

## Chapter 8

### Learning: Changing the Game

Everyone has firsthand experience with learning. Students learn by transferring knowledge from their teachers and other resources—and prove it by passing exams and completing degrees. Employees learn the norms, expectations, and goals of their company and its leaders and demonstrate their learning by both delivering and receiving value from their work. Family members learn to adapt and share as they create a positive home environment. And every life transition (relocation, marriage, divorce, new children, children leaving home, or whatever) makes it necessary to unlearn and let go of the past, then learn to begin a new future.

In organizations, learning also occurs. Learning differs from change and speed of change. Where change deals with doing something new, and speed focuses on the pace of doing new things, learning implies transferring knowledge from any single change experience to another. A leader can implement an innovation initiative for new products (change) and do so quickly (speed) without changing the company for the better on a long-term basis (learning); learning occurs when the innovation initiative draws on experiences from other companies or divisions of the company or when the innovation ideas implemented in one setting transfer to other settings in the company.

Some organizations seem to have the ability to learn better than others, creating intangible value in the process. These organizations are not only able to change but to learn from each change experience so that cumulative progress occurs. In some ways, it is easier to recognize non-learning organizations. You often run into them—say, when you arrive at the airport just as it begins to rain and find that your flight is delayed. Many airlines seem to have a learning disability: it looks as if their people have to completely relearn foul-weather operating procedures every time it rains. This corporate Alzheimer's is the antithesis of learning. Each new experience requires a reconception of new patterns rather than transfer of knowledge from one event to the next. When it rains, the experiences of previous rainstorms should transfer to the current situation, enabling the airline to meet travel goals in spite of the rain.

Investors recognize intangible value in organizations with a learning reputation because these organizations not only create new ideas, they share those ideas throughout their structure, building knowledge networks where technology and communities of practice transfer experience from one setting to another. These organizations operate on the leading edge of the half-life of knowledge within their industry—that is, they keep updating what they know and abandoning what becomes obsolete, so that the time interval from any given date to the point where half of that date's knowledge has been replaced grows shorter and shorter—and their lead over their competitors grows longer and longer.

In knowledge-based industries like consulting, learning becomes particularly critical. Successful consulting firms constantly seek new ideas and ways to frame client problems and offer solutions. They use knowledge networks to share experience from one partner to another, and they strive to shorten the half-life of their knowledge by creating new ideas faster than their competitors do.

As a concept, "organizational learning" was first elaborated by Chris Argyris and Donald Schön in the late 1970s.<sup>1</sup> Peter Senge and his colleagues further popularized the idea of the learning organization by introducing the ideas of mental models, shared vision, and team learning, among others.<sup>2</sup> Many prominent management theorists have offered varied views of learning, all with something to add for the modern organization—the “knowledge society,” learning from the “middle-up-down” in Japanese firms, and learning as a property of organizations separate from the individuals that make them up, so that organizational memory preserves certain behaviors, mental maps, norms, and values over time even as leadership changes.<sup>3</sup> Many others have defined the concepts and constructs of learning organizations.<sup>4</sup> In summarizing this work, Mark Smith suggests, “While there has been a lot of talk about learning organizations it is very difficult to identify real-life examples. This might be because the vision is ‘too ideal’ or because it isn’t relevant to the requirements and dynamics of organizations.”<sup>5</sup>

To make learning relevant in your organization, we propose the following simple equation to represent the extent to which an organization has developed its learning capability and may help leaders assess their firm's overall ability to learn:

$$\text{Learning Capability} = \text{ability to generate} \times \text{generalize ideas with impact}^6$$

Examine each element of the equation. *Generate* deals with creation of new knowledge through discovery, invention, experimentation, or innovation. Many seem more adept at doing new things before others. *Generalize* deals with movement of ideas across boundaries. Merely having an idea (generate) is not sufficient for learning. Learning requires that the idea transfer across a boundary. Time might be a boundary where a new manager learns from a predecessor. A geographic boundary means that ideas are moves from one country or region to another. Business boundaries imply transfer of knowledge across product or business units. Impact means that something substantial has changed, and change implies that learning has happened. Routine, piecemeal, and nonstrategic ideas may be shared across boundaries without making a company into a learning organization. One firm we know of spends a large percentage of its training budget ensuring that managers understand internal administrative processes (such as which forms to fill out when), accountabilities (who makes what decisions), and what kinds of approvals are required based on the scope of a decision. You could say this organization has generated and generalized ideas on administrative operations, but these actions don't affect the actual competitiveness of the firm. Leaders of this company have not built organizational learning capability. For real-world business purposes, we define impact as adding value to the firm's stakeholders (investors, customers, and employees) over a long period of time.

Learning as an intangible requires all three building blocks. True learning organizations both generate and generalize ideas and ensure that the ideas will have impact. Matsushita is a good example of how this process works. Its Cooking Appliance Division generated new concepts in designing a product (the Home Bakery), and then the company generalized the concepts and methods to other divisions and finally to the whole corporation.<sup>7</sup> The successful development of Home Bakery—the first fully automatic bread-making machine to allow users to make quality breads comparable with

those of a professional baker—provided an exciting learning experience for Matsushita, a company known up to that point as a price-based competitor for relatively standard products in mature markets.

To begin with, the development process for Home Bakery represented a sharp break with the conservative and status quo-oriented culture at Matsushita. It dissolved the usual boundaries within the organization through formation of interdepartmental project teams. Engineers also reduced the amount of time they spent competing with each other to conjure new fancy products and concentrated their efforts on creating products with genuine quality that met real customer needs. The development of Home Bakery inspired Akio Tanii, CEO at the time, to adopt "Human Electronics" in 1986, a program that focused Matsushita's strategic and product-design energy on developing more "human" products that incorporated high technology. The fully automatic coffee maker with an integrated mill and the new generation of rice cookers (such as the Induction Heating Rice Cooker, which cooks rice in a manner similar to the traditional Japanese steam oven) are other examples that have hit the market. Based on our definition, Matsushita has high organizational learning capability.

Leaders who want to build learning into their organization strive to generate and generalize ideas with impact. Such learning occurs at three levels: individual, team, and organization. When each of these three learning targets employs the building blocks effectively, an organization creates intangible value. Table 8.1 gives an overview of organizational learning. Leaders who master each of the six action cells ensure that learning builds intangible value.

Table 8.1. Overall Model for Learning Capability.

## **Individual Learning**

Some individuals are predisposed to learn. By nature they are inquisitive and curious; they're always experimenting, trying new things, and seeking ways to improve. These individuals have a constant stream of fresh insights and ideas. They see alternatives others don't see and connections not readily apparent to others. These natural learners are valuable employees because they generate new ideas and offer alternatives for the future not grounded in the past.

### *Individuals Generate Ideas with Impact*

Our colleague C.K. Prahalad is a natural learner. His inquisitive nature and clever intellect allow him to constantly be on the lookout for new ideas. His half-life of knowledge is short as he constantly strives to discover and frame new ideas in new ways. Many organizations have people like C.K.—people who don't rest on the past but look toward the future, who have new ways to perceive thoughts and ideas, and who seem to be ahead of the "what's next" question.

Leaders should identify these individuals both as they come into and as they move through the organization. Natural learners offer novel responses to preliminary screening questions. A number of companies (Microsoft comes to mind) have thought-provoking interview questions to tease out an individual's predisposition to learning:

- How much water flows through the mouth of the Mississippi River in a day?
- Why are manhole covers round?
- Who in history would you like to visit with for an hour? Why? what would you ask?
- What is the future of our industry? What are the threats? Challenges? Opportunities?

The goal in each case is to see how a prospective employee responds to these questions; the factually accurate response, where there is one, matters relatively little. The intent is to identify how the candidate thinks about finding an answer to the problem. Natural learners see alternatives that others don't see. Since personal history is the best predictor of present state, natural learners have also probably engaged in creative activities, taken risks, and had unique experiences. In screening for natural learners, leaders may explore such issues as these:

- How did you approach selecting your college major?
- What was unique or unusual about your college studies?
- What array of jobs or experiences have you had?
- What are some of the riskiest tasks you've taken on? What did you do when you failed?

Screening the applicant pool and securing natural learners may sound enticing, but bear in mind that what makes these individuals creative on one hand may make them difficult to manage on the other. Creative people need space to experiment and try new ideas. Corporate bureaucracy stifles such creativity and may cause them to leave. For example, a few years ago Norm worked with a group of creative senior technical professionals who were critical to the future of a computer firm and their managers in Silicon Valley. Many of these professionals had a reputation as "portable skills for hire" and moved often to new companies. Their managers were making ambitious plans to retain these "creative types" by offering enticements such as promotion, bonuses, access to more senior leaders, and so on. When Norm relayed the managers' ideas to the technical professionals, Buzz Nielson (a key figure in the group) shook his head and said, "It's the same everywhere I go. Management always comes up with a list that relates to what turns them on. They ask us what we want and we tell them but it always translates into this other list. What I want is opportunities for time off, smart graduate students, and funding for the technology! If these guys could figure that out, I wouldn't change companies so often."

Natural learners are a real resource for companies that know how to handle them, but they're not absolutely essential for the development of a learning organization. Even people who aren't natural learners can master the tools of learning, and any organization is well advised to help them do so, as there are never enough natural learners to fill all the available jobs.

Most individuals go through a learning cycle that has three steps: choice, consequence, and correction, as shown in Figure 8.1. Natural learners go through this learning cycle by instinct, but non-learners can also master it and make it run more smoothly for them.

Figure 8.1. Individual Learning Cycle.

### Choice

Learners seek alternatives. They see what might be, not what has been or has to be. They are able to quickly brainstorm multiple ways of approaching and defining problems rather than relying on old methods of solving them. Here are some tools to help individuals increase their ability to make choices:

- *Comparing*: Learners look around and see what others do. They encourage their own creativity when they identify alternatives by examining how other people have approached similar problems; benchmark both successful and unsuccessful people and draw conclusions about the two groups; find mentors who offer formal and informal counsel about their experiences; and ask for advice from those who have relevant experience.
- *Experimenting*: Learners are willing to try new things and take risks. They create alternatives by testing new ways to do things even if the old ones are still working; by setting up mini-experiments where they do something one way and see the impact, then try another; by trying something that is not within their comfort zone; and by volunteering for new assignments or task forces.
- *Being willing to look stupid*: Learners accept that they probably won't get it right the first time. They see alternatives, are willing to make mistakes, and don't become captive to the mistakes. When learners make a mistake, they take it in stride, figure out why it happened, adapt, and try to not make the same mistake twice. They don't blame, they reflect. By contrast, perfectionists have to have things right the first time and often don't create as many alternatives as those who try something even if it is not completely finished. Leaders encourage learning when they model successive experimentation by admitting their own mistakes and sharing their lessons learned.
- *Volunteering for tough assignments and projects*: Learners increase choices by taking on assignments that stretch their thinking and approaches. One leader encourages learning by having manufacturing employees spend time (a day every quarter) in sales to get a better look at the customer point of view. Another leader puts new employees onto tough projects and asks them to share their ideas before the seasoned employees speak up; this both gets the benefit of an outside eye and helps the new employee learn by surfacing misunderstandings.
- *Asking "what if?"* Learners moderate fear of failure and facilitate generation of new ideas by thinking through "what if" questions:

What if I don't succeed? What is the worst possible thing that can happen? Am I OK with that?

What if I don't try something new? How will I feel about myself in the future?

What if I try to do this project another way? How would someone else approach this project? What insights can I gather from seeing this project through someone else's eyes?

What if I go forward with the project or decision? What are the second- or third-order implications?

Individual learners create choices and seek alternatives. They exercise *agency*—a term psychologists use for acting on one's own behalf—and recognize that choices always exist. They seek novel and unusual ways to solve problems. They see existing challenges through others' eyes. They have new ways of doing things.

### Consequence

Every choice has a consequence, some good, some not. Natural learners instinctively connect choice and consequence. They see the impact of their choices, both positive and negative. They constantly play the “if, then” game: if I make this decision, then such and such is likely to happen. In the “if, then” game, they can see future consequences of present decisions. They envision a future and fold it into the present.

Dave's had a couple of vivid experiences with non-learners. He once ran into a young man who wanted to be a doctor but admitted—when asked about the required studies—“I don't like school much and my grades are so-so.” Dave tried to help him see that the choices he made in not committing to school had consequence on his becoming a doctor (or not), but he remained convinced he could go ahead regardless. Another time, a colleague said, “I would like to do what you do in your career.” She liked the idea of engaging with senior business leaders on strategic issues, charging high consulting fees, and having business impact. When he pointed out that access to this career meant at least a hundred nights a year on the road, she replied that she was really not inclined to travel because of personal and family pursuits. She did not like the idea that her personal agenda—though valid and entirely within her right to choose—had the consequence of closing off access to the career she admired.

Often employees fail to learn when they cannot connect choices to consequences. Employees who won't work on tough projects, who won't take difficult assignments, who don't work well on teams, or who do the minimum to get by are surprised when they don't have opportunities for promotion or long-term success. These employees have not connected choice and consequence; they are not able to envision a future and fold it into the present.

The choice-consequence connection implies understanding risk. Risk focuses on the probability that an action will lead to a reaction. Managing risk comes from having a clear path between choice and consequence. Effective learners assess probabilities and take informed risks.

### Correction

Learners adjust and adapt to the choices and consequences they experience. They constantly need to take corrective action to inform the next cycle of choices. Effective learners are feedback junkies—they always want to know how their work is seen by and affects others. They ask what worked and what did not so they can adapt and improve their work. Sometimes they seek formal feedback on their general behavior (as with a 360-degree survey). At other times they seek informal feedback by watching how others

react to their work. They do not make the same mistake over and over. Rather than being satisfied with the status quo, they always want to improve and make things better.

In this context, if the young man with poor grades were an effective learner, he would recognize that he could either adjust his aspiration and enter a profession less rigorous than medicine, or he could take corrective action on his academic work and become more diligent in his studies. Either of these new choices implies that learning has occurred. Likewise the colleague who aspired to have an impact on business leaders could realize that her personal, family choices and commitments were more salient than business impact and could thereby learn to set and accomplish goals that matter most to her. Alternatively, she could rearrange her life to the same end, making the business goals the most important.

Leaders can find natural learners through the rigorous talent selections that we laid out in Chapter 5, or they can develop individual learners by helping employees master the choice-consequence-correction cycle we have described. In either case, leaders want individuals in their units who seek new ideas and are able to experiment and try new things.

#### *Individuals Generalize Ideas with Impact*

Sometimes the most creative people don't have the impact that they should or would like to have. Some creative people who generate new ideas fail to generalize the ideas they create. Their personal creativity does not lead to sustained innovation. They do not see patterns, connections, or integrated solutions. They are not able to generalize their knowledge beyond isolated experiments or applications.

Patterns occur when creative individuals see common trends or themes—but these patterns are not necessarily beneficial. Back when IBM first proclaimed “THINK” as a mantra, a new employee in the finance area took it to heart, put “THINK” signs all over the office, and worked to find new solutions to old problems. After a few months, some of the financial operations were in shambles. In desperation, the finance director went into the employee's office and replaced the “THINK” signs with signs that said “ASK.” The creative employee failed to generalize knowledge from the past to the present by not asking what had been done, what had worked, and what needed yet to be done. Effective learners build on the past. They also see patterns in activities and work to build in positive directions. Whereas isolated failures tend to disrupt or discourage non-learners, learners see the pattern and do not let isolated events get them down. Dave's physician-to-be might have a class or two where the grades are not where they should be, but if the pattern is toward better scholarship, these isolated events should not become disheartening. When effective learners see relationships between activities, they transfer knowledge from one setting to another. This kind of transfer is best if knowledge is adapted, not adopted; if ideas from one setting are rearranged to suit another and not simply imposed upon it. Learning to see connections of ideas from one area to another enables leaders to accumulate knowledge and experience.

By integrating solutions, learners can avoid fixing one part of a problem only to find that other problems arise all over again. Sometimes, non-learners fix the symptoms,

not the underlying problems. In basketball or soccer, coaches who want to build teamwork may emphasize that players pass before they go for a basket or a goal.

However, coaches who really build teamwork help players learn that teamwork is more than passing, it is a way to think about the game. When this learning finally takes hold, players begin to work as an integrated unit rather than as individuals and the team's success tends to soar.

Leaders want to harness individual creativity by ensuring that the most creative people deliver on their ideas. When those who generate also generalize their ideas, they turn energy, action, and creativity into sustained innovation and results.

## **Team Learning**

Increasingly, companies perform work through task forces, projects, groups, account teams, and the like. Teams as collectives of individuals may be scored on their ability to generate and generalize ideas with impact. High-performing teams begin their learning journey by generating new ideas, which come both from the composition of the team and from the way the team operates.

### *Teams Generate Ideas with Impact*

Teams striving for new ideas select diverse members. When team members each bring a unique point of view, the entire team benefits—and so does the organization it serves. When the members are all looking at problems from the same perspective, by contrast, they're likely to fall into groupthink and miss many useful possibilities. That makes it important to orient new members to encourage debate and dialogue. One of the most effective team leaders we know uses this briefing for new team members: "You are on this team because you are different from me. If you and I think alike all the time, one of us is not necessary. And it won't be me."

Teams may operate to encourage generation of ideas. Successful teams brainstorm alternatives before reaching a conclusion, set stretch goals that demand new ways of doing work, do risk assessment to examine probabilities between actions and outcomes, orient new members rigorously to norms and listen to new members for new ideas, use time well to ensure that progress is made, allocate rewards based on team performance, and manage their group process to promote smooth teamwork.

When leaders use teams well, they are sources of new ideas and new ways of thinking. Teams have the ability to generate more alternatives than any one individual can perceive.

### *Teams Generalize Ideas with Impact*

High-performing teams not only generate new ideas, they generalize those ideas by rigorously improving their team process. Team process checks enable teams to audit and improve how well they are working. By so doing, they learn about their own processes and improve upon them. Four processes are critical for team effectiveness: defining purpose, making decisions, managing relationships, and learning. Exhibit 8.1 summarizes the key questions for reviewing team processes.

Exhibit 8.1. Team Audit.

Purpose

A team needs a purpose, a vision, mission, strategies, goals, agenda, intent, aspiration, or raison d'être. A successful purpose statement articulates an aspirational view of the future and defines what should be, more than what is. A purpose shows how the organization will meet its members' needs, which energizes and excites everyone on the team. Although team purposes evolve with changing business conditions, they also remain consistent over time.

We have seen three ways to craft a purpose statement. You can simply pick a purpose and stick with it for a long time, until it is accomplished, or you can pick one and allow it to evolve as conditions require. In today's high-participation work groups, however, it's often most effective to lay out an array of goals and ask members to pick the ones that work best for them.

Leaders have primary responsibility for shaping a team's purpose. The following tools will come in handy in the process:

- *Ask*: What are the most pressing needs of our organization? What does our organization want to be known for among those new to or visiting the group? What would we like to have people say about our organization?
- *Align*: How will this team's purpose align with overall business objectives?
- *Invite*: Elicit participation from team members, remembering that participation does not mean consensus; team leaders have ultimate accountability and responsibility.
- *Construct*: Craft the purpose—find words, symbols, messages, and images that communicate and express the purpose and elicit emotional response to it.
- *Share*: Consistently share the purpose through personal communications; link day-to-day decisions to the overall purpose.
- *Track*: Use indicators to measure progress—both objective (revenues, profits) and subjective (sense of mood within organization).
- *Identify individual impact*: Help members each define how the purpose will affect their experience in the organization.

When leaders engage in these activities, they shape a clear and consistent purpose that engages and directs energy in the organization.

Decision Making

A team functions through the decisions it makes. Good teams spend time sharing information, discussing issues, and building relationships, but teams make decisions. As we discussed in Chapter 7, good decisions have clarity, accountability, timeliness, processes, and follow-up (see Figure 7.3).

Team leaders facilitate decision making by focusing attention on the decisions that need to be made in any one time period, and by keeping priorities straight and not getting bogged down in issues beyond the scope of the team's charter. Team leaders also

decide who decides on decisions. They must make some decisions, then assign and delegate others to those primarily responsible for those areas. They do decision process checks frequently to assure that time in meetings is well spent.

### Relationships

Effective teams foster relationships that nurture trust, tackle issues, and validate differences. Building relationships means caring, expressing thanks, and managing conflict and differences. Teams work well when members acknowledge and care for each other. In team meetings, time can and should be spent finding out how members are doing personally and being sensitive to events outside work. Teams also need to be forums for gratitude. When people see their work appreciated, they work more willingly and effectively. Team leaders need to focus on what is done and not just on what is not done, to find things that team members do well and acknowledge it both privately and publicly, and to express thanks for work performed. But appreciation is not a matter of wishy-washy acceptance of anything anyone does; effective team leaders do set standards and demand performance—but they acknowledge success whenever they find it rather than simply pointing out weaknesses. Effective team leaders also encourage differences and manage conflict. It is useful and important to see alternative points of view and at times to formally solicit alternative points of view before coming to a conclusion. Some teams ask “what if?” to see how others might respond to an issue. But ultimately, teams must deal with tough issues and deliver results. This comes from honest and direct feedback and talking about differences and sharing performance standards.

Leaders set the tone for relationships. They show concern by being sensitive to those who are responding and to those who are not as engaged in the team. They take time in meetings to recognize the personal issues, acknowledge successes, and encourage debate and dialogue. They ask people for the opposite point of view and seek alternatives before coming to conclusions. They think about how the team's work might impact different stakeholders and make sure that people with minority points of view feel comfortable expressing them. They are candid, however, when closure is required, asking, “Will you accept this decision? Will you be OK if we do this? Given the discussion, I know you don't fully agree, but are you OK if we go ahead?”

### Learning

Teams always do some things that work and some things that do not work as well. The choice-consequence-correction cycle also applies to teams. Teams need time to reflect and assess: What did we do since last meeting? How did it work? What was successful? Why? What was less than successful? Why? What can we learn that we can apply to the next project or assignment? Effective teams focus on learning what they can discern from experience and apply in the future; blaming individuals is their last choice, as they're looking for lessons rather than scapegoats. Teams, like individuals, also identify patterns of common errors and work to resolve those errors. When mistakes are made, it is important to acknowledge them quickly and directly, and then move on.

Team leaders must be role models of learning by being inquisitive, asking questions, seeking new solutions, looking for alternatives, encouraging creativity, and having fun with new ideas. Team leaders learn from failure and allow others to do

likewise. Team leaders allow others to make choices and accept consequences of their actions. Team leaders are willing to say “I goofed on this” and apologize.

Team leaders do formal learning audits with their teams to periodically check on how they are performing. These might be fifteen minutes once a quarter to review purpose, decision making, relationship building, and learning.

We have had the opportunity to take a number of teams—from the top team in a company to project teams to account management teams to shift teams—through the type of team audit outlined earlier, in Exhibit 8.1. This is a valuable process, as it enables the team to generalize from previous experiences to enhance its chances of success in future experiences.

## **Organization Learning**

Organizations as entities also have the capacity to learn. By so doing routines or patterns become adopted and shared throughout an organization.

### *Organizations Generate Ideas with Impact*

Our research on learning organization identified four learning styles that represent ways in which organizations generate ideas with impact: experimentation, competency acquisition, benchmarking, and continuous improvement.<sup>8</sup>

#### *Learning Style 1: Experimentation*

Some organizations learn by trying many new ideas and being receptive to experimentation with new products and processes. The primary sources of learning are direct experiences from customers and employees. They aim to achieve organizational learning through controlled experimentation, from both inside and outside, rather than through exploiting the experience of others. 3M, Sony, Hewlett-Packard, and Unilever are companies known for their experimentation strategies. They follow guiding principles like these:

- We constantly seek new ideas, even before old ones are fully implemented.
- We constantly seek new ways to do work.
- We try a lot of new ideas; we want to be known as experimenters within our industry.
- We want to be the first in the market with a new idea or concept.

#### *Learning Style 2: Competency Acquisition*

Some organizations learn by encouraging individuals and teams to acquire new competencies. Learning is a critical aspect of business strategy, and focuses on both the experience of others and an exploration of new possibilities. By investing resources in training and development, these organizations provide cutting-edge materials and concepts to their members through consultants, line managers, and faculty. The intention is to help organization members acquire relevant knowledge that may accelerate their

subsequent assimilation of new knowledge and stimulate them to develop innovative products and processes. Motorola and GE are well known for their competency acquisition strategies. Guiding principles:

- We encourage individuals to acquire new competencies.
- We encourage teams to acquire new competencies.
- We learn by hiring people from other companies who have skills we need.
- Learning is a critical part of our business strategy.

#### *Learning Style 3: Benchmarking*

Other organizations learn by scanning how others operate and then trying to adopt and adapt this knowledge into their own organizations. Learning comes from organizations that have demonstrated excellent performance or developed the best practices in specific processes. Benchmarking companies primarily learn from the experience of others and exploit successful technologies and practices that already exist. Samsung Electronics, Xerox, and Milliken all emphasize benchmarking. Guiding principles:

- We learn from others, entering a product market or applying a process only after it has been fully tested.
- We learn by broadly scanning what other companies do.
- We learn by focusing our scanning on specific activities done by other companies.
- We primarily benchmark the competition, measuring our progress against competitors' performance.

#### *Learning Style 4: Continuous Improvement*

And still other organizations learn by constantly improving on what has been done before and mastering each step before moving on to new steps through a disciplined process like six-sigma. They often emphasize employee involvement groups (such as quality control circles or problem-solving groups) organized to resolve issues identified by internal and external customers. These are organizations that both rely on learning through direct experience and the exploitation of existing practices. Toyota, Honeywell, and Honda are continuous improvement companies.

- We master new ideas before moving on to the next round.
- We upgrade the way we do existing work until we have it right.
- We want to be known as the best technical experts in our industry.
- We primarily benchmark ourselves, measuring progress against our previous performance.
- We use six-sigma and other quality tools to continually improve how we do our work

*Implications of Learning Styles*

These four styles are the ones we've seen in action; they're not abstracts that we've invented either as straw men or as recommended goals. Real as they are, however, the descriptions represent ideal types only. Just as individuals never conform to one personality type, companies—especially large corporations with diverse businesses like GE and Motorola—seldom engage exclusively in just one learning style. Typically, organizations mix all four (as individuals do on the Myers-Briggs), but in different combinations and to varying degrees. In addition, learning capability profiles can change over time within organizations, depending on particular situations.

In general, our research indicates that competency acquisition and continuous improvement are the most popular learning styles, followed by experimentation and benchmarking. We surveyed a number of companies on the extent to which they engaged in the behaviors of each learning style. On a five-point scale, the extent to which our sample companies focused on the four styles runs as follows:<sup>9</sup>

<i>Learning Style</i>	<i>Mean Score</i>	<i>Standard Deviation</i>
Competency Acquisition	3.58	.84
Continuous Improvement	3.53	.77
Experimentation	3.11	.80
Benchmarking	2.94	.84

If we classify businesses based on their dominant learning style (the one that receives the most emphasis in organizational structure and action), here's the breakdown:

<i>Dominant Learning Style</i>	<i># of Businesses</i>	<i>% in the Sample</i>
Continuous Improvement	104	40%
Competency Acquisition	95	37%
Benchmarking	33	13%
Experimentation	25	10%

The results make sense, given the very strong emphasis on total quality management and six sigma, as well as the traditional association between learning and training in many corporations. But while most of the sample companies didn't emphasize experimentation, our research nonetheless identifies experimentation as the most effective style for enhancing business performance, as measured by organizational competitiveness (a composite measure of fifteen items, including human resource practices, customer relations, and globalization); organizational innovativeness (a composite measure of four items, such as willingness to experiment and reputation as an innovator); and new product introduction (the percentage of sales based on products introduced in the last three years). Competency acquisition also boosted all three performance outcomes, but not as strongly as experimentation. Companies that emphasized continuous improvement appeared to have more trouble with new product introduction, and benchmarking didn't significantly correlate with any performance outcomes.

Leaders who want to generate new ideas would be well advised to use multiple learning styles. Indicators of the ability to generate new ideas would be patents, trademarks, R&D budgets, and percent of sales from new products introduced in the last few years (often called a vitality index). Leaders might ask which of the four styles are most prevalent in their unit, and to look for ways to build up experimentation and competency acquisition if they're currently underemphasized in relation to continuous improvement or benchmarking. Likewise, if the more cautious approaches are largely ignored, it's apt to be useful to make sure they get a measure of attention, or the organization may miss out on some good ideas.

### *Organizations Generalize Ideas with Impact*

Many more organizations generate ideas than generalize them. In fact, when we ask managers what makes a learning organization or how to enhance learning within an organization, most emphasize coming up with new ideas through benchmarking, continuous improvement, competence acquisition, or experimentation—one or all of the four learning styles we've just discussed. But from the learning capability perspective, it's not enough to be awash in new ideas. That's why the second building block--generalization--forms the other crucial half of our equation "g x g." For generalization of ideas, *implementation* of what has been learned is essential.

All too many companies have succeeded in creating pockets of excellence, then failed to transfer the achievement across boundaries to the rest of the firm. Somehow, they never got around to moving employees from one location to another to share how work should get done, or using technology to transfer knowledge from one unit or individual to another. They never established best-practice forums to codify and disseminate lessons from one site to another. Each of these options allows ideas to move smoothly across boundaries and create changes in behavior—but they must all be adopted and encouraged deliberately; they rarely happen by chance.

Leaders build learning capability, therefore, not only by generating ideas but by sharing them within—and even beyond—the organization. This has direct impact on the intangible value of the firm; it's a focused set of leadership actions and accountabilities, and not just an academic exercise and experience. The primary leadership task in generalizing ideas is to create an infrastructure that moves ideas across boundaries. When at General Electric, Steve Kerr,<sup>10</sup> chief learning officer and vice president of management development, created a *learning matrix* (Figure 8.2) that identified the source of good ideas for sharing across geographic, functional, or business boundaries and proposed a disciplined process for moving ideas across units.

Figure 8.2. Learning Matrix Form (Adapted from General Electric).

Completing the learning matrix involves five steps:

1. Complete the statement, "To be world class at 'x,' we must. . . ." "X" can be anything the corporation is committed to doing well, such as service, quality, customer focus, cycle time, training. The outcome of this step should be identification of ten to twelve critical factors for a corporate initiative to succeed. Arriving at this outcome might involve a small research team, task force, or other

group to define these critical success factors. These answers become the columns in Figure 8.2.

2. Answer the question, "What are the units where these critical success factors can be demonstrated?" The units generally are discrete work settings (plants, divisions, business units, or regions) where work is performed. These answers form the rows in Figure 8.2.
3. On a scale of 0 to 5, score each cell of the matrix: 0=not applicable; 1=not good at all; 2=sort of good; 3=average; 4=we think we are good; 5=others think we are good (that is, we've been certified by someone outside the business as "world class" in this particular area). This assessment should be done by either an organizational unit leader or a rating team external to the unit (such as a corporate group who inspects the unit or an outside rating agency). Scores of 0 to 4 can be provided by members of the unit, but a score of 5 must come from someone outside the unit. This exercise enables the leader of the unit to diagnose the extent to which the unit exhibits the specific actions required by the overarching initiative.
4. Combine the individual assessments by row into an overall learning matrix. The information provided by each organizational unit now forms a general pattern for a particular initiative ("X"). This completed company-wide matrix can help pinpoint pockets of excellence (scores of "5" in a cell) and provides an overall corporate score on any initiative. The overall score may provide feedback for a corporate person assigned to pursue initiative X. And the matrix itself indicates the baseline for how ideas are generalized across these different units.
5. Create processes for sharing ideas and knowledge based on the high-score cells in each column and apply them to the lower-score cells in that column. In other words, generalize, or transfer, knowledge and best practices from one unit to another. This is where learning rubber meets the road. One beauty of Kerr's learning matrix is that it simply and elegantly shows where pockets of excellence exist and suggests how to move ideas from one unit to another. You can use any of these mechanisms for generalizing knowledge and experience from one cell to the entire column:
  - Make the high-score cells "best practice" sites where others can learn. The best practice site opens its doors to the rest of the company and invites others to visit, observe, and take ideas that might be moved to another unit.
  - Create case studies from the higher-score cells for others to draw on. The best practice site might be written up for a company newsletter, or used as a case study in a development class. Participants from other units can be encouraged to question leaders from the best practice site to draw out knowledge that might be transferred.
  - Move talent from higher- to lower-score cells. In one company that used this matrix, the corporate executive would ask the business leader to identify six individuals who were instrumental in making the unit a best practice site. Once these individuals were named, the corporate executive would then ask, "Which three do you want to keep?" The expectation was that the other three could be moved to other units to share their experiences. When visiting the other units with lower scores, the corporate executive could refer to this pool of available talent as a way to improve performance.

- Create an incentive system to encourage those in high-score cells to share knowledge. People do what they are rewarded for. In one company, each year leaders of units were offered bonuses by the number of “5” scores in a column. These financial bonuses provided an incentive, but it turned out that the nonfinancial rewards counted even more as the leaders of best practice sites gained visibility and credibility for their successes.
- Assign someone from corporate headquarters to oversee the entire matrix process, ensuring that a larger percentage of cells achieve scores of "5" each successive year.

This learning matrix offers a simple methodology for generating and generalizing ideas with impact within an organization. Leaders who use methods like this ensure that good ideas are not hidden within a unit but quickly and rapidly disseminated across units.

Generalizing ideas through technology. Another popular tool for generalizing ideas across units relies on technology. Through technology individuals in different parts of an organization may be connected to form a community of practice. Of course, most companies have a lackluster history of deploying learning technology only to be disappointed by its failure to live up to expectations of increased productivity and effectiveness. So how do you avoid the potential traps of technology and appropriately apply technology for maximum learning impact? The following sections list traps to avoid and effective steps to take.

#### Avoid...

Taking the apparently easy road of converting content to the Web or CD-ROMs and telling employees that it is available for their use (often referred to as “pushing” it at them). This approach depends on employees’ taking time away from their daily work to go through the learning exercise—and staying engaged throughout the exercise. Most of the time CD-ROMs sit on the shelf and stand-alone Web-based courses remain unused—especially the ones aimed at training executives and senior managers, who always have more urgent demands on their working time.

#### Do...

Design learning technology with these barriers in mind and try to create a lure or “pull” for users. Technology with the best “pull” is integrated into daily work and organizational processes; it is not a separate activity that users must remember to use.

#### Avoid...

Eye-candy—sexy technology that incorporates video, animation, and sound for the sake of an impressive production. These solutions tend to be quite expensive to build or customize and not relevant to a user’s work. Most of these solutions share a fatal fault: They ignore adult learning theory and are not designed to create specific business results. Another danger is that these exercises are usually one-on-one with the computer; the computer becomes the “expert” and whatever the computer says is perceived to be right, so valuable dialogue and sharing of experiences can be lost.

Do...

Remember that technology cannot totally replace face-to-face classroom time. At the very least, opportunities for networking, the reflection part of action reflection, dialogue, and Q&A need to be fully integrated into any learning solution.

Avoid...

Spending too much on the initial creation of a knowledgebase. Most knowledgebases work only if executives are interested enough to stop their daily work and access the information. Executives must then search through it and with any luck, find data or case studies that illustrate learning that they can apply directly to current work. Unfortunately, many knowledgebases are not used or maintained on an ongoing basis because they are static, one-way communication vehicles and lack the pertinent information to be useful on the job.

Do...

Try using a “moderated” knowledgebase. Internal or external consultants interview the senior executives and write the cases for the moderated knowledgebase, rather than relying on the senior executives to make time to write up their own cases. This ensures that the cases are timely, complete, and objective (recounting both successes and failures) so that everyone in the organization can learn from the action-learning project. Any executive reading a case in the moderated knowledgebase can post a question for the action-learning team or consultant about the project. The reader can also view all past questions and answers for each case study.

By adopting the to-do items in the preceding sections, you can use technology to help move knowledge from one setting to another. In fact, technology has many benefits to sharing ideas. Technology enables people in geographically dispersed units to connect and share; it costs less than face-to-face meetings or training; it focuses attention on key concepts and applications; it allows for preliminary work and follow-up to surround traditional training activities; and it develops as it is used, becoming a way to continually share ideas over time.

In one company we used technology to leverage the five-day leadership-training program we offered. Each of the five days of the program focused on how leaders could and should deliver a specific result (employee, customer, investor, organization). Faculty (both internal line managers and external customers and professors) presented materials at two levels. First, they offered a brief synopsis of the theory, or content, of their topic. Faculty who worked on employee results developed a perspective on how to build employee commitment through providing employees clear and accountable standards, communication of ideas, flexible work practices, and team-based organizations. The theory for each of these modules was taught in the course, then synthesized into a one-page summary.

Second, for each module, faculty provided a tool or worksheet on how to apply the theory. For example, the concept of employee accountability was tied to a performance improvement tool that had been used by others and could be used by participants to increase employee accountability. The concept of effective teams

translated into a team effectiveness instrument that could be used to assess and improve team functioning.

These concepts and tools became part of a leadership knowledgebase that participants could access after the course. On the last day of the course, participants were introduced to this knowledgebase and taught how to access it from their desks. Using problems they were likely to face in their next year as leaders (for example, how to build employee, organization, investor, and organization results), they were shown how to find the concepts and tools used for resolving the challenge.

Since each module taught in the course had a concept and tool, anyone who accessed the module and used the tool could add that experience into the knowledgebase. For example, the module on holding employees accountable had been taught for the last three classes. Five participants in those courses had used the concepts and tools to build performance improvement plans for their employees. Their experiences were also in the leadership knowledgebase, which generalized this knowledge to those more recently in the course. Any participant could access the knowledgebase twice "free of charge" and find out how others had used the concepts taught. However, to have access after these two freebies, participants had to put their personal experience with the concept and tool into the knowledgebase. In this way, the knowledgebase grew over time.

A key to the knowledgebase's effectiveness was that course participants were not expected to remember everything it included, they merely had to know that they had learned some ideas and tools. In the ensuing months, participants could recall that the event gave them ideas on employee, customer, investor, and organization results. They could then access the knowledgebase to recover the concept taught (the one-page summary) and find applications of those tools written up by other participants based on firsthand experience. With this focus, the event facilitated generalization of ideas over time. The leaders learned by doing as they used information when they needed it. They had access to others who had used similar ideas within the firm so they could test their ideas. They shared their learnings and the learnings of others so that they received feedback on their effort. The knowledgebase was integrated into daily work activities because it was organized around business issues and challenges the leaders would be facing, offering them real-time, live examples of how to respond to those problems.

Whether through a learning matrix or technology, leaders who generalize ideas gain a broad commitment to organization learning.

## **Leadership Implications**

Leaders build learning into their organizations by generating and generalizing ideas with impact for individuals, teams, and organizations. Here are some specific leadership actions that you can take to build learning into your organization:

1. Bring natural learners into the organization and encourage all employees to learn through the choice-consequence-correction cycle.
2. Encourage employees to look for patterns and to transfer knowledge from one setting to another.

3. Provide forums (meetings, training, and the like) where people have permission and the opportunity to reflect on better ways to do their jobs.
4. Help teams become more creative and insightful by bringing new people onto teams and by operating teams in a way to encourage debate and dialogue,
5. Allow teams to generalize learning through team audits on purpose, decision making, relationships, and learning.
6. Encourage units to create new ways of doing work through experimentation, competence acquisition, continuous learning, and benchmarking—making sure that all receive at least some attention, and that experimentation and competence acquisition aren't overshadowed by the more cautious approaches.
7. Share knowledge and ideas across organization boundaries through building the right culture and a disciplined learning process.
8. Frequently audit for internal best practices in relevant areas and find ways to export these best practices to other parts of the firm.
9. Use your intranet to create chat rooms and e-mail lists focusing on important issues, making it easy to discuss important ideas across geographic boundaries.

Table 8.1. Overall Model for Learning Capability.

Targets of Learning	Dimensions of Learning	
	Generate New Ideas	Generalize Ideas Across Boundaries
Individual	1 Ensuring that people are creative and innovative	2 Ensuring that people see patterns in their behavior
Team	3 Ensuring that teams encourage creativity and approach problems in new ways	4 Ensuring that teams learn from successes and failures over time (team audit)
Organization	5 Ensuring that organizations find ways to bring new ideas into the organization	6 Ensuring that the organization has the ability to share ideas across units

Figure 8.1. Individual Learning Cycle.

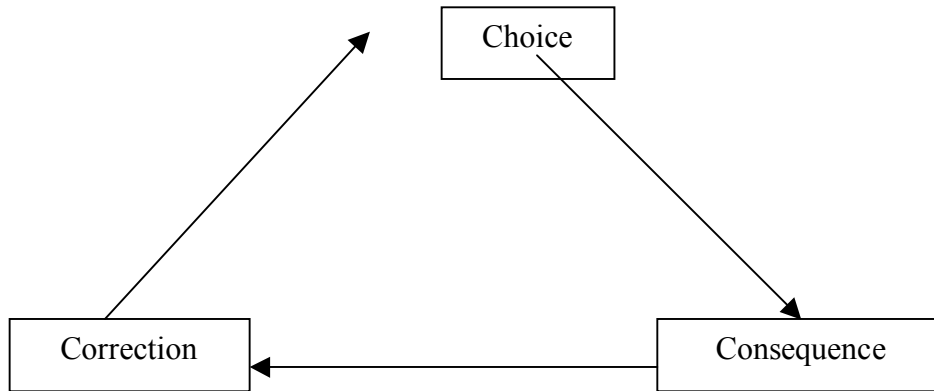


Exhibit 8.1. Team Audit.

Purpose:

- Are our goals clear?
- Is our identity clear?
- Do we know what we need to accomplish?

Decision making:

- How timely are our decisions?
- How well do we involve everyone?
- How effectively do we implement our decisions?
- How good is our decision process?
- How well do we follow up on decisions?

Relationships:

- How well do we get along?
- How well do we show that we care for each other?
- How well do we manage conflict?
- How well do we encourage diversity?
- How well do we ensure unity?

Learning:

- What has worked or not worked well in last time period and why?

Figure 8.2. Learning Matrix Form (Adapted from General Electric).

PROPOSITION: To be world class as "X," we must . . .											
		Critical Success Factors for "x"									
		a	b	c	d	e	f	g	h	i	...
Business where work is done	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	...										

In each cell score 1 (low) to 5 (high).

Notes

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<sup>1</sup> Chris Argyris and Donald Schön, *Organizational Learning: A Theory of Action Perspective* (Reading, MA: Addison-Wesley, 1978); and Chris Argyris and Donald Schön, *Organizational Learning II: Theory, Method, and Practice* (Reading, MA: Addison-Wesley, 1996).

<sup>2</sup> Peter Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Currency/Doubleday, 1990); Peter Senge, Art Kleiner, Charlotte Roberts, Rick Ross, and Bryan Smith, *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization* (New York: Currency/Doubleday, 1994); Peter Senge, Art Kleiner, Charlotte Roberts, Rick Ross, George Roth, and Bryan Smith, *The Dance of Change: The Challenges of Sustaining Momentum in Learning Organizations* (New York: Currency/Doubleday, 1999); and Peter Senge, Nelda Cambron-McCabe, Timothy Lucas, Bryan Smith, Janis Dutton, and Art Kleiner, *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education* (New York: Currency/Doubleday, 2000).

<sup>3</sup> Peter Drucker, *Management Challenges for the 21st Century* (New York: HarperBusiness, 2001); Ikujiro Nonaka, Hirotake Takeuchi, and Hiro Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (London: Oxford University Press, 1995); C. M. Fiol and M. A. Lyles, "Organization Learning," *Academy of Management Review* 10, no. 4 (1985): 803–813; B. Hedberg, "How Organizations Learn and Unlearn," in Paul Nystrom and William Starbuck (eds.), *Handbook of Organization Design* (Oxford, UK: Oxford University Press, 1981).

<sup>4</sup> Three notable omissions from the summary are J. Slocum and C. Dilloway, "The Learning Organization," discussion group report, School of Management, Southern Methodist University, 1992; R. B. Shaw and D. Perkins, "Teaching Organizations to Learn," *Organization Development Journal* 9, no. 4 (1991): 1; and Cal Wick, *The Learning Edge: How Smart Managers and Smart Companies Stay Ahead* (New York: McGraw-Hill, 1993).

<sup>5</sup> Mark Smith, "The Learning Organization," in *The Encyclopedia of Informal Education*. Available online: <http://www.infed.org/biblio/learning-organization.htm> (2001).

<sup>6</sup> Many of the ideas presented here on organization learning capability come from work synthesized in Arthur Yeung, Dave Ulrich, Stephen Nason, and Mary Ann Von Glinow, *Organization Learning Capability: Generating and Generalizing Ideas with Impact* (Oxford, UK: Oxford University Press, 1999).

<sup>7</sup> Ikujiro Nonaka, Hirotaka Tekeuchi, and Hiro Tekeuchi, *The Knowledge-Creating Company* (New York: Oxford University Press, 1995).

<sup>8</sup> For more detail, see Yeung, Ulrich, Nason, and Von Glinow, *Organization Learning Capability*.

<sup>9</sup> For more information on this study, see Yeung, Ulrich, Nason, and Von Glinow, *Organization Learning Capability*.

<sup>10</sup> Now at Goldman Sachs.