

*Theoretical Foundations*

## **Building a Learning Organization: Communities of Practice, Self-Directed Learning, and Continuing Medical Education**

SHARON J. CONFESSORE

Assistant Professor, Human Resource Development  
Director, Executive Leadership Program  
The George Washington University  
Washington, DC

**Abstract:** *Learning organizations may provide a mechanism by which physicians can meet the challenges currently occurring in the medical profession, such as the emergence of HMOs, increased concern over medical costs, and the need to maintain continuing competence in increasingly complex environments. Learning organizations are generative; they are responsive and have been used effectively during times of rapid change and in chaotic, highly competitive environments. This paper describes the learning organization and discusses how self-directed learning and communities of practice provide the beginnings for the establishment of a learning organization in the medical profession. Continuing medical education (CME) is seen as the mechanism to transfer new knowledge across all members of the community of practice and become a key component in building learning organizations.*

**Key Words:** Communities of practice, continuing medical education (CME), learning organizations, organizational learning, self-directed learning

To effectively meet the challenges presented in the 21st century, organizations are increasingly exhorted to become “learning organizations.” Learning organizations provide a means whereby individuals, working together, are able to increase the knowledge and skills of all of their members, especially during times of rapid change and in chaotic, often highly competitive, environments. Learning organizations assume competence of all members and are designed so that individuals may perform to the limit of their capability with a minimum of supervision.

Individual learning and development is seen as the foundation of a learning organization, but

collaboration and generation of new knowledge are its distinguishing characteristics. Learning organizations are generative; they are responsive, efficient, and cost effective.<sup>1</sup> An important value of a learning organization, especially from the perspective of professionals, is that it explicitly acknowledges the capacity of individuals to contribute to the knowledge base of all members of the community.

Senge<sup>2</sup> defines a learning organization as one “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.” As physicians address events such as the emergence of HMOs, increased concern over medical costs, and the continuing need to maintain competence in increasingly complex environments, the promise of learning organizations as mechanisms to help physicians proactively address

---

Reprint requests: Sharon J. Confessore, Human Resource Development, Executive Leadership Program, The George Washington University, Washington, DC.

the changes in their practice and profession is a powerful one.

Sherman and Davis,<sup>3</sup> in their discussion of continuing medical education (CME), state that “members of any profession, particularly the medical profession, are individually responsible for keeping up-to-date.” This suggests that developing learning organizations within the medical community may be difficult. However, evidence from continuing professional education suggests that the key components necessary for learning organizations to exist may already be present within the medical profession.

In conceptualizing the role and purpose of CME within a learning organization, consideration must be given to ways in which independent learning and collective knowledge building may be enhanced within the daily practice of physicians. This paper (1) proposes that three components are necessary for learning organizations to exist within the medical profession: physicians must be competent to self-direct their own learning opportunities, knowledge must be shared and new knowledge created, and both self-learning and collaborative knowledge sharing must be encouraged, and integrated into daily practice; and (2) suggests that CME activities may be appropriate for the integration of these components into the practice of physicians.

### **Defining a Learning Organization**

In determining the role and purpose of a learning organization within the context of CME, consideration must first be given to distinguishing between the terms “learning organization” and “organizational learning.” These terms are frequently linked and even used interchangeably. Organizational learning may be defined as a process by which information, determined by the collective as meaningful, is communicated by and throughout the collective.<sup>4</sup> Shrivastava<sup>5</sup> conceptualized organizational learning as adaptation to the environment, the sharing of assumptions,

developing a knowledge base, or institutionalized experience.

A key concept in organizational learning is that there is a body of corporate knowledge. This knowledge is the essence of the organization—its norms, values, and culture. Regardless of the frame used to describe organizational learning, all perspectives include some dimension of transforming individual knowledge into collective knowledge, meaning that is collectively determined, shared, interpreted, and used throughout the organization.

A learning organization may be described as an environment where organizational learning is structured so that teamwork, collaboration, creativity, and knowledge processes have a collective meaning and are valued. Senge<sup>2</sup> describes a learning organization as one that is viewed holistically, that is, all individuals within the organization work together across traditional boundaries to solve problems and create innovative solutions. He identifies five disciplines required for the learning organization: (1) systems thinking, (2) personal mastery, (3) mental models, (4) building a shared vision, and (5) team learning. Managers help employees understand and use these disciplines effectively to increase the organizational learning.

Watkins and Marsick<sup>6</sup> address individual learning and the role it plays in the learning organization, but still emphasize that collective learning is the necessary component in a learning organization. They view the role and purpose of individual learning as a means to enhance the organization’s capacity to adapt to change and environmental pressures. Watkins and Marsick identify six “action imperatives” for a learning organization: (1) creating continuous learning opportunities, (2) promoting inquiry and dialogue, (3) encouraging collaboration and team learning, (4) establishing systems to capture and share learning, (5) empowering people to a collective vision, and (6) connecting the organization to the environment. These imperatives provide the framework for building the learning organization. Like Senge, Watkins and Marsick emphasize that building a

learning organization is a process by which people learn to harness their individual intellect to create an environment that is responsive to the constantly changing needs of business in the late 20th century.

### **Individual and Organizational Knowledge in the Learning Organization**

Because the emphasis in learning organizations is on collective knowledge, much less attention is paid to individual knowledge and the role it plays in developing and sustaining a learning organization. There is an assumption that individual learning is occurring; however, there is very little explicit information regarding how this occurs. Both individual and organizational knowledge are important: the interplay between the individual and the organization is the essence of the learning organization.

Nonaka and Takeuchi<sup>7</sup> assert that knowledge can be created only by individuals, and the role of the organization is to provide contexts for individuals to create knowledge. They view the relationship between individually created knowledge and organizationally adopted knowledge as a process of “amplification,” where the organization crystalizes the individual’s learning through integration across the boundaries of the levels of the organization.

Nonaka and Takeuchi describe two types of knowledge that occur in the learning organization. Tacit knowledge is described as personal, context specific, and difficult to communicate. It includes both mental models, or the way individuals construct the reality of their world, and technical capabilities, or concrete knowledge of how to do something. Tacit knowledge is also discussed in the adult learning literature, most often within discussions of wisdom and professional knowledge. Tennant and Pogson<sup>8</sup> link tacit knowledge with professional expertise and describe it as being unconscious and implicit. They maintain that tacit knowledge is a key aspect of professional com-

petence and differs between novices and experts. Schön’s<sup>9</sup> description of “knowing in action,” or the information that professionals acquire as part of their practice, also includes tacit knowledge.

Explicit knowledge is transmitted in formal language and describes past events or objects. Explicit knowledge manifests itself in an organization via documentation, formal training programs, and databases. Within the context of individual and collective learning, tacit knowledge is individual, while explicit is collective learning. Nonaka and Takeuchi<sup>7</sup> assert that there must be a conversion between tacit and explicit knowledge to have knowledge creation occur. There are four modes of conversion: (1) tacit to tacit (socialization), where tacit information is shared and new mental models are created; (2) tacit to explicit (externalization), where metaphors and analogies are used to conceptualize an image; (3) explicit to explicit (combination), where concepts are organized into a knowledge system; and (4) explicit to tacit (internalization), where the new knowledge becomes an integral part of the individual’s knowledge base. This transfer from explicit to tacit and tacit to explicit is described as a spiral. The spiraling of this knowledge makes it possible for the creation of new knowledge for both the individual and the organization.

Watkins and Marsick<sup>6</sup> describe a “deeper level of thinking” as being necessary for individuals in the learning organization. This requires individuals to make meaning of information and then establish it as part of their individual knowledge bases, to be used to solve new problems within the work context. The concept of analyzing one’s performance is seen as a key part of improving one’s professional practice. Schön<sup>9</sup> describes two types of reflection: “reflecting in action” and “reflecting on action.” In both cases, the reflection occurs as a result of a surprise, or the introduction of new circumstances or information. When reflecting in action, the individual, using the current knowledge base, experiments until an appropriate solution to the puzzle is found, and then integrates this new knowledge into the existing knowl-

edge base. In the second case, the individual, after finding the solution, analyzes the circumstances, the alternatives as they present themselves, and the process of selection. This enhances the individual's knowledge base in two ways, by identifying a new solution to a problem, then by developing new information regarding the problem-solving process itself. By reflecting on how they react in new situations and solve problems, professionals enhance their professional practice by increasing their ability to assess their own skills and identify and access ways to learn new ones. Through the sharing of this knowledge, individuals provide new knowledge to members of the profession.

These concepts of collective knowledge creation make two assumptions about individuals within the organization. First, they have a sufficient knowledge base to contribute to the initial knowledge creation process and, second, they can internalize the newly created knowledge once the knowledge is shared. The focus of organizational learning, once again, is linked to the individual's learning capacity.

### **Self-Directed Learning and the Learning Organization**

The importance of self-directed learning is implied but not clearly articulated in the literature on learning organizations. Building and maintaining a learning organization assumes the individual's ability to seek out, make meaning, and then integrate new information into his/her knowledge base. The premise of learning organizations—that individuals find or make opportunities to learn from whatever resource or situation occurs, or adds value to the organization by converting individual knowledge to organizational knowledge—assumes that self-directed learning is occurring. However, there is no clearly articulated process for accomplishing or enhancing this process.

There are many conceptualizations of self-directed learning; however, they all share some common attributes. First, the learner decides the

essential components of the learning situation: what is to be learned, the order of the learning events, the resources to be used, and the duration of the project. Some also include a feedback mechanism as an important component of the self-directed learning activities of professionals.<sup>10</sup> Second, self-directed learning encompasses a variety of learning activities and may include participation in formalized learning situations and the assistance of others, including leaders. The fundamental role of the educational leader changes within the context of self-directed learning, however. In a self-directed situation, the leader's role is that of "expert resource"; the learner works with the leader to identify *options and their relative merits*. Finally, self-directed learning does not require that the purpose of the learning be established by the learner alone. Particularly within an employment situation, the learner and employer may collaborate to determine the learning goals most appropriate for both the learner and the organization.<sup>11</sup>

How individuals undertake self-directed learning activities provides an important link with a learning organization. Two schools of thought are described in the literature. Tough<sup>12</sup> initially describes self-directed learning as a linear process, where individuals determine the learning to be undertaken and identify a set of activities, which will be accomplished in a specific order to accomplish the goal. This conceptualization is generally used in organizations where self-directed learning has become formalized as part of the learning activities.<sup>13</sup>

An alternate view is proposed by Spear and Mocker,<sup>14</sup> who found that circumstances within the environment establish the parameters of the self-directed learning project. Four "patterns" were identified: (1) single event/anticipated learning, where the individual expects learning will take place, but has no preconceived idea of how it will happen; (2) single event/unanticipated learning, where the individual has no expectation that learning will take place, but through observation and interaction with the environment, a situation

emerges where learning occurs; (3) series of events/related learning, where a learning project emerges from several unrelated events, and one learning project leads to the next learning event; and (4) series of events/unrelated learning, where the individual discerns, after a series of seemingly unrelated events, that learning occurred. Physicians describe self-directed learning activities within all of these contexts, as do architects.<sup>15,16</sup> Framing self-directed learning as a response to situations and resources as they occur within the environment provides one description of the means whereby tacit knowledge becomes explicit, and explicit knowledge becomes tacit, establishing a clear link between self-directed learning and the learning organization.

Self-directed learning is an integral part of the learning organization and has an important place in the continuing education of physicians.<sup>15,17</sup> However, self-directed learning of individuals is insufficient to build a learning organization; the knowledge acquired must be shared within the community.

### **Professional Practice and the Learning Organization**

Professional practice and performance are related to the culture within which the professional works. Brown and Duguid<sup>18</sup> maintain that practitioners develop in “communities of practice,” where learning to become a practitioner occurs by having access to colleagues. Through discussion and exchange of information, the knowledge base of all who are within the community is increased. Communities of practice achieve this goal in two ways: first, they introduce new knowledge into the environment and, second, through the process of framing and exchanging information, they clarify and enhance information for the individuals sharing the knowledge. Communities of practice emerge as a natural result of individual working and learning collaboratively through self-directed means, and represent one way in which information is shared throughout the organization. Com-

munities of practice are one of the mechanisms by which information is transmitted within the learning organization. They are a means by which knowledge and skills are passed on informally to others through collaborative means.

Communities of practice exist within medical practice. Physicians seek information from colleagues in different ways, including formal patient consultations, informal consultations, and casual conversations.<sup>19</sup> Informal consultations have been identified by physicians as a valuable means of skills updating,<sup>20</sup> as has modeling, using respected peers.<sup>21</sup> Paul and Osborne<sup>22</sup> found that physicians form “complex networks generating powerful forces for both change and stability.” They report that a variety of professional environments encountered by physicians provide many opportunities for learning, including hospitals, professional organizations, and medical office practices. Different types of interactions were cited, including consultations with colleagues, which were found to be the most valuable.

Nowlen<sup>23</sup> reinforces the relationship between individual and organizational context. He notes that the “competence of professionals relies on the relationship of individuals in the organizational setting. It is this ensemble that can cripple or enhance individual performance.” He conceives of the optimal continuing education model (the performance model) as one that accounts for both the culture within which the professional practices and the person’s development as an individual.

Nowlen describes this model of continuing professional education as a double helix. One strand of the helix carries the values and culture of a given profession and can be likened to organizational knowledge. The other strand carries the individual’s skills, values, and past experiences, and parallels the idea of individual knowledge within a learning organization. Professional practice is described as an intertwining of these two strands. Culture, when “creatively orchestrated,” enhances both individual and collective performance. This conceptualization of the double helix, and the idea that conditions can be directed to

enhance both individual learning and the organization's ability to support and enhance learning, provides a graphic representation of how a learning organization might be contained within the professional community of practice.

### **CME and the Learning Organization**

In a learning organization, three conditions are present: first, individuals have opportunities to exploit their work environment to increase their individual knowledge bases; second, there are opportunities for individuals to work collaboratively and share and create new knowledge; and, third, there are mechanisms to ensure that these activities are valued, encouraged, and integrated into daily practice. The increasing acceptance of self-directed learning activities<sup>24</sup> and the history of consultation among physicians suggests that two of the three conditions are present for learning organizations to exist within the medical community. Rethinking CME activities to include informal learning activities may be a means to address the third criterion.

Because CME already includes self-directed learning activities and informal consultations within the community of practice as important ways of maintaining competence, establishing learning organizations within CME can be said to be already in progress. Yet, physicians often view self-directed learning as unrelated to their formal continuing education, and organizations that have attempted to include self-directed learning activities within formal CME contexts have encountered resistance.<sup>25</sup> Nowlen's<sup>23</sup> two strands of influence model makes it possible to conceptualize the learning organization within the CME paradigm because it accounts for both the individual and cultural components of professional practice. In order for the learning organization to exist, however, explicit efforts to ensure that an environment that supports the learners within a community of practice are necessary.

The learning organization is a complex association among individual learning, organizational

learning mechanisms, and the collaboration of individuals within a community of practice. When CME is conceptualized as something occurring outside the routine activities of the physician, it devalues the independent learning and collective knowledge building that occurs as part of daily practice. The challenge to the profession is to recognize the value of the learning organization and shared knowledge and to put into place mechanisms that ensure transfer of knowledge across all members of the community of practice.

### **References**

1. Handy C. Managing the dream. In: Chawla S, Renesch J, eds. *Learning organizations: developing cultures for tomorrow's workplace*. Portland, OR: Productivity Press, 1995:45-56.
2. Senge P. *The fifth discipline: the art and practice of the learning organization*. New York: Doubleday, 1990.
3. Sherman C, Davis D. CME in oncology— from where we were to where we are going. *J Cancer Educ* 1995; 10:131-136.
4. Dixon N. Organizational learning: a review of the literature with implications for HRD professionals. *Hum Res Dev Q* 1994; 3(1):29-49.
5. Shrivastava P. A topology of organizational learning systems. *J Management Stud* 1983; 20(1):7-28.
6. Watkins K, Marsick V. *Sculpting the learning organization: lessons in the art and science of systematic change*. San Francisco: Jossey-Bass, 1993.
7. Nonaka I, Takeuchi T. *The knowledge creating company*. New York: Oxford University Press, 1995.
8. Tennant M, Pogson P. *Learning and change in the adult years*. San Francisco: Jossey-Bass, 1995.
9. Schön D. *Educating the reflective practitioner*. San Francisco: Jossey-Bass, 1988.
10. Price M, Fox R. *Crossing boundaries in continuing professional education*. Presented at the Conference on Crossing Boundaries in Practice, Cincinnati, Ohio, 1992.

## Confessore

11. Durr R. Guidelines for the self-directed learning process. Boynton Beach, FL: Motorola Corporation.
12. Tough A. Learning without a teacher: a study of tasks and assistance during adult self-teaching projects. Toronto, ON: The Ontario Institute for Studies in Education, 1967.
13. Weldon K, Denny M. Continuous workplace learning: an assessment of learner perceptions. In: H. Long and Associates, eds. *New ideas in self-directed learning*. Norman, OK: Research Center for Continuing Professional and Higher Education, 1994:187–200.
14. Spear G, Mocker D. The organizing circumstance: environmental determinants in self-directed learning. *Adult Educ Q* 1984; 35(1):1–10.
15. Fox R, Mazmanian P, Putnam R. *Changing and learning in the lives of physicians*. New York: Praeger, 1989.
16. Price M, Knowles L, Confessore S. Architects self-designed learning activities: the task 4 report. A report to the American Institute of Architects. Norman, OK: Research Center for Continuing Professional and Higher Education, 1993.
17. Mann K, Chaytor K. Help! Is anyone listening? An assessment of learning needs of practicing physicians. *Acad Med* 1992; 67(Suppl 10):54–56.
18. Brown J, Duguid P. Organizational learning and communities of practice: toward a unified view of working, learning, and innovation. *Organization Sci* 1991; 2(1):40–57.
19. Richards RK. Physicians' self-directed learning: a new perspective for continuing medical education II. Learning from colleagues. *Mobius* 1986; 6(3):1–7.
20. Curry L, Putnam W. Continuing medical education in Maritime Canada: the methods physicians use, would prefer and find most effective. *Can Med Assoc J* 1981; 124:563–566.
21. Mann K. Educating medical students: lessons from research in continuing education. *Acad Med* 1994; 69(1):41–47.
22. Paul H, Osborne C. Relating to others in the profession. In: Fox RD, Mazmanian P, Putnam R, eds. *Changing and learning in the lives of physicians*. New York: Praeger, 1989:123–134.
23. Nowlen P. *A new approach to continuing education for business and the professions*. New York: Macmillan, 1988.
24. Candy P. Physician teach thyself: the place of self-directed learning in continuing medical education. *J Cont Educ Health Prof* 1995; 15:80–90.
25. Confessore G, Confessore S. Adopting self-directed learning in continuing professional education: physicians and architects. In: Hiemstra R, Brockett R, eds. *Overcoming resistance to self-direction in adult education*. San Francisco: Jossey Bass, 1994:31–38.