

Creating a Learning Organization

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Managers of leading organizations know that the ability to change in response to changing conditions is a matter of not only competitive edge but survival. *Yet* most recent change efforts designed to keep organizations competitive – downsizing, restructuring, reengineering, even employee empowerment – have proven disappointing, and many have failed outright.

A powerful new approach is now taking shape: the concept of the learning organization. This approach engages employees' hearts and minds in continuous, harmonious, productive change designed to achieve results that they genuinely care about and that the organization's stakeholders want. We are confident that the concept of the learning organization will have long-term value. It keeps emerging as a central theme in our work with clients, and we find it is crucial to our success in fostering innovation and positive change, both on behalf of our clients and in Arthur D. Little's own knowledge creation processes worldwide.

Approached thoughtfully, the process of building a learning organization can unleash the enormous creative force of people's intrinsic motivation, curiosity, and love of learning, and focus that collective intelligence and energy on the fundamental strategies and business imperatives of the firm.

In this article we set forth our current understanding, based on more than a century of work with leading organizations around the world, of the concepts, philosophy, mindset, tools, and methodologies that support effective change and learning in organizations. Let's begin by defining organizational knowledge and learning.

Organizational Knowledge and Learning

Organizations have organizational knowledge – the ability to accomplish collective tasks that individuals acting alone cannot, tasks designed to create value for the organization's stakeholders. Organizational knowledge is both explicit, such as the knowledge contained in technical drawings, manuals of procedures, and computer memories, and tacit, including judgment, „feel,“ and deep understanding. Tacit knowledge is an essential part of „knowing how“ and „knowing why“ and is essential to making explicit knowledge useful.¹ Examples of organizational knowledge are shown in Exhibit 1.

As the organization's context (or „environment“ in the jargon of strategy) changes – whether in terms of technology, regulations, market openings, the expectations of customers or employees, or the capabilities of competitors – the organization must learn to perform new tasks and to perform older tasks faster and more effectively. In other words, it must generate new organizational knowledge and put it to use.

Exhibit 1

Statements Describing Organizational Knowledge

- „We know how to manufacture compact discs of the highest quality at competitive cost.“
- „We know how to enter emerging markets and gain market share rapidly without losing significant amounts of money.“
- „We know how to acquire companies and integrate them swiftly, painlessly, and effectively.“
- „We know how to make strategic alliances work.“
- „We know how to induct new employees into the company and integrate them so that they are highly productive within a month.“
- „We know how to select people for key management positions.“

Clearly, organizational learning is commonplace. It takes place constantly in all organizations that endure. But only rarely is it planned and managed so that it takes place swiftly, systematically, and in alignment with the organization's strategic purposes.

The Learning Organization

Learning organizations are those organizations that are particularly adept at organizational learning. In these organizations:

- The learning is not merely reactive but intentional, effective, and connected to the purpose and strategy of the organization.
- The learning is timely, anticipating challenges, threats, and opportunities rather than just responding to crises.

- The learning creates flexibility and agility, so that the organization can handle uncertainty.
- Most importantly, people see themselves as capable of continuously generating new ways to create the results they most want.
- Therefore, the changes that go hand-in-hand with the learning take root, rather than being transitory, as has been the case with so many attempts at reorganizing, downsizing, merging, acquiring, forging strategic alliances, entering new markets, and generally „rethinking the business.“

To achieve these qualities of learning adeptness, learning organizations undertake certain distinctive practices. First, they cultivate a holistic view of what makes complex organizations work, what makes change take root, and how to use systems thinking in diagnosing needs and designing new actions, so that learning is effective and change is permanent. And they don't reserve these insights for a few people at the top. Learning organizations understand that only through widespread participation in the generation of knowledge and the creation of change is it possible to create the desire and enthusiasm for continuous change. Widespread involvement also enhances the effectiveness of actions, because multiple insights are brought to bear. And it increases the flexibility and agility of the organization, because responses to a changed context can occur spontaneously and rapidly throughout the organization rather than always having to be driven from the top.

Learning organizations sponsor programs to continually improve and diversify the skills of the employees, to enhance their ability to change continuously. Job descriptions are relatively fluid and are based on the tasks that currently need to be accomplished.

And learning organizations understand that organizational learning takes place through specific processes, and they make explicit and continual efforts to improve these processes.

Improving Organizational Knowledge

There are three fundamental types of organizational learning: learning how to improve current organizational knowledge; learning to create new organizational knowledge (also known as innovation); and disseminating or transferring knowledge between parts of the organization. In the first category, for example, companies in the computer hardware industry generally need to improve their product creation processes. In the software industry, on the other hand, many companies are single-product marvels. They need to innovate and create a product creation process starting with a clean sheet of paper. The health care and multimedia industries, similarly, need innovation to create new visions and paradigms. And organizations in every industry need ways to capture learning that takes place in one area and transfer it to other areas of the organization. While all three processes are important, in this article we focus on improving organizational knowledge.

Before we look at organizational learning, it is helpful to understand how individual learning works. When individual learning happens by intent (rather than by accident), it generally starts with the awareness of the need to change. For example, a manager may become aware through employee feedback of the need to improve his leadership skills. Next, he develops an understanding of what it means to become a more effective leader. Third, he undertakes an action designed to improve his leadership skills – attending a workshop and finding a coach, for instance. Last, he reviews the results of the action to determine what else needs to be done, thereby initiating another cycle of learning.

The process of organizational learning also has four stages: awareness, understanding, action, and review. But in organizational learning, these stages represent collective tasks: creating *shared* awareness of the need to learn, developing *common* understanding of what must be done, taking *aligned* action to enhance performance, conducting *joint* review and drawing conclusions. These activities reflect the distinctive character of the learning organization, in which knowledge is generated by those who must apply it (often by importing knowledge from other organizations, commonly known as „benchmarking“), rather than by an elite group of senior managers or experts.

These collective tasks also suggest the challenge of creating a learning organization, for they imply a style of working – a quality of relationships – that will be new to most organizations. People will have to learn effective teamwork, for which an important requirement is honest and forthright communications. That, in turn, is likely to require some revisions in the „unwritten rules“ that deter communication.

What makes learning particularly effective? As with any process, the answer is effective process design at the outset, coupled with continuous process improvement. Let's go back to the individual wanting to become a better leader. Having completed the process stages of awareness, understanding, action, and review, he steps back from this experience and engages in a separate, higher-level process of *reflection*. In it, he asks, „Could I have become aware of the need to change earlier than I did? How? How can I improve my sensitivity to these issues generally? Do I, for example, need more open communication with my people?“ Reflecting on the awareness stage, he might ask, „Should I, perhaps, have consulted more people recognized as effective leaders? Should I, in general, be broadening the network through which I gain understanding?“ Coming to the action

stage, he might ask, „Why did it take me nine months to actually do something? Can I find a way to give important-but-not-urgent issues a place of honor along with urgent issues?“ Last, he might ask about the review stage, „Should I have a smarter way of doing these retrospective reviews? Should I make them more or less formal? Involve more people? Use measurement as well as opinion?“ Through this process of reflection, individuals become *better learners* as the years go by; that is, they become more adept at learning.

A similar process of reflection can improve the process of organizational learning. At Xerox, the senior management devote an entire annual retreat to reflection. At Rubbermaid, this process of reflection has led to major improvements in internal communications in order to increase shared awareness of customer needs. At Analog Devices, reflection has led to the use of the „dialog“ method and the „KJ Method“ to improve the phase of developing a common understanding. Ford has made a major effort to improve team problem-solving in order to more effectively create aligned action. British Petroleum Exploration now regularly analyzes the Unwritten Rules of the Game² in order to make plans easier to implement. And Emerson Electric continually improves the process of quarterly review of business unit performance, with a relentless emphasis on improving the planning process so that plans are realized with ever-greater fidelity.

The process leading to action and the process of reflection can be depicted as cycles, as shown in Exhibit 2. We call the lower cycle the learning-to-act cycle and the upper one the learning-to-learn cycle. We also like to depict the learning-to-learn cycle as attached to a helicopter, symbolizing the „helicopter mind“ that is able at any time to rise above the field of action to gain perspective on how to fine-tune the learning-to-act cycle.

Improving Learning Processes

The great benefit of making learning processes explicit is that the organization can then improve and accelerate its learning – in the service of creating organizations that achieve the results people genuinely want. Reflection generally reveals opportunities to improve the learning-to-act cycle in one or more ways:

- By making the internal environment healthier for learning
- By improving the learning infrastructure
- By improving people’s knowledge and learning skills

A Healthy Learning Environment. Our work with clients suggests that healthy learning environments share certain characteristics. They have relatively little hierarchy, excellent teamwork, and first-class communications. They also reward the sharing of knowledge and encourage everyone to develop broad and deep understanding of the business. In addition, there is a strong outward focus, encouraging the inflow of knowledge from the outside world. There is also active learning from past experience, especially from failure.

Knowledge and learning are recognized, respected, and rewarded, as are initiative and entrepreneurialism. The organization cultivates diverse points of view. People are listened to respectfully. There is open dialogue and debate. Neither hierarchy nor politics are allowed to obstruct effective teamwork. Teams form and disband easily and reach consensus effectively. Senior management sets an example of team learning.

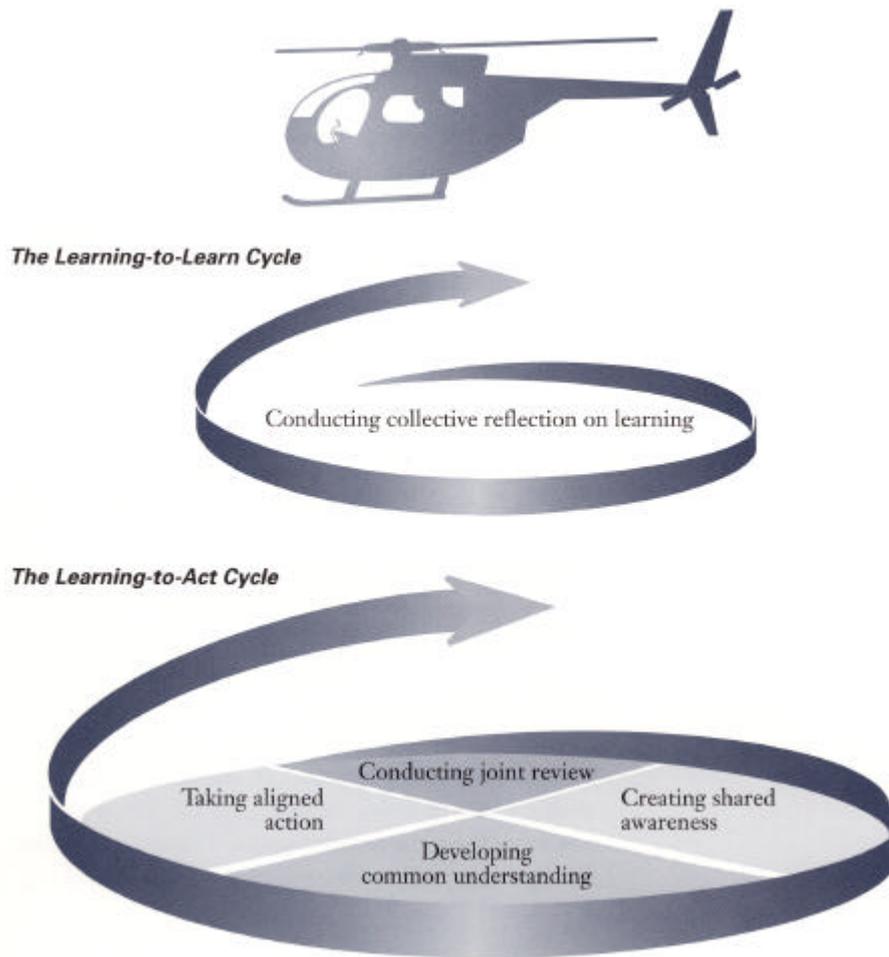
Learning organizations are constantly devising practical mechanisms that overcome inhibitors of organizational learning and make each stage of learning more effective. Examples from the Best People Practices Database compiled by Robert Levering, author of *The 100 Best Companies to Work for in America*³ and currently collaborating with Arthur D. Little, include the following:

- To overcome employees’ unwillingness to experiment, the Hershey Company encourages them to pursue ideas they believe in through the „Exalted Order of the Extended Neck“ award presented annually by the CEO.
- To ensure effective review of business decisions, Lincoln Electric holds a twice-monthly meeting of elected employee representatives with the CEO and president. Together they find ways to address every issue raised. Responses are recorded and minutes are published and posted on bulletin boards.
- To create a culture of open and direct communications, Lyondell Petrochemicals’ CEO Bob Gowd holds monthly meetings with all employees at all four main locations. Employees unable to attend can watch the meetings on videotape. All questions raised are answered, either on the spot or in a follow-up letter.

These are relatively mundane undertakings. Nonetheless, organizations need creativity to invent them and a lot of will to implement them.

Exhibit 2

The Processes of Organizational Learning



The Learning Infrastructure. A solid infrastructure can create considerable long-term value by facilitating organizational learning. Elements of the infrastructure can take the following forms:

- Knowledge libraries, including electronic databases, that store knowledge *about* things
- Scanning mechanisms for keeping track of technologies, competitors, and customers
- Integrated teaching, training, and coaching programs that store explicit and tacit knowledge of *how* to do things
- Facilities for teaching, training, and coaching
- Facilities and systems for trying out new ideas (prototypes, simulations, test marketing approaches, etc.)
- Systems for communication, such as e-mail, voice-mail, videoconferencing, and other wireless communications
- Systems that facilitate teamwork, such as group-ware and storyboarding rooms
- Systems that facilitate the sharing of tacit knowledge, such as staff transfers, centers of excellence, and multifunctional teams

People's Knowledge and Learning Skills. At the core of an organization's learning capability are its employees. To learn effectively, they need to be deeply engaged in the process of defining the goals of the organization, so that they can define their own learning goals in alignment with this larger purpose. Toward this end, they need deep knowledge about the business and its key technologies, as well as the desire and ability to work together to create new knowledge. Specifically, they need learning skills in the areas of teamwork, systems thinking, reflection, and the ability to unearth and discuss mental models.

The Field of Learning

When AT&T declared, after the deregulation of the telecommunications industry, that it wanted to become customer-focused, it was seeking to learn at the level of vision. Vision covers questions such as, „Why are we in business?“ „What do we want to achieve?“ and „What are our core values?“

When Asea Brown Boveri decided to decentralize and create autonomous business units, it was seeking to learn at the level of paradigm, or what Peter Drucker terms „the theory of the business“: the set of assumptions managers make about the best way to compete.

When Bane One decided to grow through acquisitions, its learning challenge was at the *process* level: how to create a particularly effective process for making many successful acquisitions – identifying, acquiring, and integrating companies that would be a good strategic, operational, and cultural fit.

When Mercedes-Benz opened a new factory to produce its cars in India, the Indian organization needed to learn at the „procedures“ level: to acquire and use explicit knowledge from Mercedes to produce Mercedes’ cars.

The distinction between process and procedure is essential. Procedures contain only *explicit* knowledge. Processes embed procedures in *tacit* knowledge of both the expert and the social kinds. Many of the problems of reengineering can be traced to the treatment of processes as though they were procedures – i.e., as though people’s tacit knowledge didn’t matter.

The field of learning (Exhibit 3) is a simple model that combines *what* needs to be learned (the change challenge) with *who* needs to learn (the learning challenge). Depending on the particular situation of a company, its learning needs may lie at one or more of these levels: *vision, paradigm, process, or procedure*. The ability to learn at any one level may be constrained by frozen knowledge at the next-higher level. For example, improvements in the procedures for doing the market launch of new products may be constrained by a haphazard and unstructured product creation process. Or, improvements in any cross-functional process may be constrained by a business model based on the functional organization.

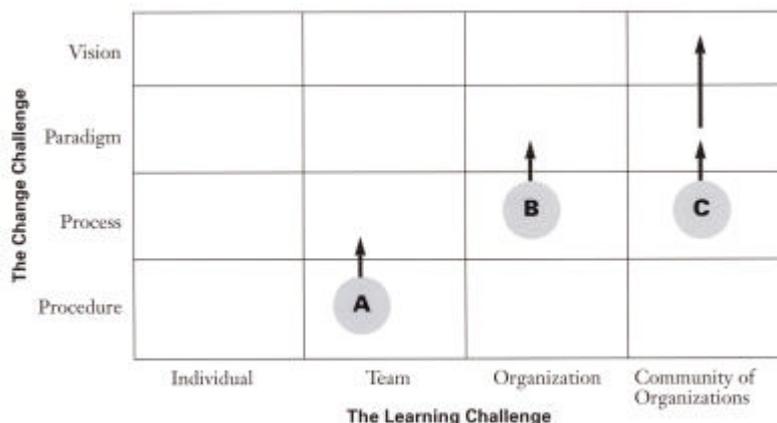
Furthermore, learning at any level almost invariably requires learning at the next level down and at the next level up. Thus, to learn to become customer focused, one needs to generate knowledge of how to execute a number of cross-functional processes effectively, ranging from product creation to customer satisfaction. But one also needs to understand how customer focus helps the organization move forward toward achieving its vision.

Learning at these four levels can be done by individuals, teams, groups, the organization as a whole, or two or more organizations working together. An example of individual learning at the procedural level might be a salesperson creating a new procedure for distilling and recording competitive information obtained during sales calls. In contrast, organizational learning at the procedural level would involve disseminating that same procedure so that all salespeople are using it, and, equally important, implementing a process to make use of the competitive information flowing in.

Similarly, an example of individual learning at the level of vision might be the rethinking of a senior manager’s self-image, away from „knowing“ to „learning.“ Organizational learning at the level of vision might take the form of envisioning – or re-*visioning* – one’s own firm as a learning organization and creating a new architecture of the firm to optimize creation and sharing of knowledge versus optimizing use of the physical assets of the firm.

Exhibit 3

The Field of Learning



Learning at the organizational level is constrained by the ability of individuals and teams to learn, so enhancing individual and team learning ability is a good starting point.

The field of learning is a very useful framework for discussing and agreeing on the most important learning needs of an organization. For example, for many companies that have got past the vision stage, the challenge is at the process level. At this level, there may be individual learning needs (managers thinking out of their „silos“); team learning needs (how to be a team); and organizational learning needs (how to make a whole cross-functional process work smoothly).

The following examples are illustrated in Exhibit 3:

- **A** A manufacturing team can design suitable quality control procedures only if it understands the design of the manufacturing business process in which these procedures must fit. For example, the manufacturing process must respond to changes in customer schedules at short notice without affecting in-process inventories; therefore, quality control procedures that require taking parts off the line for inspection, or that allow batches of parts to move to the next stage only after quality clearance, will not work.
- **B** The design of the product development process in a professional services firm must be consonant with the paradigm for managing the business. If the paradigm is to break the business into self-governing units measured principally by their bottom-line performance, then a product development process that requires the units to share resources across their boundaries for future benefit will be dysfunctional. The firm has to learn either a new paradigm or a new product development process that conforms to its present paradigm.
- **C** A network of health care firms designing a new service delivery process that cuts across their firms' boundaries should begin with a shared vision of what good service may mean to customers in the future. In turn, that shared vision may require them to rethink their individual firms' visions of what their own businesses are and how they will manage them.

Try filling out the chart in Exhibit 3 for your organization, including the specific mental models, processes, and procedures you believe should be the focus of learning. Then see what your colleagues think.

A Learning Litmus Test

To help you sense where you are on the path to becoming a learning organization, we have created a brief „learning litmus test“ (Exhibit 4). We hope this test gives you a quick sense of your organization's learning challenges and opportunities.

Learning Pulled by Aspiration

Learning can be initiated by curiosity („Is there a better way to do this?“); by happenstance („I was visiting a customer's factory, and guess what I learned!“); or by daily experience („I tried a modification to the sales pitch, and it worked!“). It can also be initiated by crisis („We are losing market share and money. We must become customer-focused, efficient, and fast.“). However, transformational change of the organic and continuous kind can be initiated only by a shared understanding of current reality and a shared vision of the future.⁴ The distance between the two – the discontent with the present as well as the desire for a specific future – creates the tension that pulls people through the change process.

Part of the art of leadership in the learning organization is the creation of this tension. (See the article on this subject by Charles Kiefer in this issue of *Prism*.) The leader has a central responsibility for promoting the conditions that support collective learning, setting an example of learning skills, and fostering alignment by creating continuously shared vision. In discussions with senior executives, we have come to the conclusion that many of these capabilities involve learnable skills. However, building these skills takes commitment, persistent effort, and coaching.

Conclusion

Learning is not an end in itself. The point is to create the future that you and others in your organization want. We think the approaches outlined here will enable you to do just that, by developing the collective intelligence of the organization and allowing it to work. We look forward to continuing our own learning in this area, and toward that end we very much welcome your comments.

Exhibit 4

A Quick Litmus Test for a Learning Organization

	Always	Often	Sometimes	Seldom	Never
1. The organization “learns from experience” and doesn’t repeat mistakes.	<input type="checkbox"/>				
2. When someone leaves the organization, his or her knowledge remains.	<input type="checkbox"/>				
3. When a team completes a task, it distills and documents what it has learned.	<input type="checkbox"/>				
4. Knowledge generated in all parts of the firm is sought out, validated, and made available to the whole organization through data-bases, training, and other learning events.	<input type="checkbox"/>				
5. The organization recognizes and rewards the value of knowledge created and shared by individuals and teams.	<input type="checkbox"/>				
6. The organization systematically assesses its future knowledge requirements and executes plans to meet them.	<input type="checkbox"/>				
7. The organization facilitates experimentation (thus enriching experience) as a way to learn.	<input type="checkbox"/>				
8. The organization hones its skills for generating, acquiring, and applying knowledge by learning from other organizations’ learning processes.	<input type="checkbox"/>				

¹ Nonaka, Ikujiro, and Takeuchi, Hirotaka, *The Knowledge Creating Company*, Oxford University Press, New York, 1995.

² Scott-Morgan, Peter, *The Unwritten Rules of the Game*, McGraw-Hill, New York, 1994.

³ Levering, Robert J., *The 100 Best Companies to Work For in America*, Penguin Books, New York, 1994.

⁴ Senge, Peter M., *The Fifth Discipline*, Doubleday Currency, New York, 1990.

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work is aimed at creating leadership at all levels in organizations, with a focus on how people learn and how they share their learning to produce results.