 1) the cognitive school, which highlights the “thinking” element of organizational learning; and 2) the behavioral school, which focuses on its “doing” dimension. The cognitive school reasons that learning occurs through our mental models, structures, or schemas, which enable us to understand events and situations and to interpret and respond to our environments. The behavioral school asserts that we learn by gaining insight and understanding from experience through experimentation, observation, analysis, and examination

of outcomes (Azmi, 2008, p. 61). The former is clearly a thinking-based model, while the latter is an action-oriented one.

Emphasizing the cognitive approach, one of the key tenets of scholar David Kolb's (1984) learning model (to be explored later in this paper) is grasping, which entails conceptualization and understanding – both mental processes. Corroborating this point, scholars McGill and Slocum (1994) define organizational learning as responding to new information by altering the very “programming” by which information is processed and evaluated (p. 27).

By contrast, scholar Peter Senge's (1990) definition demonstrates a balance of cognitive and behavioral elements that combine patterns of thinking plus action. He claims that organizational learning occurs where “new and expansive patterns of thinking are nurtured, where collective aspiration is set free, where people continually expand their capacity to create the results they truly desire, and where people are continually learning how to learn together” (p. 3).

Finally, Nevis, DiBella, & Gould (1995) define organizational learning as the capacity or processes within an organization to maintain or improve performance based on experience (p. 73) – clearly underscoring the behavioral components. Since this paper is a comparative analysis, no singular definition is identified as the best one to characterize organizational learning. The previous paragraphs merely offer three different definitions of organizational learning to illustrate the diversity of thought along the cognitive-to-behavioral-focus spectrum.

The Rationale for Organizational Learning

Why is it important to establish and maintain a learning organization? One of the primary drivers of organizational learning becoming an imperative for today's businesses is the

need for enhanced learning processes as organizations move from relatively stable to relatively unstable environmental conditions in our globalized marketplace. As trends in market conditions, competition, customer demands, technology, and other environmental areas evolve, companies, too, must rejuvenate and reinvent themselves for long-term survival and success. Indeed, Azmi (2008) claims that nurturing learning is a top priority in today's business world because it contributes to competitive advantage through enhancing organizational performance and effectiveness (p. 58). Essentially, if organizational members share their tacit knowledge with others in the organization, this becomes one powerful resource that competitors cannot replicate. Senge (1990) substantiates this idea, noting that the ability to learn is expected to create the major source of competitive advantage for organizations in the future, and stressing that learning itself is seen as a prerequisite for the survival of today's organizations (p. 4).

At the individual level, scholar William Isaacs (1993) stresses the importance of humans everywhere developing their capacity to think and act collaboratively. He asserts that, if people can come together and be encouraged to become conscious of the thought processes they use to form assumptions and beliefs, they can then develop a common strength and capability for working and creating things together. He concurs that the realities of today's business environment make organizational learning an imperative, claiming that the level of complexity in business today requires intelligence beyond the capacity of any individual, which demands that we tap the collective intelligence of groups of knowledgeable people.

Three Unique Theories of Organizational Learning

Now that we have an appreciation for the diversity of thought in defining and justifying organizational learning, it makes sense to explore its principles and practices. Three classical

theories are presented by which to compare and contrast organizational learning models and methods: 1) experiential learning theory from the "cognitive" school; 2) adaptive & generative learning theory, also from the "cognitive" school; and 3) assimilation theory from the "behavioral" school.

Experiential Learning Theory

Kolb's (1984) experiential learning theory (ELT) is based in psychology, philosophy, and physiology (p. 7), and has significantly influenced leadership and organization development and contributed to principles of the learning organization since its introduction. Its basic premise is that learning occurs through the combination of grasping and transforming experience. ELT constitutes of a four-stage learning cycle: concrete experience (CE) and abstract conceptualization (AC) comprise the grasping component, while reflective observation (RO), and active experimentation (AE) make up the transforming experience component.

This learning process is characterized as a cycle in which the learner proceeds through the sequence of experiencing, reflecting, thinking, and acting in a repeating progression that is unique to each learning circumstance. Specifically, concrete experiences (experiencing) spark observation and reflection (reflecting), which is internalized and integrated into abstract concepts (thinking) that spark new behavioral experimentation (acting) (Yeganeh & Kolb, 2009, p. 15). This learning cycle can be entered at any point, but the stages are always followed in sequence.

Adaptive and Generative Learning Theory

Kolb's ELT model influenced scholar Peter Senge, who evolved another cognitive theory of organizational learning that prominently identified mental models – deeply ingrained assumptions, generalizations, or pictures and images that influence how we understand the world

and how we take action (1990, p. 8) – as a crucial component. The other four of the five disciplines required for acquiring skills and competencies (learning) at the individual, team, and organization level, as introduced in Senge's theory, are personal mastery, building shared vision, team learning, and systems thinking (p. 7).

One of the important principles of Senge's work is the differentiation between adaptive and generative learning. He characterizes adaptive learning as focusing on the foundation of existing knowledge, and amending that with new thinking, to accomplish an objective. This kind of learning is particularly salient to organizations seeking continuous improvement. For example, understanding the gaps between one's own firm's productivity, quality, costs, or market agility, and that of the competition, enables the generation of additional ideas by which to close those gaps.

By contrast, when new strategies, product lines, resources, or other assets are urgently needed, a different kind of learning is required to produce radical new ideas and discontinuous change – which is the nature of generative learning (Harrison, 2000). This is validated soon after by scholar James March (1991), who expanded on this theory to identify two modes of organizational learning: 1) exploitation, or the use of existing knowledge and resources to gain value from what is already known; and 2) exploration, or thinking in previously unused or unforeseen ways (i.e., seeking new options, experimenting, and conducting research) (p. 72).

Assimilation Theory

Different from the cognitive theories, behavioral approaches to organizational learning emphasize the action-based changes that take place as individuals learn through performance. These approaches characterize learning as observable, rational, and quantifiable.

Scholars Nevis, DiBella, & Goulds' (1995) theory presents a learning process featuring three unique stages: 1) knowledge acquisition, consisting of the development or creation of skills, insights, and relationships; 2) knowledge sharing, characterized by the dissemination of what has been learned; and 3) knowledge utilization, comprised of the integration of learning to make it broadly available and generalized to new situations (p. 74). All three of these stages are strongly behavior-linked and focused on practical application more than cognition.

To flesh out these three stages, the researchers propose seven "learning orientations" that further define the mindset and methods by which learning occurs: 1) knowledge source: is knowledge developed internally or acquired externally; 2) product-process focus: focus on what the organization produces versus how it develops and delivers its products/services; 3) documentation mode: individual possession of knowledge versus its public availability; 4) dissemination mode: sharing learning through formal, organization-wide methods versus informal methods; 5) learning focus: incremental versus transformative learning; 6) value-chain focus: investing in "design and make" functions versus "market and deliver" functions; 7) skill development focus: development of individuals' versus teams' skills (p. 77). The final component to the scholars' model is 10 "facilitating factors," which are the structures and processes that facilitate learning and its effectiveness (p. 76). These are covered in more detail in the section titled "The Learning Context."

A Comparative Analysis of the Three Theories of Organizational Learning

In the extant literature, organizational learning theory has generally been presented from three key and differing perspectives, which will serve as the primary criteria by which these organizational learning theories will be evaluated and contrasted: 1) the learning process, or how

learning actually occurs within an organizational; 2) the learning target, or who experiences the learning – individuals, groups, and/or organizations; and 3) learning context, or the antecedents and conditions that promote organizational learning. Interestingly, however, new organizational learning theory typically focuses exclusively on one, rarely two, of these elements, and has never incorporated all three in an integrated theory and model (Lähteenmäki, et al., 2001).

The Learning Process – How Learning Occurs

The idea of organizational learning as a process is obvious in all three of the theories introduced. Senge (1990) introduces a four-step process called the "wheel of learning" – doing, reflecting, connecting, and deciding – that is remarkably similar to Kolb's (1984) ELT process of experiencing, reflecting, thinking, and acting. Nevis et al.'s (1995) three-step process of knowledge acquisition, sharing, and utilization suggests a chronology or progression of activity in learning.

Perhaps the most interesting insight about all three theories is that they are exclusively categorized within either the "cognitive" or "behavioral" school of thought on organizational learning, but all three contain cognitive *and* behavioral elements. ELT's components of conceptualization and reflection are both thinking processes, yet the components of concrete experience and active experimentation are behavioral processes. Senge's (1990) elements of mental models and systems thinking are cognitive-related, while personal mastery, building shared vision, and team learning are behavior-related. Additionally, Nevis et al.'s (1995) knowledge acquisition stage assumes cognition is necessary for the intake and processing of new data and information, while the stages of knowledge sharing and knowledge utilization are purely behavioral.

One of the criticisms of cognitivism is its simplification of the learning process. For example, Kolb's (1984) ELT, which has proven to be quite useful, describes learning in four basic steps that are said to neglect the role of social, historical, and cultural aspects of human action (pp. 116-117). Rather than oversimplification, one of the challenges of learning from experience in the behavioral approach is that of complexity. Experiential learning naturally incorporates personal inferences from information obtained, while also engaging memory, past experience, beliefs, and assumptions about each unique situation (Levinthal & March, 1993). Not only are there limitations associated with individual inference and memory, but there are also limitations to learning at the organizational level that include memory, conflict, geographic disbursement, turnover, and more. These issues make it difficult to glean learnings from individuals' experiences and retain them enterprise-wide.

One final strength of these theories is noteworthy in the context of the learning process. Nevis et al. (1995), similar to Senge (1990), see the need for a more bold and aggressive learning process – generative learning – when transformational change is required, typically necessary in today's fast-moving, often chaotic organizational environments. Both sets of scholars assert that this by no means contradicts the value of more measured, modest learning – incremental learning – which can serve the purpose of performing everyday "fixes," as needed. However, too much exploration of new knowledge (generative learning) leaves the organization wishing for returns on its investments, while too much exploitation of existing knowledge (incremental learning) may result in its becoming outdated and useless. The challenge here is to create the appropriate balance – even though it may be a moving target – between the need to develop new knowledge versus leverage existing knowledge.

The Learning Target – Who Experiences the Learning

The second criterion for evaluating these three theories is the learning target, or the recipient of the learning. Almost all theories on organizational learning are concerned with knowledge acquisition and transfer, which occurs exclusively at the individual level. Indeed, Argyris (1991) emphasizes the importance of managers and employees looking inward in order to learn and reason about their own behavior in new and more effective ways (p. 100). This is corroborated by scholar Hodgkinson (1998), who underscores the need for individuals to reflect on their actions and be lifelong learners. Too, Kolb's (1984) work reflects a learning process that is exclusive to the individual, and Senge (1994) focuses on individual learning, emphasizing how individuals' mental models are created and perpetuated through unique processes inside one's own head that include the ladder of inference, the left-hand column, and others (pp. 237-252).

Less has been written about the assimilation process – the step by which knowledge becomes institutionally available, frequently referred to as "organizational memory" (Nevis, et al., 1995, p. 74). Yet, in determining whether this is truly organizational learning, as opposed to learning at the individual level, the challenge arises when we consider that knowledge is more than information, as was mentioned earlier in this paper – it includes the meaning or interpretation of the information, combined with unique context that is tacitly held by the communicator (such as history, experience, assumptions, and the like).

Some scholars have adopted a broader view and argue that organizations learn at the systemic level, stressing that organizational learning is not merely the aggregate of the learning accumulated by each of its members. Learning "systems" are embedded in an organization's

culture, norms, and history, and are communicated through – and influence – all of its members. Researchers Cummings and Worley ([1997], as cited in Lähteenmäki, et al., 2001, p. 116) claim that individual members can learn while the organization doesn't, exemplified by a member learning to serve a customer better without sharing that knowledge with anyone else. Further, they assert that it is possible for the organization to learn without individual members learning, as demonstrated by improvements in work processes or materials designed that do not reflect participation in learning by all individual members involved (p. 116). Distinctive from the other two theories, Nevis et al.'s (1995) assimilation theory incorporates very specific practices by which learning is disseminated organization-wide.

The Learning Context – Conditions that Promote Organizational Learning

The final criterion for analysis – the learning context – identifies the antecedents and conditions that promote a learning organization. First, Senge (2004) introduces a new set of five operating principles that serve as requisite mindsets and practices, for learning organizations, which reflect a more dynamic and ambiguous business world (pp. 4-5). These include: 1) the learning organization embodies new capabilities; 2) learning organizations are built by servant leaders; 3) learning arises through performance and practice; 4) process and content are inseparable; and 5) learning is dangerous. While most of these are classic elements that are reflected in much of the contemporary literature, the last item is uniquely bold and progressive.

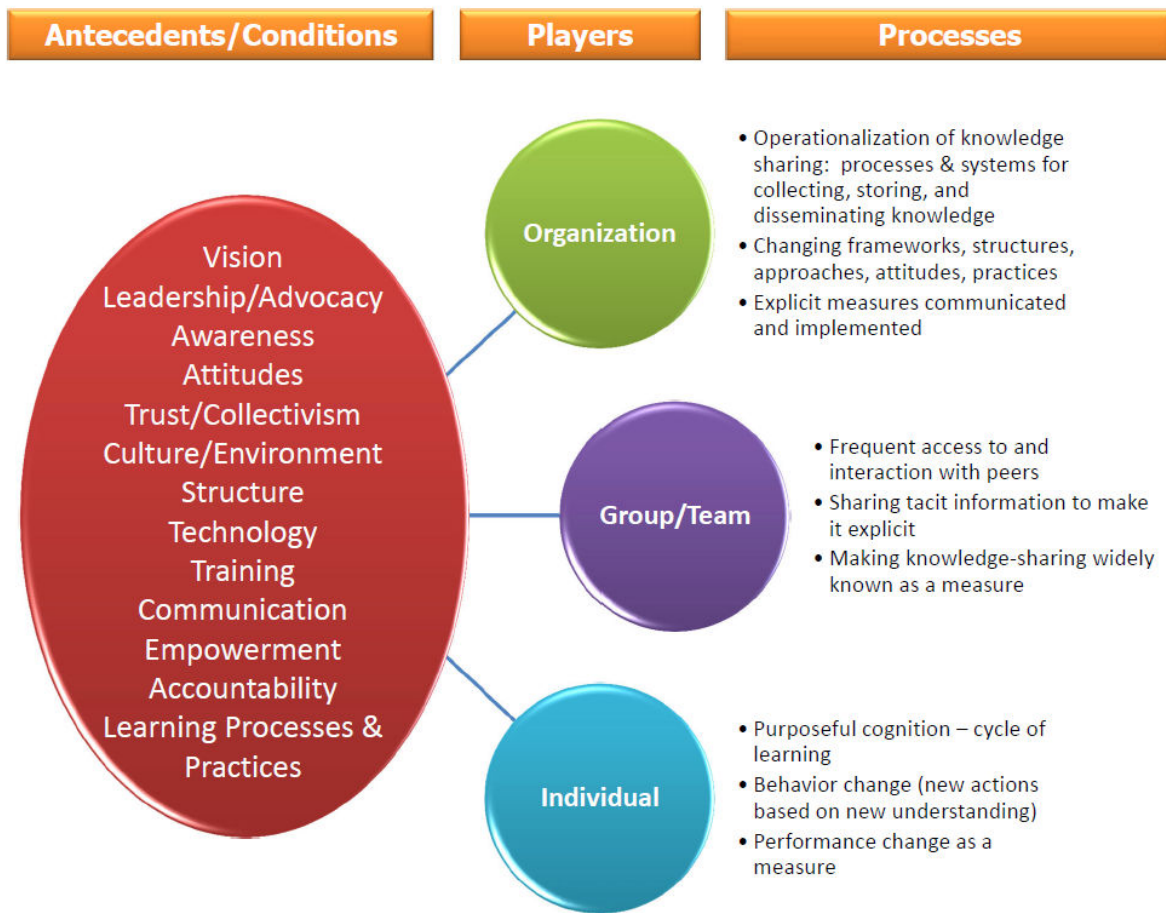
Second, Nevis et al. (1995) defined 10 “facilitating factors” that are the structures and processes which affect how easy or hard it is for learning to occur (pp. 76-83). These include: 1) scanning imperative; 2) performance gap; 3) concern for measurement; 4) experimental mindset; 5) climate of openness; 6) continuous education; 7) operational variety; 8) multiple

advocates; 9) involved leadership; and 10) systems perspective. A few of these align with Senge's five disciplines for learning organizations: a systems perspective is identical to systems thinking; continuous education relates to both personal mastery and team learning; and multiple advocates can be linked to building shared vision.

Finally, it is valuable here to summarize the more common themes from the extant literature regarding antecedents and conditions that promote organizational learning, and highlight where those themes have occurred in the three theories analyzed herein. As is true in the above examples, most of the research is prescriptive in nature and proposes how organizations should be designed and managed in order to create favorable conditions and promote effective organizational learning. Common themes include establishing a learning climate and culture that offer learning opportunities for all (Argyris & Schon, 1978; Nevis, et al., 1995; Peter Senge, 1990); facilitating members' experimentation and learning from experience, and giving appropriate feedback and guidance (Isaacs, 1993; Nevis, et al., 1995; Peter Senge, 1994; Yeganeh & Kolb, 2009); people being encouraged to take responsibility for their own professional development, as encouraged by the leader (Argyris, 1991; Nevis, et al., 1995; Peter Senge, 1990); and the role of the leader, the guiding force behind the learning process, who has to adopt different, effective roles depending on the particular situation (Argyris, 1991; Nevis, et al., 1995; Peter Senge, 1996b). A final common theme is that learning organizations are built by empowering employees in the development of their working context and getting them committed to continuous personal development (Isaacs, 1993; Peter Senge, 1990; Peter Senge, 1996a, 2004).

While these themes are fairly pervasive in the literature, in general, theory-building in this discipline has a history of approaches that fragment rather than assimilate new theory (Lähteenmäki, et al., 2001, p. 113). As a result, a new prototype theory is introduced in the next section that effectively integrates the important themes, principles, and practices of organizational learning into a more holistic model.

A New Model for Integrated Organizational Learning



Key Principles of the New Theory & Model

This new model and theory integrates the three criteria from the analysis and evaluation section, depicting the requisite antecedents and/or conditions that promote organizational

learning (far left), its “players” or beneficiaries (middle), and the key processes recommended for each of the targets (far right). First, conditions required to create and sustain learning organizations that were key themes among the three theories explored herein are included, as are those additional and complementary antecedents that were repeatedly mentioned in the extant literature. Second, while most of the literature focused exclusively on learning at the individual level, this new model demonstrates equal emphasis on learning occurring at the team and organization levels, themes that were mostly present in Senge (1990) and Nevis et al.’s (1995) work. Third, it is made clear in this new model that the learning process features unique steps and foci at each level.

One important principle of the new theory and model demonstrates a commitment to *measures* related to organizational learning at the individual, group, and organization levels, which serves to underscore the importance of this body of work and put "teeth" behind its use and reinforcement. For example, cognition, as a thoughtful and purposeful process, is still included as a vital part of the individual learning process, and the behavior change that emanates from it is a strong metric for performance evaluation.

Another key factor is the establishment of learning processes and systems enterprise-wide that support the collection, storing, and disseminating of information and knowledge. This type of technological infrastructure is required in order to make it easy and "natural" for members at all levels to engage in knowledge sharing. Additionally, technology can be instrumental in facilitating access to peers – especially when they are geographically dispersed – through virtual, albeit face-to-face means, which also supports and reinforces the sharing of tacit knowledge.

The learning theories introduced by Kolb (1984), Senge (1990), and Nevis et al. (1995), and analyzed herein, each provides a unique perspective regarding how learning takes place within the context of organizations. Research has continued to add considerably to these foundations, with new ideas and concepts being developed even today. The value of organizational learning is unmistakable as we see its ability to create competitive advantage in today's complex, dynamic, ambiguous, competitive marketplace. It serves as a method for rejuvenation and reinvention, both for organizations as well as individuals. Yet, the task of implementing and sustaining organizational learning is a daunting and complex task that involves significant culture change, attitude change, behavioral change, systems change, process change, and more. Moving forward in organizational learning research, the crucial goal for scholars in this field is to strive for integration, rather than fragmentation, so that new advances can be of maximum usefulness to practitioners who are forwarding this important work as a key priority within their own firms.

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