

The Systems Thinker



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Learning Organizations: From Invention to Innovation

"Forget your old, tired ideas about leadership. The most successful corporation of the 1990s will be something called a learning organization," intoned a recent *Fortune* magazine article. But what exactly is a "learning organization" and what resources and capabilities will it take to create one? In his book *The Fifth Discipline: The Art and Practice of the Learning Organization*, Peter Senge tackles that question head-on, proposing a framework of five key disciplines that can provide a foundation for building such an organization.

Senge, the director of the Systems Thinking and Organizational Learning Program at MIT's Sloan School of Management, describes *The Fifth Discipline* as a compilation of the work of many people in the systems thinking field. It also draws on the experience of a core group of organizations—

including Ford, Digital, Hanover Insurance, Herman Miller, and Analog Devices—who, under the auspices of the MIT program, have become "experimental laboratories" for developing and testing new tools and ideas.

A learning organization, explains Senge, "is an organization 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." He distinguishes his definition of organizational learning from the contemporary meaning it has acquired. A learning organization is often described as one that is "fast on its feet," and able to adapt quickly to a changing marketplace. But Senge feels that the idea of learning as adaptation is very inadequate. "Learning is really about evolving the capacity to create. It is very action-oriented."

From Invention to Innovation

In terms of actually creating such an organization, Senge believes we are still on the road from invention to innovation. "A new idea has been invented when it is proven to work in a laboratory," he explains. "Only when it can be replicated reliably on a meaningful scale at a practical cost can it be considered an 'innovation.'" In these terms, the learning organization has been invented, but it has not yet been innovated.

Senge likens the development of the learning organization to the creation of the commercial airline

industry. The Wright brothers proved powered flight was possible, but it took thirty years and the synthesis of five component technologies to create a viable commercial aviation industry.

In the learning organization, the "component technologies" are the five disciplines: personal mastery, mental models, building shared vision, team learning, and systems thinking. Only when these five disciplines are used together will the learning organization become an "innovation"—predictable, stable, and functional.

Learning Disabilities

The book begins by identifying several core "learning disabilities" which, Senge argues, afflict all organizations to a certain extent, not just the ones that fail. In fact, he suggests that perhaps even successful companies are underperformers, never living up to their potential. "What if," he muses, "in light of what organizations *could* be, 'excellence' is actually 'mediocrity?'"

"But the learning disabilities really just set the stage," says Senge. "What I think potentially could be the enduring contribution of the book is the idea that it's possible to build a different sort of organization, and I've proposed a method for doing that in the form of the five disciplines."


The Five Disciplines

According to Senge, the indivisible unit of the learning organization is the individual. "Organizations learn only through individuals who learn. Individ-

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ual learning does not guarantee organizational learning. But without it no organizational learning occurs." Therefore, *personal mastery*—the discipline of personal growth and learning—is the cornerstone of the learning organization, its spiritual foundation.

"I think in many ways the discipline of personal mastery is the most radical in the book," comments Senge. "It seems to me that the idea of what it means for an organization to be fully committed to the development of each individual's personal mastery is still pretty far ahead of us. I also think that one of the reasons shared visions are not more common in the world is that very few corporations have any idea of the sort of commitment you have to make to the *individual* for this sort of vision to operate."

Mental models, the constructions and internal pictures we use to interpret the world and take appropriate action, comprise the second discipline. Transferring the learning from the individual to the organizational level requires shared understanding of mental models, so that shared visions can evolve. Senge emphasizes that working with mental models requires the ability to carry on "learningful" conversations, where individual assumptions can be exposed and held up to scrutiny.

Shared vision emerges from personal visions. "If people don't have their own vision, all they can do is 'sign up' for someone else's." Shared vision, Senge cautions, cannot be dictated by the head of a company or even by a "vision statement." Instead, it emerges over time as a by-product of the interactions of individual visions.

Building on the discipline of

mental models is *team learning*, which emphasizes that the mental models that really matter in an organization are the shared, implicit assumptions that "this is the way the world is." Team learning consists of three critical dimensions: the need to think insightfully about complex issues; the need for innovative, coordinated action; and the continual fostering of learning through team members' roles on other teams. Although it can be very difficult to achieve, team learning, when effective, can become a microcosm for learning throughout the organization.

Systems Thinking

Systems thinking is the "fifth discipline," the one that fuses the others into a coherent body of theory and practice. "By enhancing each of the other disciplines, it continually reminds us that the whole can exceed the sum of its parts," explains Senge. If we don't understand how our actions create our current reality, there is no fundamental reason to have a personal vision and practice personal mastery. Systems thinking also strengthens mental models because it shows how to restructure assumptions to reveal the causes of significant problems and expose high-leverage solutions. Similarly, while shared vision paints a picture of what we want to create, systems thinking reveals how we have created our current reality and gives us a sense of empowerment over the future reality we strive to create.

Without a shared language for dealing with complexity, team learning is limited. Systems thinking is such a language—it provides a way for teams to begin learning about the issues that are most important for the long-term health of the company

Senge cautions that mastering a discipline is a never-ending process. "No matter how much you learn, you realize how much more there is to

The Seven Learning Disabilities

- **I am my position.** Over time, people in organizations develop intense identification with their position—who they are is what they do. This leads to a myopic and non-systemic view of the organization, where we no longer see how our actions affect the rest of the system.

- **"The enemy is out there" syndrome.** A by-product of the "I am my position" mentality. When we think of who we are as the position we play or the job we do, then if things go wrong we imagine that somebody out there "screwed up." With a very narrow sense of self-identification, it becomes natural to think of people outside and around us as enemies.

- **The illusion of taking charge.** All too often "proactiveness" means "I'm going to get more active fighting those enemies out there." True proactiveness comes from seeing how our own actions contribute to our problems.

- **Fixation on events.** We are conditioned to see life as a series of events, and

for every event, we think there is one obvious cause. The irony is that the primary threats to our survival—both in organizations and societies—come not from sudden events but slow, gradual processes.

- **The Parable of the Boiled Frog.** Like the frog that will sit in a pot of water and let itself be slowly boiled to death, we are very good at reacting to immediate danger to our survival, but we are very poor at recognizing gradual threats.

- **The delusion of learning from experience.** We learn best from experience—from trial-and-error—but we never experience the results of our most important decisions. The most critical decisions made in organizations have systemwide consequences that stretch out over years.

- **The myth of the management team.** Most teams operate below the level of the lowest IQ in the group. The result is "skilled incompetence"—teams of people who are proficient at keeping themselves from learning.

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Calendar

- September 10. **The Art and Practice of Learning Organizations—A Conversation with Peter Senge**, San Francisco, CA. Co-hosted by Innovation Associates and Doubleday, publisher of Peter's new book *The Fifth Discipline: The Art and Practice of Learning Organizations*. Informal dialogue will revolve around the issues raised in the book and their applications within organizations. Copies of the book will be available. Contact: Sheryl Erickson, *Innovation Associates*—(508) 879-8301.

- September 13. **The Art and Practice of Learning Organizations—A Conversation with Peter Senge**, Minneapolis, MN.

- September 14. **The Art and Practice of Learning Organizations—A Conversation with Peter Senge**, Chicago, IL.

- September 17. **The Art and Practice of Learning Organizations—A Conversation with Peter Senge**, Boston, MA.

- September 19-21. **Leadership and Mastery**, Boston, MA. This three-day workshop offers executives, senior managers and middle managers insights into how people and organizations can be led and structured for inspired performance. Contact: Stephanie Ryan, *Innovation Associates*—(508) 879-8301.

- September 23-26. **Leadership and Mastery**, Boston, MA. Co-sponsored by The Healthcare Forum and Innovation Associates. Contact: Laura Woodburn, *The Healthcare Forum*—(415) 421-8810.

- October 8-12. **Introduction to Systems Thinking**, Cambridge, MA. This course will introduce managers to the basic principles of systems thinking. Managers will also gain hands-on

experience in system dynamics modeling using STELLA and other modeling languages. Contact: *Gould-Kreutzer Associates*—(617) 497-2926.

- October 9-12. **Visionary Leadership: Building the 21st Century Healthcare Organization**, Tarpon Springs, FL. The third annual conference, co-sponsored by 3M, is The Healthcare Forum's first systems thinking-related event held outside the West. Peter Senge and Leland Kaiser will be the lead faculty. Contact: *The Healthcare Forum Foundation Leadership Center*—(415) 421-8810.

- October 10-12. **Leadership and Mastery**, Boston, MA.

- October 17-19. **Business Thinking: A Systems Perspective**, Framingham, MA. This two-and-a-half day working session teaches managers how to apply systems thinking to their own work issues. No prior understanding of systems thinking is required. Contact: Stephanie Ryan, *Innovation Associates*—(508) 879-8301.

- October 23. **The Art and Practice of Learning Organizations—A Conversation with Peter Senge**, Cincinnati, OH.

- November 7-9. **Leadership and Mastery**, Toronto, Ontario.

- November 12-16. **Advanced Systems Thinking**. A follow-up course for managers who have already been introduced to systems thinking. Course participants will build their own simulation models with professional guidance. Contact: *Gould-Kreutzer Associates*—(617) 497-2926.

- December 4-7. **Leadership and Mastery**, Santa Monica, CA. Co-sponsored by The Healthcare Forum and Innovation Associates.

The Global Citizen



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trap of Gramm-Rudman, high military budget, and refusal to raise taxes, doesn't see where to get \$25 billion. It is considering floating "FSLIC recapitalization bonds," high-interest junk bonds with no real assets behind them.

In other words, Congress is willing to stand behind the bank deposits of the citizens of the United States with further government debt. Another story will be added to the teetering Tinkertoy tower of national fiscal irresponsibility. If that happens, it won't take much of a tremor to spread to the whole nation the vulnerability felt now by Norman residents, the feeling that one's economic foundations have disappeared. ↻

Learning Organizations

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learn." The same can be said about the process of creating a learning organization. "When the five component technologies converged to create the DC-3 the commercial airline industry began. But the DC-3 was not the end of the process. Rather, it was the precursor of a new industry. Similarly, as the five component learning disciplines converge they will not create *the* learning organization but rather a new wave of experimentation and advancement." ↻

The Fifth Discipline is published by Doubleday, 384 pages, \$19.95 hardcover. Innovation Associates offers a substantial discount for orders of 10 or more. Contact: Innovation Associates, P.O. Box 2008, Framingham, MA 01701. Phone (508) 879-8301.