

Effective Learning in Organizations

Herman J. Najoli

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Indiana Wesleyan University

Professor: Dr. Joanne Barnes

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The complexity of the modern organizational world creates demands that heighten the need for rapid learning and adjustment to change (Schwandt & Marquardt, 2000). In a complex environment, organizations are constantly engaged in a battle for their future, which can be seen in the global competition between organizations for resources, markets, and longevity (De Geus, 1997). Leaders are discovering that failure to learn could result in their organization's extinction (Marion & Bacon, 1999). This adds impetus to the need for organizational learning in today's companies. Fiol and Lyles (1985) lamented that "although there exists widespread acceptance of the notion of organizational learning and its importance to strategic performance, no theory or model of organizational learning is widely accepted" (p. 803). Researchers and practitioners are left with the challenge of selecting suitable models and theories from many different approaches. The organizational learning systems model (Schwandt & Marquardt, 2000) provides a suitable analysis of organizational learning for this discussion whereas Senge's (1990) work on systems thinking and Argyris' (1990) work on defensive reasoning provide an understanding of how learning organizations become communities of good learning practices.

Underlying Basis for Effective Learning in Organizations

Organizations are a universal phenomenon. Every global culture has organizations that serve specific purposes. Dunlop (1944) views organizations as "the purposive processes of association, integration and specialization among living individual units" (p. 176). These processes are essential for the continued adaptation of individuals to their environment through learning and application of new knowledge. Learning, too, is a universal phenomenon. Argyris and Schön (1996) contend that "there is virtual consensus that we are all subject to 'a learning imperative'" (p. xvii). Such an imperative is not restricted to individuals because groups and

organizations learn too (Maier, Prange, & Rosenstiel, 2001). Senge (2006) provides a succinct rationale for organizational learning stating that “learning organizations are possible because, deep down, we are all learners” (p. 4).

Organization Theory and Learning. An organization is a social entity formed by individuals and groups for a specific purpose (Stern & Barley, 1996; Weber, 1947). Like other organisms, organizations “are capable of learning at different levels” (Maier, Pranger, & Rosenstiel, 2001) only that they may not learn concurrently with the individuals within them (Argyris & Schön, 1996). Organizational learning follows organization theory by exploring the learning construct in the total collective as opposed to the individual per se. Schwandt and Marquardt (2000) borrow from Parsons’ (1956) theory of organization to develop a model of organizational learning that addresses “the learning aspect of an organization as a social system and explains how an organization learns so that it can survive in a changing environment” (p. 43). Parsons (1956) theory on organizations focuses on how the organization adapts to diverse situations, the implementation mechanisms utilized, and the interactions that take place.

Learning Theory and Organization. Learning takes place at three levels: individual, group, and organizational levels of learning (Maier, Pranger, & Rosenstiel, 2001). The individual and group levels of learning are important though not the primary focus of organizational learning. Kupers (2004) points out that adult learning theory, which investigates individual learning processes, underpins the construct of organizational learning. Schwandt and Marquardt (2000) assert that organizations must “continuously *transform* [emphasis added] themselves” (p. 17), implying that transformational learning theory, one of the more recent approaches to adult learning, provides a useful underlying framework on how individuals learn in the organization. In transformative learning, the learner changes personal frames of reference

“to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action” (Mezirow, 2000, p. 8). The series of activities that takes place may be summed up as a transformative process of continual learning, unlearning, and relearning (Schein, 2004) which occurs in the individual but is also manifest in organizational change processes.

The Concept of Organizational Learning. According to Schwandt (1993) organizational learning is “a system of actions, actors, symbols, and processes that enables an organization to transform information into valued knowledge which in turn increases its long-run adaptive capacity” (as cited in Schwandt & Marquandt, 2000, p. 43). This definition correlates with other researchers like Leavitt and March (1988) who view organizational learning as process of “encoding inferences from history into routines that guide behavior” (p. 319). Dodgson (1993) offers a broad definition of organizational learning as “the ways firms build, supplement, and organize knowledge and routines around their activities and within their cultures, and adapt and develop organizational efficiency by improving the use of the broad skills of their workforces” (p. 377). These definitions offer a picture of organizational learning as a set or series of processes that organizations engage in as part of a qualitative improvement strategy. Does this differ from the concept of learning organizations?

The Concept of Learning Organizations

The term organizational learning has been used interchangeably with learning organizations by many researchers and practitioners with few appreciating that “there is a distinct difference in the two concepts” (Schwandt & Marquandt, 2000, p. 26). According to Argyris (1999) literature on the learning organization is “practice-oriented, [and] prescriptive” (p. 1) whereas literature on organizational learning is more scholarly oriented. The modern

concept of learning organizations was first popularized by De Geus (1988) who coined the term living companies, stating that these are organizations which engage in “institutional learning...whereby management teams change their shared mental models of their company, their markets, and their competitors” (p. 70). Acknowledging this contribution, Senge (1997) states that “it was through Arie de Geus...that I [Senge] first became seriously acquainted with the concepts of organizational learning” (p. vii). Further development of these concepts led to Senge’s (2006) widely accepted definition of learning organizations as “organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3). This definition offers the image of learning organizations as the product of a process of never-ending development of those within them, in short a product of the process of organizational learning.

Organizations as Learning Systems: A Model for Organizational Learning

Organizations are formed to meet specific objectives and emerge as entities that utilize their systems to master constantly changing variables and environments and ensure survival for the long-term (Marion & Bacon, 1999; Senge, 2006). This mastery occurs as individual actors within the organization commit to learning and sharing knowledge with other individuals, units, and departments in the organization (March, 1991; Schwandt & Marquardt, 2000). Building on a social systems approach to dynamic learning, Schwandt and Marquardt (2000) developed an Organizational Learning Systems Model (OLSM) that integrates “multiple theories into a coherent picture of the dynamic learning of the organization” (p. 53). OLSM’s conceptual framework of systems thinking enables the researcher in organizational learning to “make the full patterns clearer, and help us [researchers and practitioners] see how to change them

effectively” (Senge, 2006, p. 7). Organizations act as systems by engaging in specific subsystem functions that allow inputs from the environment to be transformed and delivered as outputs to the external environment (Thompson, 1967).

The OLSM derives its premises for the organizational learning construct from Parsons (1956) general theory of action. According to Schwandt and Marquardt (2000) individual, group, and organizational actions are a complex of performance, learning, or both, meaning that the organization has two “systems of actions” (p. 59), a performance system and a learning system. The performance system relies on four functions of organizational learning: adaptation to external environments through the exchange subsystem, goal attainment by the use of member’s knowledge, skills and abilities via the production subsystem, integration of separate learning acts through the coordination subsystem, and pattern maintenance through the reinforcement subsystem (Schwandt & Marquardt, 2000). Organizational performance enables the measurement of learning within and among the members of the organization.

The learning system, similarly, relies on four subsystems to carry out learning: “Environmental Interface, Action/Reflection, Dissemination and Diffusion, and Memory and Meaning” (p. 62). The environmental interface subsystem serves as the adaptation function which allows or disallows inputs into the system. The action/reflection subsystem is the goal attainment function that produces new knowledge for the system. The dissemination and diffusion subsystem is the integration function that enables knowledge transfer. The meaning and memory subsystem facilitates pattern maintenance that governs “sensemaking control processes” (p. 63) for the entire organizational learning system. Without these subsystems working together through an “interchange process” (Schwandt & Marquardt, 2000, p. 67) learning will not take place. Following is a description of the four essential media.

New information and the environmental interface subsystem. The creation of new knowledge is fundamental to learning in organizations (Nonaka & Nishiguchi, 2001). Organizations make adjustments to environmental changes based on new knowledge that prompts organizational renewal (Barr, Stimpert, & Huff, 1992). Leaders must understand that “the most important and vital asset in any organization is knowledge” (Darling, 1996, p. 674). According to Schwandt and Marquardt (2000) “the learning system must have new information both from its environment and from within itself” (p. 68). New knowledge enables solution seeking and prevents an organization from declining. Such new knowledge will not benefit the organization unless it is specific and recognizable. New knowledge into the system is an input that facilitates both learning and performance. The environmental interface subsystem determines the data that enters the learning system. This data is converted into functional information that is either “verbal, written, visual, or electronic” (p. 70) and therefore useful for the organization’s goal attainment purposes.

Goal reference knowledge and the action/reflection subsystem. New information that is acquired through the environmental interface subsystem has to be adapted for the organization’s needs. According to Schwandt and Marquardt (2000) various subsequent action and reflection processes enable the “transforming of information into valued knowledge which in turn increases the adaptive capacity of the organization in a changing environment” (p. 70). The organization’s learning and performance goals are met as participants utilize new knowledge and reflect on its value to the production process. Dilworth (1996) emphasizes the need for ‘learning through doing, and experiential forms of learning’ (p. 418) as essential in organizational learning. Knowledge that has been acted and reflected on becomes input for the other subsystems within the organization.

Structuring and the dissemination and diffusion subsystem. According to Schwandt and Marquardt (2000) structuring is “an integration of organizational structures, roles, policies, objects, and processes [to] allow for information and knowledge to move within the learning system and the organization itself” (p. 71). In other words, structuring enables knowledge transfer within the organization. The integration and transfer of new knowledge into an organization depends on the mental models in use, defined as “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action” (Senge, 2006, p. 8). Group and organizational learning are facilitated by the mental models utilized by individuals within the collective, most of which “are very often systematically flawed,” thus making necessary “a *library of ‘generic structures’*” (p. 189) throughout the organization. Generative learning occurs in the organization as individuals examine and refine the structures that govern their patterns of thinking through the development of new mental models. Senge (2006) argues that structures “should be a natural by-product of practicing systems thinking within an organization” (p. 190). The diffusion of knowledge throughout the organization’s subsystems enables sensemaking.

Sensemaking and the meaning and memory subsystem. Organizations use the medium of sensemaking to reflect on past actions, create new knowledge, accumulate knowledge for maintenance in the organization’s memory, and generate new structuring for integrating stored knowledge. According to Schwandt and Marquardt (2000) the interchange process between the subsystems is facilitated by the language and symbols derived by organizational members from the dissemination and diffusion process. The language and symbols are stored in the organization’s memory and become part of the collective’s culture. Walsh and Ungson (1991) define organizational memory as “stored information from an organization's history that

can be brought to bear on present decisions” (p. 61). An organization’s language and symbols enable shared interpretations that serve as new knowledge for problem solving. Senge (2006) argues that organizations must strive for “goals, values, and missions that become deeply shared throughout the organization” (p. 9). The collective sensemaking that takes place enables the attainment of deep agreement on the organization’s espoused values and vision.

The OLSM reveals the value of systems thinking in the establishment of fruitful organizational learning processes. As analyzed in this discussion, individual actions within the collective organization play a significant role in the learning process. Shared learning is imperative in the organizational learning process (Senge, 2006). To achieve shared learning, Schwandt and Marquardt (2000) recommend action learning, which consists of “a small group of people solving real problems while at the same time focusing on what they are learning and how their learning can benefit each group member and the organization as a whole” (p. 145). The continued implementation of learning within an organization requires individual commitment to the development of a “learner’s mindset” (McCauley & Wakefield, 2006, p. 7) as a common practice within the organization. Towards this end, an understanding of the scholarly concept of organizations as learning systems facilitates the implementation of the newer, practice-oriented concept of organizations as communities of practice.

Organizations as Communities of Practice: Dynamics of the Learning Organization

One formal objective of collective learning is to further the organization’s “existence as a continuous work community – in short, as a living, learning company” (De Geus, 1997, p. 21). Wenger (1998) suggests that learning should be understood as “competent participation in a practice” (p. 137). The work community’s continued engagement in learning as a practice facilitates the existence of a community of practice. A community is a group of people that are

united by a common vision who find oneness by engaging in many “self-organized” (Kikoski & Kikoski, 2004) actions. Goal-oriented individual action within the organization is a precursor to group action that is oriented towards some purposeful end (Weber, 1947). According to Gheradi and Nicolini (2001) “the various forms of goal-oriented activities are important for understanding how people become members of a community of practice and how they come to master the specific knowledge embedded in the various activities” (p. 47). Organizations and communities that advance and become communities of practice support the “development, exchange, and application of knowledge” (Zboralski, Salomo, & Gemueden, 2000, p. 547) through mutual commitments, obligations, responsibilities, and accomplishments of individuals. In a community of practice individuals engage in specific practices that benefit the group.

Practices of the Learning Organization. Senge (1990) identified five “disciplines of the learning organization” (p. 5): systems thinking, personal mastery, building shared vision, team learning and mental models. Each of these plays a critical role in the organization’s learning. The need for systems thinking is necessitated by the failure of linearity in addressing how organizations learn (Schwandt & Marquardt, 2000). The complexity of modern organizations calls for an approach that accounts for the diversity of actions undertaken in the organization. Senge (2006) argues that an organization’s leverage in terms of learning comes from systems thinking, which he refers to as “the fifth discipline” (p. 11) and the “cornerstone of the learning organization” (p. 55). Personal mastery highlights the individual’s commitment to continuous professional development and self governance. This commitment enables one to avoid the “moral lapses and impaired judgment” (Henry, 2009, p. 49) that cripple organizational learning within an organization.

Self governance enables “actors-in-interaction, differentiated societal groups or even sectors of societies develop problem-solving or opportunity-creating procedures and institutional arrangements to do so ‘on their own’ and ‘by themselves’” (Kooiman & van Vliet, 2000). As individuals develop mastery and competence, their interaction facilitates the transfer of knowledge and skills between them, enabling the generation of shared vision. This results in unity of thought, direction, and effort and the cultivation of “shared ‘pictures of the future’ that foster genuine commitment and enrollment rather than compliance” (Senge, 2006, p. 9). Organizational learning will not thrive where individuals are coerced but rather where they willingly engage in the prescribed practices.

Learning should be “purpose driven,” (Henry, 2009, p. 50) with the goal of empowering “all employees with the set of tools to be effective leaders” (p. 49). Effective learning in organizations is an organization-wide endeavor. Team learning is a critical practice in any community of learners as it creates an environment where “the intelligence of the team exceeds the intelligence of the individuals in the team, and where teams develop extraordinary capacities for coordinated action” (Senge, 2006, p. 9). Teams find identity in their commonalities and are able to distinguish themselves from others within their environment.

The environmental interface subsystem (Schwandt & Marquardt, 2000) enables the input of data that is essential for structuring in the organization. New data converted to useful information provides the knowledge necessary for generating new mental models that govern organizational learning. This corresponds to De Geus (1988) suggestion that learning is a process whereby “teams change their shared mental models” (p. 70). This change in mental models is essential for the structuring processes within the organization. The structures or patterns of thinking that emerge facilitate generative organizational learning.

Generative Learning, Change Theory, and Culture in Learning Organizations. One of the salient objectives of designing a community of practice is the cultivation of an organizational culture in which learning is valued (Wenger, 1998). A generative learning organization is a collaborative group in which the learners see themselves as part of the whole (Senge, Scharmer, Jaworski, & Flowers, 2004) and endeavor to constantly inquire as to how to use both tacit and explicit knowledge in sustaining their existence in a complex environment (Kikoski & Kikoski, 2004). Ulrich and Smallwood (2002) define collaboration as “different parties working together for a common purpose” (p. 16). A generative learning organization engages in collaborative action-learning (Marquardt, 2002) that addresses the sources of recurrent problems.

Senge (2006) contends that “generative learning cannot be sustained in an organization where event thinking predominates” (p. 53). Generative learning requires thinking that goes beyond events and examines the causes of those events. Senge (2006) suggests that “our fixation on events is actually part of our evolutionary programming” (p. 21–22). This fixation is manifested in situations where organizational theories-in-use do not match espoused theories-of-action (Argyris & Schön, 1996). An espoused theory-of-action is “based on principles and precepts that fit our intellectual backgrounds and commitments” (Argyris, 1999, p. 232) whereas a theory-in-use represents the actions that “to which we resort in moments of stress” (p. 232). Generative learning aims at discovering these patterns and contradictions within the organization’s culture and facilitating the change of established theories-in-use.

Schein (2004) provides a rich understanding of change and learning theory as applied to both organizations and the individuals within them by arguing that transformation in a system occurs when there is “enough *disconfirming data* [which creates] discomfort and disequilibrium;

[resulting in] *anxiety and/or guilt*; [that necessitates] enough *psychological safety*, in the sense of being able to see a possibility of ... learning something new without loss of identity or integrity” (p. 320). Organizations, as learning systems, resist change by disallowing data and input via the environmental interface that would alter their established culture (Schwandt & Marquardt, 2000). This understanding highlights the importance of the interchange medium of sensemaking since its function may be interpreted as that of allowing a critical examination of the organizational theories-in-use. Argyris and Schön (1996) emphasize that “an organization’s theory-in-use largely accounts for its identity over time” (p. 14). This identity may be analyzed culturally at three levels: “(1) visible artifacts, (2) espoused beliefs, values, rules, and behavioral norms, and (3) tacit, taken-for-granted, basic underlying assumptions” (Schein, 2004, p. 59). These three components are manifest in the language and symbols of the organization. Generative learning within the organization relies on the interchange media to change the language and symbols that make up the organization’s culture (Schwandt & Marquardt, 2000).

Overcoming Barriers to Effective Learning in Organizations. The preceding discussion identifies some of the barriers to learning as anxiety and elements of the organization’s culture (Schein, 2004). Antal, Lenhardt, and Rosenbrock (2001) examined the literature and concluded that “the conceptualization [of barriers to organizational learning] is still quite thin and fragmented” (p. 869). A conclusive listing of all the barriers to effective learning may be idealistic at this point. According to Argyris (1999) “*organizational defensive routines* [which] consist of all the policies, practices, and actions that prevent human beings from having to experience embarrassment or threat and... [simultaneously] prevent them from examining the nature and causes of the embarrassment or threat” (p. 232) are a formidable barrier to learning in organizations. Defensive routines are problematic because an underlying assumption for the

pursuit of effective learning in organizations is that the ends will be positive and beneficial to the organization. Defensive routines hinder the attainment of the positive ends of learning and are produced by what Argyris (1990) branded as “Model I theory-in-use” (p. 12), which is characterized by reasoning patterns that are counterproductive to the pursuit of positive ends of effective learning and not aligned to espoused theories of action. These patterns result in thinking loops that are only strengthened by any attempts to discontinue their effect (Argyris, 1990). The theories-in-use correlate to the collective actions associated with the performance reinforcement subsystem, which subsequently enables the organization to engage in pattern maintenance (Schwandt & Marquardt, 2000).

Argyris (1990) conceived the term “single loop learning” (p. 92) in reference to the actions undertaken to detect and correct counterproductive actions. Long-term learning, however, may not be attained by simply correcting faulty actions. Productive and effective change many times requires the establishment of a new theory-in-use. Argyris (1990) introduced the notion of “Model II” (p. 89) actions or theories-in-use to illustrate the quality of generative inquiry that is needed to resolve why specific problems prevail and coined the term “double-loop learning” (p. 94) to represent the process of altering the underlying values that govern those specific problems. A Model II theory-in-use is derived from an espoused theory-of-action, leading to more productive reasoning that overcomes the barriers to organizational learning.

Argyris and Schön (1996) set out to differentiate between the “second-order learning, or ‘learning how to learn’” (p. 29) that takes place in organizations and that which takes place in individuals. Individuals learn by shifting from Model I to Model II theories-in-use, a process referred to as individual deuterolearning whereas organizations learn through organizational deuterolearning by shifting from “O-I to O-II learning systems” (p. 29). The authors point out

that O-I learning systems are predominated by defensive routines that fail to alter the “governing variables, norms, and assumptions” (p. 111) of organizational intervention, whereas O-II learning systems have a “built-in capacity for double-loop learning which continually questions the status quo” (p. 112). Organizational deuterolearning, which is defined as “the second-order learning through which the members of an organization may discover and modify the learning system that conditions prevailing patterns of organizational inquiry” (p. 29) is the only means by which the shift can be made from O-I to O-II learning systems. Organizational deuterolearning overcomes the barriers of organizational learning by completely changing the learning system.

Implications for Leadership Philosophy

Organizations that make a difference have leaders who understand the value of learning and recognize that “knowledge, competencies, and other learned practices are passed successfully from one generation of employees to another as the organization adapts successfully to an environment characterized by an accelerating rate of change” (Sadler, 2001, p. 417). Given the accelerated pace of change and increased complexity of the modern organizational universe it is necessary for organizations to embrace learning, and incorporate it into their philosophies and core ideology (Collins & Porras, 1994). Learning precedes both change and growth in organizations. Garvin (1993) pointed out that “in the absence of learning companies – and individuals – simply repeat old practices” (p. 78). In an era of rapid change, organizations could become extinct when they do not harness an appreciation of their learning capacities and implement processes that facilitate a continuously improving performance (Marion & Bacon, 1999). Complexity and profound social changes must be interpreted accurately and utilized in shaping future direction (Senge, et al, 2004), hence the importance of organizational learning to organizational leadership.

Leader development occurs in the context of a community that provides challenge, encourages mutual support, and facilitates reflective assessment (McCauley & Van Velsor, 2004; Schwandt & Marquardt, 2000). Action and reflection are essential for the progressive clarification of leader philosophy (Argyris & Schön, 1978; Schön, 1983). Leadership begins with inner work (Senge, et. al., 2004) and flourishes through continuous engagement in a community of practice (Zboralski, et al., 2006). The leader and the organization have to learn, change, and grow in a way that continuously expands and challenges them to learn (Senge, 2006). The leader's style, mission, core values, knowledge base, and developmental objectives are a constant work in progress. Growth on the leader's part requires reflective practice (Raelin, 2002). Organizational learning enables leaders to grow in community as “designers, teachers, and stewards” (Senge, 2006, p. 321) of effective learning in organizations.

Learning organization leaders have to be creative in developing appropriate responses to environmental changes, instructing organizational members on how to embrace new perspectives when old routines become inapplicable, and navigating new situations with the goal of sustaining the organization through complexity (Senge, 2006). This challenge is reflected in Chilean biologist Humberto Maturana's idea of “transformation through conservation” (as cited in Senge, 2006, p. 335). Leaders have the enviable role of transforming situations while recognizing that certain elements of what's already in existence have to be preserved. Towards this end, leaders have to embrace a “learningful” (Senge, 2006, p. 4) approach that adapts to change with an understanding of the historical context of the organization. This attitude and approach enables leaders to “weave an organizational learning quilt that is composed of the fabrics of world-class theory, research, and practice” (Schwandt & Marquardt, 2000, p. 227). This view of the leader's work as transformative yet conservatory is a cornerstone for effective learning in organizations.

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