

Systems Thinking and the Learning Organization: The Path to School Improvement

Fred C. Lunenburg
Sam Houston State University

ABSTRACT

The learning organization concept has received much attention since the publication of Peter Senge's book *The Fifth Discipline*. He provides five interacting principles that constitute a learning organization: systems thinking, personal mastery, shared vision, team learning, and mental models. Senge has written a companion book directly focused on education. In *Schools That Learn*, Senge (2011) argues that teachers, administrators, and other stakeholders must learn how to build their own capacity; that is, they must develop the capacity to learn. From Senge's perspective, real improvement will occur only if people responsible for implementation design the change itself. Through learning, people make meaning of their experience and of information. Learning helps people to create and manage knowledge that builds a system's intellectual capital.

Just as individuals learn, so do organizations (Antonacopoulou, 2006). Organizations are said to have human-like cognitive functions, such as the abilities to perceive and interpret, solve problems, and learn from experience (Kreitner & Kinicki, 2010). "All organizations learn, whether they consciously choose to or not—it is a fundamental requirement for their sustained existence" (Kim, 1993, p. 37). However, some organizations do it more effectively than others.

Those organizations that have developed the capacity to adapt continuously are known as *learning organizations* (Senge, 2006). The principal thesis is that the organizational structure, associated work and technologies, key operational systems should evolve, be unique, and expect to be impermanent in response to emerging knowledge and the environment (Gortner, Nichols, & Ball, 2007). This systems perspective assumes that organizations, or the people in them, set aside old ways of thinking, freely share ideas with others, have a shared vision, and are committed to improving processes and services or products in ways that ensure the success of the organization. As a result, learning organizations are said to improve themselves systematically.

Most school organizations engage in what has been called *single-loop learning* (Argyris, 2008a). When errors are detected in the system, the correction process relies on past routines and present policies. In contrast, learning organizations use *double-loop learning* (Argyris, 2008b; Collinson, 2006). When an error occurs in the system, it is corrected in ways that involve the modification of the school's goals, policies, and standard operating procedures. Double-loop learning challenges deeply rooted assumptions and norms within the organization (Robbins & Judge, 2011). In this way, it provides opportunities for radically different solutions to problems and dramatic improvement in results.

Today, school leaders read and hear a great deal about learning organizations (Baird & Griffin, 2006; Frahm & Brown, 2006; Raz & Fadlon, 2006; Ron, Litshitz, & Popper, 2006; Roome & Wijen, 2006). Peter Senge (2006), a professor at the Massachusetts Institute of Technology, popularized the concept of learning organizations in his best-selling book *The Fifth Discipline*. Learning organizations are results oriented. They foster a culture in which organization members are encouraged to use behaviors and operational processes to improve the system (Bulach, Lunenburg, & Potter, 2008).

The Learning Organization

A learning organization is a strategic commitment to capture and share learning in the organization for the benefit individuals, teams, and the organization. It does this through alignment and the collective capacity to sense and interpret a changing environment; to input new knowledge through continuous learning and change; to imbed this knowledge in systems and practices; and to transform this knowledge into outputs.

Senge defines the learning organization 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” (Senge, 2006, p. 3). Senge describes a model of five interdependent disciplines necessary for an organization to seriously pursue learning. He identifies systems thinking as the “fifth discipline” because he believes that thinking systematically is the pivotal lever in the learning and change process. Brief definitions of Senge's principles follow.

- *Systems thinking*: A conceptual framework that sees all parts as interrelated and affecting each other.
- *Personal mastery*: a process of personal commitment to vision, excellence, and lifelong learning.
- *Shared vision*: sharing an image of the future you want to realize together.
- *Team learning*: the process of learning collectively; the idea that two brains are smarter than one.
- *Mental models*: deeply ingrained assumptions that influence personal and organizational views and behaviors.

The five disciplines work together to create the learning organization. A metaphor to describe this systems theory-based model would be DNA or a hologram. Each is a complex system of patterns, and the whole is greater than the sum of its parts.

Senge, author of the best-selling book, *The Fifth Discipline*, has written a companion book directly focused on education. In *Schools That Learn*, Senge (2011) argues that teachers, administrators, and other school stakeholders must learn how to build their own capacity; that is, they must develop the capacity to learn. From Senge's perspective, real improvement will occur only if people responsible for implementation design the change itself. He argues that schools can be re-created, made vital, and renewed not by fiat or command, and not by regulation, but by embracing the principles of the learning organization.

Senge makes a powerful argument regarding the need for a systems approach and learning orientation. He provides a historical perspective on educational systems. Specifically, he details "industrial age" assumptions about learning: that children are deficient and schools should fix them, that learning is strictly an intellectual enterprise, that everyone should learn in the same way, that classroom learning is distinctly different from that occurring outside of school, and that some kids are smart while others are not. He further asserts that schools are run by specialists who maintain control, that knowledge is inherently fragmented, that schools teach some kind of objective truth, and that learning is primarily individualistic and competition accelerates learning. Senge suggests that these assumptions about learning and the nature and purpose of schooling reflect deeply embedded cultural beliefs that must be considered, and in many cases directly confronted, if schools are to develop the learning orientation necessary for improvement.

Through learning, people make meaning of their experience and of information. Learning helps people to create and manage knowledge that builds a system's intellectual capital. Karen Watkins and Victoria Marsick (1999) have developed a model of the learning organization around seven action imperatives that speak to the kind of initiatives that are implemented in learning organizations.

Action Imperatives of a Learning Organization

The action imperatives can be interpreted in terms of what must change to help schools become learning organizations. Each one will be discussed in turn.

Create Continuous Learning Opportunities

This means that learning is ongoing, strategically used, and grows out of the work itself. School administrators and teachers have many opportunities to consciously look at what they are learning from new initiatives. They can look at results as opportunities to consciously look at what they are learning from new initiatives. They can look at results as opportunities to learn why an initiative was not successful; and they can initiate projects to experiment with change. They can make it attractive for faculty members to serve as mentors. They can find ways to use technology better to help faculty gain new

skills. Schools might also find ways to provide time, money, and other incentives for professional development.

Promote Inquiry and Dialogue

The key to this imperative is a culture in which people ask questions freely, are willing to put difficult issues on the table for discussion, and are open to giving and receiving feedback at all levels. Strategies to implement this action imperative include the use of dialogue and questioning in meetings and learning sessions.

Encourage Collaboration and Team Learning

The relevant action imperative for this level focuses on the spirit of collaboration and the skills that undergird the effective use of teams. People in schools frequently form groups, but they are not always encouraged to bring what they know to the table. Strategies to implement this action imperative might include support for the effective functioning of teams that cross levels and groups (students, faculty, administrators, and parents). A step in this direction is to extend training that is commonly given to a few key people, and to focus instead on team building for intact site-based decision-making teams that include teaching everyone needed skills of dialogue, negotiation, consensus, and meeting management.

Create Systems to Capture and Share Learning

Technology-based strategies that are used for this purpose focus on the use of software such as Microsoft Office Word to capture ideas across dispersed teams and divisions, and computerized documentation of changes in a particular area. Options for sharing knowledge include keeping journals of lessons learned and processes for collaborative development of new ideas so all are involved in co-creating knowledge before using it. Celebration events can be used to bring people together, recognize accomplishments, and share ideas across geographical, functional, time, and experience levels.

Empower People toward a Collective Vision

The primary criteria for success with this action imperative are the degree of alignment throughout the organization around the vision, and the degree to which everyone in the organization actively participates in creating and implementing the changes that follow from the vision. To gain acceptance of a shared vision, schools could ask task forces to identify and change elements that are inconsistent with the vision. They could engage people in ceremonies to mourn the passing of the old culture and skits to depict the new. They could ask community artists to render a new vision. They could invite stakeholders to physically modify the creative product to represent their ideas.

Connect the Organization to Its Environment

Schools must function at both global and local levels. Schools can use benchmarking to see what other schools are doing to achieve excellence and to solve similar problems, and can scan their environment for new trends by using computer databases. Technology enables people in schools to move beyond their walls. Schools often initiate Internet projects whereby students and teachers from one school can communicate with other students around the globe; or design programs that bring school faculty and staff members, students, and community groups together around special interests.

Provide Strategic Leadership for Learning

Leaders who model learning are key to the learning organization. They think strategically about how to use learning to move the organization in new directions. School leaders can routinely discuss development plans and opportunities with faculty and staff members, can make information available regarding opportunities for learning, and can seek resources to support faculty development.

Conclusion

The learning organization concept has received much attention since the publication of Peter Senge's book *The Fifth Discipline*. He provides five interacting principles that constitute a learning organization: systems thinking, personal mastery, shared vision, team learning, and mental models. Senge has written a companion book directly focused on education. In *Schools That Learn*, Senge (2011) argues that teachers, administrators, and other stakeholders must learn how to build their own capacity; that is, they must develop the capacity to learn. From Senge's perspective, real improvement will occur only if people responsible for implementation design the change itself. Through learning people make meaning of their experience and of information. Learning helps people to create and manage knowledge that builds a system's intellectual capital.

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Organizations with the best chance to succeed and thrive in the future are learning organizations. In his landmark book, "The Fifth Discipline: The Art and Practice of the Learning Organization," Peter Senge defined the learning organization. The underlying structure and the interlinking components of each of our work systems, shape a great deal of the behavior of the individuals who work inside of the work system. Think about Dr. W. Edwards Deming's admonition. When something goes wrong, rather than seeking someone to blame, ask, what about the work system caused that individual to fail? Personal Mastery.