

7

KM and Organizational Learning

Useful knowledge is not a “thing” that can be managed like other assets, as a self-contained entity. Nor does it just float free in cyberspace. . . . Only when information is used by people does it become knowledge.
(Wegner, McDermott, and Snyder 2002)

Learning is primarily about the acquisition of information and knowledge.
(Canadian Centre for Management Development 1999)

Organizational learning occurs because individual members of the organization learn. This does not mean that individual learning guarantees organizational learning. Rather, it means that no organizational learning occurs unless individuals learn. Government agencies encourage individual learning in a number of ways, including training and management development, communities of practice, intranets, and, increasingly, such Web-based communications as e-mail. Collectively, these and other information-sharing tools are part of the discipline known as knowledge management; they help enable learning when they are part of a comprehensive social system designed specifically to husband and exploit knowledge.

Throughout this book, the point has consistently been made that information is not knowledge. However, DeLong (2004) rightfully warned that it is often difficult to differentiate between the two because knowledge and information are overlapping constructs, and that their relative relevance is established by situational factors. He added,

Information is data that is structured so that it is transferable, but its immediate value depends on the potential user’s ability to sort, interpret, and

integrate it with their own experience. Knowledge goes a step further and implies the combining of information with the user's own experiences to create the capacity for action. (DeLong 2004, 22)

Information can be readily managed with technology, which does a good job of collecting, acquiring, and storing data and making it available as information. Government organizations spend billions annually investing in information technology for just this purpose. Knowledge, on the other hand, is information that someone has put to work. This is achieved when one or more persons in an organization identify or share knowledge about an issue, a problem, or a solution, and then add what they have learned. The application of their existing knowledge can be combined with the new knowledge in synergistic, innovative, and creative ways. Combining new with existing knowledge results in learning.

The same can be said for organizations. With the right attitudes of managers and administrators, agencies can learn in the same way that individuals learn. Stories abound of government agencies from around the world that have been transformed into learning organizations. This chapter looks at what is known about the linkages between knowledge and learning, including some of the stories of KM and learning organizations in other nations.

Chapter Objectives

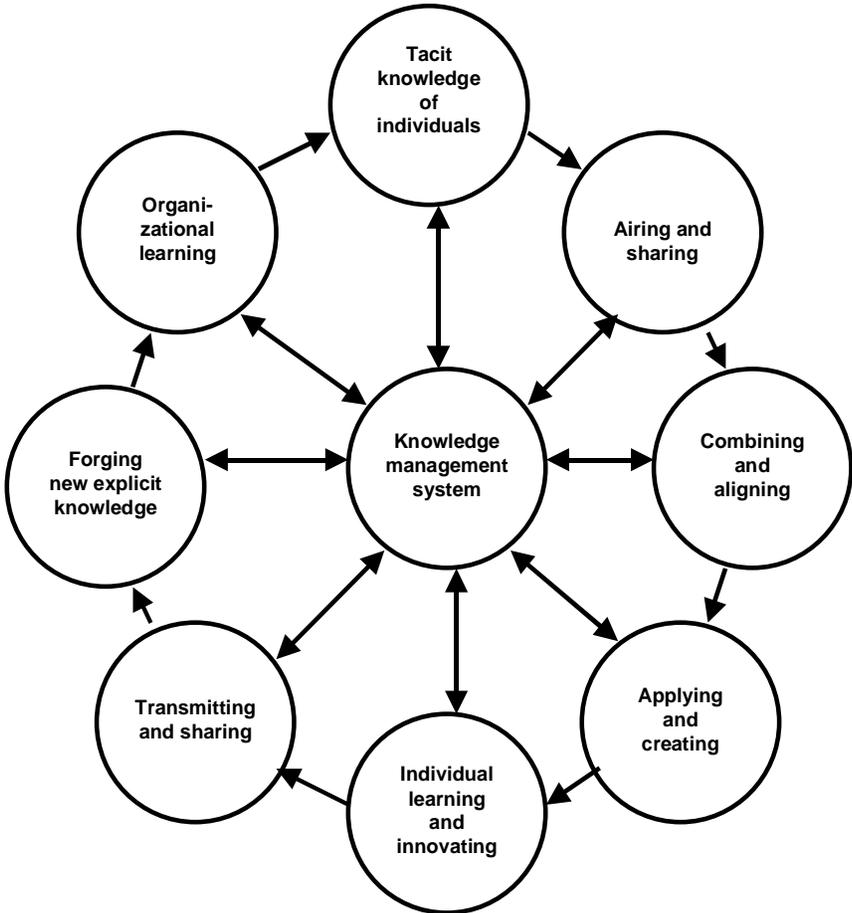
Learning objectives for this chapter include helping readers develop an awareness and understanding of the following concepts associated with learning organizations:

- An understanding of the meaning of learning organizations.
- An awareness of the links between knowledge management and learning.
- Recognition of the processes involved in an organization's transformation to a learning organization.
- An understanding of the differences between organizational learning and learning organizations.
- An awareness of the global interest in the benefits accruing from learning organizations.

What Is a Learning Organization?

An organization that learns is one that is quick to identify, digest, and apply the lessons learned in its interactions with its environments. For public-sector

Figure 7.1 **A Model of the Knowledge Management and Organizational Learning System**



organizations, this involves developing innovative solutions to the constantly changing legal, political, economic, and social environment.

For knowledge to facilitate organizational learning, leadership in the organization must form and maintain a culture that honors and rewards the entire process. Figure 7.1 illustrates the interconnected system in which knowledge management facilitates both individual and organizational learning. The idea of a systems concept is a fundamental component of the learning organization initiative proposed by Peter Senge (1990). In this model, the agency’s knowledge management system (KMS) is the keystone of the organizational learning system. All the remaining elements are connected through their in-

clusion in the KMS. Both tacit and explicit knowledge play key roles in the system, but cannot contribute significantly to organizational learning unless they are coordinated and guided.

Definitions of a Learning Organization

Four early definitions of what constitutes a learning organization are presented in Box 7.1, beginning with Senge's (1990) conceptualization. These are not the only definitions, of course, but they appear often enough in the literature to merit their inclusion with the Senge concept.

Information, Knowledge, and Learning

People learn, begin to understand, and build knowledge through a process that has been boiled down to four easy-to-understand steps (Phillips 1976). First, they define and frame problems on the basis of their prior experience and the knowledge that is already available to them. Problems can be as large as determining how to transform a government department or agency to be more focused on citizens and results, as mandated in the President's Management Agenda (PMA). A key component in the mechanism for making this transformation happen was expanding the role of electronic government. Or, they can be as small as determining a way to personally use less paper, as mandated by the Government Paperwork Elimination Act of 1998.

Second, they seek out, locate, and collect the information they consider essential for dealing with the problems. Information comes from many sources; some is obtained from external sources such as published reports, advice from consultants, and, increasingly, documents and research reports taken from the Internet. Other information comes from internal sources, such as memos, directives, and guidelines distributed by senior management; the experiences and knowledge of other workers in the unit may be one of the most valuable, if often underrated, sources.

Third, individuals analyze and interpret the data they have collected. This is done following clearly defined rules, traditions, and biases. Data are interpreted in accordance with the past experience of the interpreter. Too often, the problem is approached with a preconceived solution in hand. The fourth step is the codification and reporting of the conclusions gathered from the learning process. Knowledge management systems are involved in each of these processes.

Government workers depend on information to do their jobs, and to add to the internal storehouse of knowledge pertaining to the world in which they must function. Often, they examine the results of scientific research as a way

Box 7.1

Four Descriptions of Learning Organizations

A learning organization is one in which people continually expand the capacity to create the results they desire, and where new expanding patterns of thinking are nurtured, where collective aspirations are set free, and where members of the organization are continually learning together to see the whole. (Senge 1990, 3)

A learning [organization] is one with a vision of what it might achieve. Learning to achieve the possible is not a product simply of training individuals. It only happens when learning takes place in the entire organization. The learning [organization] is an organization in which the learning of all its members is facilitated, and one that continuously transforms itself. (Pedler, Burgoyne, and Boydel 1991, 1)

In learning organizations, there is total employee involvement in a collaborative, collective, accountable change that is directed towards achieving the shared values or principles of the members of the organization. (Watkins and Marsick 1992, 118)

An organization can be said to be learning when it acquires information (knowledge, understanding, know-how, techniques, or practices of any kind and by whatever means). (Argyris and Schön 1996, 3)

of collecting information. It is important to note, however, that science, knowledge, and learning are not the same. Learning is what humans do when they internalize and remember information. Nobody likes to know that they have just reinvented the wheel.

In a more formal definition, knowledge has been described as “the set of statements which, to the exclusion of all other statements, denote or describe objects and may be declared true or false.” Science, on the other hand, should be considered a “subset of learning. It is composed of denotative statements, but imposes two supplementary conditions on their acceptability: the objects to which they refer must be available for repeated access [to enable replication] . . . and it must be possible to decide whether or not a given statement pertains to the language judged relevant by the experts” (Lyotard 1984, 18).

Clearly, not all knowledge is scientific knowledge. Much of people’s knowl-

Box 7.2

A California City's Transformation to a Learning Organization

The expectations and needs that must be served by city government continue to change as urban populations continue to grow, city neighborhoods get older, and the community reflects the greater diversity that characterizes much of California. These changes demand a more customized approach to service delivery, rather than the “one-size-fits-all” model of the past.

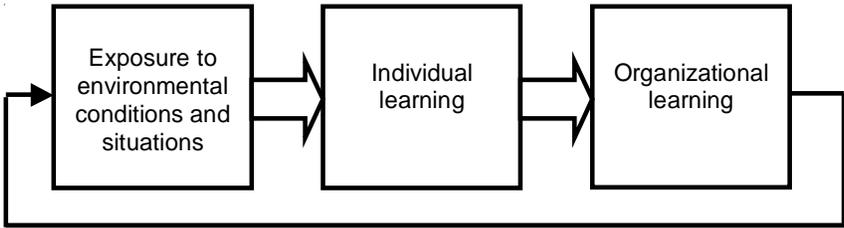
The City of Fremont team, composed of the city council, the city manager, and staff have been working together to create a learning organization with a wide range of initiatives to meet changing needs. Elements of this process include:

- Development of a strategic plan that integrates the mission, vision, and values of the organization.
- Promoting shared responsibility for problem identification and solution development.
- Engaging the community in dialogue and collaborative problem solving utilizing tools such as interest-based negotiations and program performance measurement.
- Fostering economic health through a community-wide economic development strategy.
- Creating opportunities to partner with others, from governmental agencies and businesses to nonprofit groups, neighborhoods, and individuals.
- Opportunities for continuous training and technological improvements.

Source: City of Fremont 2002.

edge comes from experiences, human beliefs, human values, and social interaction, not scientific experimentation. This type of knowledge is often called *common sense*. It is most often shared in organizations by narrative—that is, in conversations between two or more workers. When narrative sharing is facilitated in government agencies, the opportunity arises for the organization to transform itself into a *learning organization*. Box 7.2 describes the knowledge products that Fremont, a California city near San Francisco, expects will result from its efforts to transform itself into a learning organization.

Figure 7.2 A Model of Single-Loop Learning



Organizational Learning and Learning Organizations

Organizational learning begins with exposure to an external stimulus. As individuals respond to the stimulus, they learn from the experience and their future behavior is in some way modified. If the responses of the individuals involved result in a more successful way of dealing with the ramifications of the stimulus, the individual adaptations can bring about an adaptation in the organization as well. These adaptations in individuals are what is meant by *single-loop* or *adaptive* learning. The adaptations that occur in organizations are described by the term *organizational learning*.

It is important to note that the adaptation is reactive rather than proactive. Exposure to an external stimulus and individual learning are necessary antecedents for the process of organizational learning. However, they do not turn the organization into a learning organization. That only occurs when the culture of the organization is such that individuals in an organization seek and carry out adaptations prior to the impact of the environmental stimulus (Figure 7.2).

Single-loop learning can and usually does have a positive effect on an agency. When individuals learn by gaining knowledge—whatever the source—it becomes possible for them to make improvements to processes or services or products, or both. This is what is meant by innovation. Knowledgeable members of the agency no longer have to repeat past mistakes.

The new knowledge gained by members of the organization has the power to benefit the agency, provided the agency remains receptive to adaptive change. And when an agency further evolves into a learning organization, it learns not only how to avoid past mistakes, but, more importantly, how to profit from what it has learned by taking advantage of what its members have learned.

How Learning Organizations Evolve

Clearly, individual and organizational learning are different. But what about organizational learning and learning organizations—are they the same? Mark Smith (2001) suggested that the distinction between the concepts of organizational learning and learning organizations rests on the product of the learning process—what results from learning. Perhaps the most valuable product of learning is an ability to adapt to change.

Organizational learning is the term used to describe the processes involved during the learning that takes place by individuals and the collective learning that occurs within organizations; it is based upon a foundation of learning theory, and is often used to describe the processes and results of employee training and management development. Promoting the concept in an agency begins by dealing with the processes needed to bring about a fundamental change in the culture of the organization, transforming it from a reactive to a proactive organization. Smith added that organizational learning is the activity and the process by which an agency eventually becomes a learning organization.

Government agencies can evolve into learning organizations only when learning is integrated into the fundamental fibers of the agency's strategic and operational plans. One of the early government agencies to embrace KM, an intergovernmental planning committee in Alberta, Canada, was able to make this connection an integral component of the province's human resources strategy (HRDC 2003). The council's knowledge management framework was established to help the province reach its future goals by "sustaining and improving operations and service delivery, sharing knowledge to learn from the past, and by leveraging collective expertise to optimize the future for all Albertans." Table 7.1 displays elements of the Alberta guide to KM.

Measuring Organizational Learning in Brazil and Poland

A team of researchers from the Management Department at the University of Brasilia conducted a study to evaluate the extent of organizational learning in an agency of the Brazilian government. Learning in the private sector is considered a way of changing and developing competencies that organizations need in the competitive environment of the knowledge economy. In the public sector, however, this movement for change is driven by transformations reflected in the new public management (Guimaraes et al. 2001).

The study report defined organizational learning in the private sector as a process of organizational change that is intended to achieve high-quality production standards and customer standards. It is based on a framework closely

Table 7.1

Alberta, Canada, Knowledge Management and Learning Organization Framework

Guide elements	Planning focus			Optimizing values
	Planned strategic approach	Enhanced learning environment	Intentional knowledge sharing	
Program	Knowledge management is integrated into day-to-day operations	Learning and development are structured into all roles as major areas of accountability	Knowledge transfer is a priority throughout the organizations and is to occur with no boundaries	Collaborative networks and communities of practice and supporting technology are established to access department/agency/unit memory
Strategies	<ul style="list-style-type: none"> • Foster new relationships • Leverage agency and functional expertise • Promote best practices sharing • Link to long-term objectives 	<ul style="list-style-type: none"> • Create an expectation for questioning and learning • Capitalize on lessons learned 	<ul style="list-style-type: none"> • Incorporate knowledge reference and retrieval mechanisms into information and knowledge management systems • Facilitate intentional cross-boundary sharing • Identify expertise areas • Develop knowledge repositories • Integrate into business processes 	<ul style="list-style-type: none"> • Develop internal benchmarking indicators • Conduct knowledge audit
Enabling factors	<ul style="list-style-type: none"> • Merge KM with agency and operational strategies 	<ul style="list-style-type: none"> • Create a partnership culture that encourages learning and collaboration • Emphasize high personal responsibility and teamwork 	<ul style="list-style-type: none"> • Identify critical core knowledge and gaps 	<ul style="list-style-type: none"> • Document lessons learned • Benchmark best practices/processes
Chief results	Strategic partnerships and opportunities	Value openness, questioning, and exploring Learning organization	Link knowledge sharing and learning to performance Systematic approach to knowledge sharing	Leverage databases and information Document and share knowledge

Source: HRDC 2003.

linked to innovation, human knowledge, communication, and commitment. These same elements apply to public-sector management by their ability to effect changes in agency members' values, strategies, and beliefs—in a word, the *culture* of the organization.

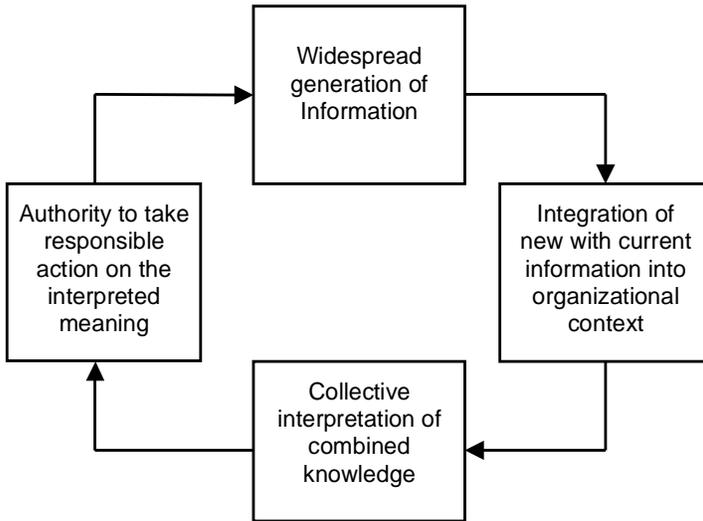
Their research instrument included questions on five fundamental organizational learning factors: shared vision, systemic vision, mental models, knowledge sharing, and an environment of learning stimulation. They found that less than half of the agency respondents were able to state the organization's objectives and targets, that many workers did not know what went on in other units of the organization, and that lower-level respondents identified the absence of an environment of participation in organizational decision making, but that there was open and easy access to higher-level managers.

The agency workers also perceived that informality and openness of relationships were encouraged. However, there was also a clear respect for authority in decision making and a feeling of obedience in following imposed rules. Both formal and informal means of communication existed. Although no organizational orientation for learning about successful practices from other organizations existed, the informal networks of knowledge sharing among employees were relatively effective. Finally, the researchers concluded that the agency did have some characteristics of a learning organization, but that these corresponded to incremental (single-loop) learning and not transformational (double-loop) learning.

Marcin Sakowicz (2002) found the organizational learning status of a Polish municipal government agency to be somewhat farther along than Guimaraes and his team found in the Brazilian agency. Sakowicz analyzed a municipal administration office in Czestochowa, a city of 250,000 inhabitants located in southern Poland. The study asked whether city officials upgraded their skills and knowledge on a regular basis; whether local authorities provided information to other agencies and citizens; to what extent use of information and communications technology improved knowledge sharing; and how officials used tacit knowledge.

Results from more than 350 survey instruments revealed that only a few departments have identified schemes, strategies, or plans for sharing internal information and knowledge. However, sharing does take place through various informal means such as face-to-face discussions, mentoring, and staff development. Sakowicz concluded that local government in Poland is still in an early phase of putting knowledge and information sharing ahead of modernization of its structure and functions. Moreover, he deemed it doubtful that really effective knowledge management at the local level existed in Poland at the time of his study.

Figure 7.3 The APHIS Organizational Learning Cycle



Source: USDA 2004.

Organizational Learning at the Department of Agriculture

A basic concept underlying the idea of organizational learning is what is known as the *organizational learning cycle*. This concept emerged from earlier work in learning theory. One interpretation of the organizational learning cycle was included in a training manual prepared by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). The APHIS four-step closed-loop model included four activities: information generation, integration of the information into the organization, interpretation, and action taken on the interpreted meaning. The APHIS model is presented in Figure 7.3.

The Inspection Service looks upon lifelong learning as the only way to remain competitive in the agency's environment, adding that employees need to invest in their own growth; APHIS can help, but the ultimate responsibility rests on the employees' shoulders.

APHIS identified a list of nearly a dozen characteristics held in common by learning organizations that should be emulated by the service. The list is included here because of its applicability to any agency wishing to evolve toward status as a learning organization. Learning organizations use these activities and strategies in their constant striving to refine their mission and transform themselves for the better:

- Learning organizations consider strategic planning and policy making a learning process; they view management decisions as experiments, not edicts.
- They encourage all stakeholders of the agency—employees, customers, suppliers, collaborators, and other stakeholders—to participate in major policy decisions.
- They use information and communications technology to inform and empower the workforce.
- Accounting and control systems are structured to assist learning.
- Learning organizations focus on pleasing internal customers through constant interdepartmental communications and promoting awareness of overall agency needs.
- They explore new and meaningful ways to reward people for ideas and actions contributing to innovation and agency growth.
- They possess an organizational structure that invents opportunities for individual and agency development.
- They rely on boundary workers—that is, all organizational members who contact external customers, clients, suppliers, stakeholders, and collaborators—for information.
- Learning organizations are those that learn from other agencies through joint training, investments, research and development, job exchanges, and benchmarking.
- They foster a learning climate by encouraging questions, feedback, experimentation, diversity, and a passion for continuous improvement.
- Finally, learning organizations provide self-development resources and facilities to all members, encouraging all workers to take responsibility for their own personal growth and learning.

Learning at the U.S. Corps of Engineers

Writing in the preface of an employees' guide on how to become a learning organization, the commander of the U.S. Army Corps of Engineers (USACE), Lieutenant General Robert B. Flowers, began with why it was important for the Corps to transform itself into a learning organization:

For over two hundred years, the Army Corps of Engineers has faithfully served the needs of the Army and the Nation. In order to continue this tradition of distinguished service in an increasingly dynamic environment, we must transform the Corps into an organization that continuously and systematically learns. This will ultimately allow us to best achieve our Vision of being the world's premier public engineer-

ing organization responding to our Nation's needs in peace and war. Organizational learning must be embedded in all that we do. We can no longer afford to simply brief each other about what we already know; instead, we must create learning dialogues in our team of teams. (USACE 2003, 3)

The guide, *Learning Organization Doctrine: Roadmap for Transformation*, was structured into three sections (USACE 2003); significant portions of that report are included in the following section.

The first portion of the learning organization report provided a definition of what is meant by a learning organization and described the roles of systematic learning, culture, and leadership in achieving learning organization status. The second section included a detailed discussion of the roles of leadership and management in learning organizations. The third outlined the assumptions and processes involved in the Corps' transformation process. Portions of each of the sections are included here as a case example of the steps public-sector agencies are taking on their paths to becoming learning organizations.

Section 1: The Learning Organization

Why Become a Learning Organization?

The Corps of Engineers is more than 225 years old, and to adapt for the future, it must continuously learn from its work today. Today the rate of change is greater than ever, thus making it even more important the Corps adapt to changing conditions as they occur. Accordingly, the Corps must learn faster than ever before. A new approach to the services it provides and to learning are also necessary. In this way, it will evolve with the needs of the nation, while also improving its competence as an organization. The cultural changes prevalent today require an understanding of all the components of the Corps. A strategy for change must take a holistic approach to align these dynamics to the desired end state.

Narrowly focused new initiatives, such as responding to the latest trend or management fad, will likely not yield enduring and widespread change. Initiatives focused solely on organizational structure will have limited success without aligning the other dynamics within the culture. The Corps must integrate many initiatives, or confusion will impede change. Since 1988, attempts to institutionalize project management as the business process have been frustrating because management did not always view the change holistically. Rather, it focused on the system and structure, doing little to change the

skills and attitudes the people needed, the style of leadership, or other elements of its culture.

USACE'S Definition of a Learning Organization

A learning organization systematically learns from its experience of what works and what does not work. The goal of learning is increased innovation, effectiveness, and performance. A learning organization is a nonthreatening, empowering culture where leadership, management, and the workforce focus on continuously developing organizational competence. Box 7.3 is a technical learning example based on recent USACE experience.

The goal of strategic learning is to create the ideal future of the Corps of Engineers in interaction with all its stakeholders. Operational and technical learning comes from the process of designing and delivering products, services, and solutions to complex problems in dialogue with customers. This journey is critical to the future of the Corps. Changes in context and in the social, economic, and governmental environment in which it serves the nation and the army require continuous development of organizational competence. Learning from past and present will prepare the Corps for an uncertain future and will create an organization that values investments in learning, an attribute that attracts and will help retain fresh talent in the ranks of the organization.

The historical and social context of the early years of the twenty-first century dramatically affects how the U.S. Army Corps of Engineers serves the army and the nation. The following Corps realities characterize this context:

Economic and Political Realities

- Increased competition for business in a global economy
- Increased scrutiny from Congress, the Office of Management and Budget (OMB), the media, and interest groups
- Drive to outsource “nongovernmental” work
- More diverse kinds of work; increasing workload (do more with less)

Work Realities

- More multi-stakeholder planning and collaboration (e.g., watersheds)
- Increased responsibilities as stewards of the environment
- New skills, thinking, and tools needed to be a knowledge-based organization
- More rapid pace of work; flexibility needed for continuous change

Box 7.3

From Khobar Towers to Pentagon Renovation

An example of how a project made use of technical learning occurred when the Corps sent a team to study what aspects of the construction of Khobar Towers in Saudi Arabia contributed to the loss of life when terrorists bombed it. By studying what did not work well there, Corps engineers were able to come up with innovative solutions that were later incorporated as best practices into the initial stages of renovation of the Pentagon.

That renovated side was attacked on 9/11/01, and those renovations resulted in a reduction in the loss of lives. Future renovations will continue to employ these innovative best practices. As a secondary benefit, the national television show *60 Minutes II* featured this example of the learning organization in action, thus educating the public about the Corps' commitment to continuous learning.

Talent Realities

- Losing experienced senior people; too few mid-level replacements
- More competition for young talent
- New values and approaches for the workforce

These elements of the new environment of the Corps reflect part of the change in the mode of production from manufacturing to knowledge and service. The manufacturing era required bureaucratic stovepipes of experts to mass produce standardized products. This logic resulted in efficient procedures, work that was fragmented into specialized compartments, and a hierarchical organization. However, the knowledge/service mode of production defining the post-Katrina era requires that bureaucratic think be replaced. This requires interactive teamwork, strategic alliances, integration of knowledge, and coproduction of solutions with customers.

In order to adapt, the Corps is continuing its evolution into a learning organization, one that is centered on these new strategic values. Today's employees are self-developing free agents who want to learn continuously. They want to acquire marketable skills, as well as attain advanced degrees and certificates to show for their learning.

According to the Corps's learning organization report, a potential fit exists between the need to create an interactive organization designed for the knowledge/service mode of production and the needs of today's employees. Creating that fit is the challenge for leadership in this era. Leaders must design the right organization and lead it in the right way. Becoming a learning organization will enable the Corps to adapt to the knowledge/service mode of production. It will also help the Corps attract young self-developers needed for the future. Only an organization that is constantly learning will attract and retain new employees to guarantee the Corps service to the nation.

In times of transformation from the old to the new, people search for the best way to organize work and motivate people in new situations. This began in the early 1980s and has continued to this day.

Sources of Learning

Organizational and individual learning have a variety of sources, including strategy, operations, and technology. Strategic learning comes from continuous dialogue about values and goals with customers, stakeholders, and partners. Operational and technical learning come from the process of designing and delivering products and solutions in dialogue with customers.

Organizational learning also comes from identifying best practices, which can be found both inside and outside the Corps. The goal for the Corps is not to copy the best practices, but to innovate something better adapted to the needs of the Corps. Similarly, members learn from cases drawn from the agency's own experience—both positive and negative—thus leading to answers to such questions as: Why did one strategy succeed and another fail? What could be done differently next time? Why did a particular initiative or operation, which had such support and resources, not produce the hoped for results? Why did another initiative or operation succeed? What lessons can be applied to improve the Corps as a whole?

The report went on to explain that learning for the Corps of Engineers occurs every day all over the world. Individuals learn. Work groups learn. Project teams learn. Senior strategic leaders learn. A learning organization makes use of these lessons for the whole organization. Training, on the other hand, is about *individual* competence. A learning organization understands the difference between individual competence and organizational competence, and connects them. Even the best training, however, does not make a learning organization. As strategic, operational, and technical learning occur, Corps leaders must bring this learning into meetings and the centers of decision making.

This learning must also be entered into a knowledge management system

that filters, distills, and integrates it so that information is turned into knowledge. The Corps must then turn this knowledge into wisdom for use throughout the organization, especially for leaders who must shape culture, policy, decisions, and planning. Knowledge management networks, techniques, and tools alone, however, will not automatically generate the sought-for higher performance, productivity, and effectiveness. Learning must be standardized so that it drives how initiatives are planned and developed, how all elements of the culture are aligned with the mission, and how decisions are made.

The learning organization is initially difficult to understand because it is a systemic concept. People often think about learning as occurring in classes taught in school; learning is considered separate from work. Learning is not “real work” in the craft or manufacturing mode of thinking. Real work in these modes produces deliverables. Some even say that learning takes time away from getting the job done; instead of learning, we could be “doing.”

This way of thinking does not portray learning as inherently a part of work. The knowledge/service mode of learning empowers people to improve their effectiveness systematically by making better products and providing better services. Learning is one of the essential keys to productivity in knowledge work. If we are not continuously and systematically learning, others are, and they will reach the goals we are aspiring to reach before we do.

Taking a historical perspective gives an insight into the relationships of learning and work. The purpose and process of learning change. New tools, technology, processes of work, and organizations require new ways of learning. Each changed context sets new purposes for learning. For example, with computers and the Internet, people can learn quickly from colleagues around the globe about their organizational innovations—if the culture and systems are there to empower that to happen, and if they are motivated to learn.

Integrating New Knowledge into the Corps

The Corps is integrating new knowledge into its institutional memory and centers of decision making. Moreover, leaders are taking responsibility for ensuring that learning from projects, initiatives, and organizational strategies is accessible across USACE. The knowledge management system is not just the network that stores the information. It consists primarily of the communities of practice, the experts in each type of work; these experts must filter, condense, and integrate the learning. Technology is considered merely a tool.

The USACE Learning Network integrates leadership, business and communications, and technical learning. The Network consists of three interrelated parts, each with a different but important function. The first part,

communities of educational resources, expands the training function by customizing courses and training events to the needs of individuals and groups. Partnerships with universities and firms allows the codesign of on-site customized offerings, distance learning (e-learning), and traditional courses. Internal Corps experts also function as educators, trainers, and mentors.

The second part of the Learning Network, communities of practice, consists of people who share a work practice, competence, or kind of knowledge. The communities of practice filter, distill, and integrate learning from all over the Corps.

The third part of the Learning Network is the Web-based system accessible from anywhere that serves as the communications infrastructure for the communities. The popular word “network” suggests that the Learning Network is a Web-based system. But without the people who use the network, the communication system is no more than a collection of electronic pipes. The Learning Network can be useful as a tool of a learning organization only if both the “people” and the “pipes” are active and working. The people and the pipes develop concurrently through the collaboration of all leaders building the communities and the Web-based system.

The Learning Network encourages virtual sharing and consulting internally based on the latest knowledge and best practices. It also facilitates assessment of individual and group learning and development needs, coaching and mentoring, and the integration of learning into the work process. All these elements of the Learning Network help ensure that learning is readily available to all Corps employees for planning, decision making, and increasing organizational effectiveness.

Section 2: Leadership in Organizational Learning

The Corps of Engineers has identified five dimensions of leadership that affect the transition to a learning organization. These dimensions are strategy, direction, drive, management, and relationships. The Corps’ explanation of each dimension is presented in the following pages.

The Strategy Dimension

Learning organizations require leaders who are strategic thinkers. These leaders explain how the organization creates value for its customers and helps them succeed. This value equation is the foundation of the organization’s strategic logic. They are visionaries who mobilize all the resources of the organization toward the ideal future. Their focus is global and long term, oriented to the success of the whole social system of the Corps.

The Direction Dimension

The leader with direction talent knows that it is inefficient for everyone to work hard when the direction for the work is unclear. This leader knows how to ask questions of teams and other leaders to make the need for clear direction obvious. This leader does not fear sounding stupid for asking what others have failed to ask: “What is the goal for this activity?” “What are we trying to accomplish?” This leader may also question the stated goal and is not afraid to go against the conventional wisdom of what the purpose is. This leader knows that this courage to ask, and to clarify direction, is extremely valuable to the Corps. The direction dimension is shaped from the interaction of five key activities:

- Creating a motivating culture
- Honest communication
- Focus
- Conceptual thinking
- Stimulating creativity

Creation of a motivating culture indicates the strength of a leader who understands that the motivation of the workforce affects the value created for the customers. Therefore, leaders make the effort to understand what motivates their workforce. Leaders must give staff members what they need to perform well. They provide the workforce with clear mandates, operating principles, resources, authority, knowledge, and tools so they can fulfill their responsibilities. They also give employees responsibilities that bring out the best of their talents. They recognize and reward them in ways they value.

Honest communication comes from a leader who is straight talking and who believes that the best policy is to let people know now what they will likely find out later. This leader tells the good *and* bad news, saying it in a way that does not cause harm to the person or the Corps. This leader knows what to say, when to say it, what forum to use, and what person or persons to say it to.

The Drive Dimension

The leader with drive knows that his or her success comes from engaging the aspirations of teams of talented people and guiding their efforts toward Corps objectives. This leader knows that others must be empowered and knows that drive to accomplish outcomes is a team effort. This leader knows that to

make the meeting effective, its outcomes must help make the Corps work better, not just make the team feel good that it did its job.

The drive dimension has two mutually supporting elements: entrepreneurial implementation and innovating systems. Entrepreneurial implementation means boldness and creativity consistent with the shared values and strategy of the Corps. Operational leaders assess local conditions, as well as human and material resource capabilities, and devise what works with their teams. Innovating systems means that leaders efficiently seek the goal, not the beaten path.

The Management Dimension

The management dimension exists in a leader who plans effectively and makes optimal use of resources. This leader recognizes that management is a series of functions to distribute among the members of a team. This leader does not feel he has to be in charge all the time and is comfortable sharing management responsibilities. This leader is comfortable letting the team, when oriented with its mandate, operating principles, and expectations, manage themselves as much as possible. This dimension incorporates five activities. The learning organization manager:

- Coordinates people and work
- Creates accountability for learning and measures results
- Integrates knowledge
- Empowers workers and stakeholders
- Includes learning in projects and meetings

The Relationship Dimension

Organizations in the knowledge/service economy thrive on relationships. Therefore, they seek to identify the values and goals of everyone with a stake in the success of the organization. The leader in these organizations creates relationships by being honest and transparent in forging shared strategy with all internal and external stakeholders. The relationship dimension has four activity responsibilities, which result in the following benefits:

- Developing leadership and talent
- Coaching younger and new workers
- Creating team collaboration and improves productivity
- Developing solutions to help customers succeed, working with them as part of the team, “coproduce” desired outcomes.

Section 3: Creating a Learning Organization

The success of a learning organization improves when leaders empower individuals to use their strengths to help customers succeed. People are more willing to develop and perform when learning builds on their strengths. The Corps remains strong in some leadership strengths, but believes that it needs to continue to develop those strengths. As an engineering organization, the Corps has achieved operational excellence throughout its history.

With retirements, transfers, voluntary departures, and new military personnel entering the Corps, new leaders may be assigned to vacated positions. The challenge for the Corps is to select the right person for the position, based not on technical proficiency alone, but also on competence and character as a leader.

Improving Training

Individuals learn every day, everywhere in the Corps. Nonetheless, improving training and increasing individual learning alone do not result in a learning organization. The organization as a whole must continuously become more competent and successful in its missions for the learning organization to become real.

Conclusion

An organization that learns is quick to identify, digest, and apply lessons learned in its interactions with the environment. Public-sector organizations must develop innovative solutions to their changing legal, political, economic, and social environments. For knowledge to contribute to organizational learning, managers and administrators must establish and support a culture that honors and rewards the people who facilitate the learning process.

People understand and build knowledge in four steps: (1) they define and frame problems on the basis of their prior experience and the knowledge that is already available to them; (2) they seek out, locate, and collect the information they consider essential for dealing with the problems; (3) they code and analyze collected data; and (4) data are coded, interpreted, and reported as the conclusions gained during a learning process. Knowledge management systems are involved in each of these processes.

The activities and experiences of the U.S. Department of Agriculture and Corps of Engineers are examples of public-sector efforts to transform their agencies into learning organizations.