
The competitive advantage of organizational learning

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Abstract

Aims to understand how training and communication help an organization to learn and gain a competitive advantage. Explores the link between training, communication and measurement with individual and organizational learning by conducting a specific qualitative analysis looking for insights into how the concepts sometimes work and how they fail. Also touches on the general themes that have shaken management and employees over the last 15 years as they struggle to survive and prosper in the global village, and compares this concept with ideas that have been prevalent in organizations since the early 1970s. The objective is to understand how organizations can tap their intangible assets and increase their value to the organization, the individual who holds the knowledge and the society that benefits from a healthy economy.

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Introduction

The secret of education lies in respecting the pupil (Ralph Waldo Emerson).

The “knowledge worker” and “organizational learning” have become important concepts in popular business culture. Managers are struggling to understand how these concepts fit into their company, if at all. Employees are concerned about how another “airline journal” war cry will disrupt their lives. This article will explore what separates these concepts from others that have emerged from North American business schools in the past ten years, and how they can make a positive change and add value to any company.

Knowledge has long been correlated with power. The Information Age has made information, and the knowledge of how to use it, more powerful than ever, but in the same instant it has a reduced “shelf-life”. Knowledge is a competitive advantage, but it is also more broadly distributed. Knowledge is an asset, but it is not usually accounted for on the bottom line. It can leave your organization and suddenly emerge at your competitors’. Employees may possess certain knowledge, but the organization has not benefited, cannot, and will not benefit from that knowledge without an adequate structure to enhance and support it. The shift in the Western economy away from manufacturing and towards service is creating a sense of urgency about evaluating this intangible or invisible asset. This transformation began in the 1970s with the popular use of mainframe computers. It became superheated when personal computers made information storage, processing and transfer available to everyone.

The market value of many corporations is now several times its book value. The difference between the two is found in an organization’s employees. Their individual skills, know-how, information systems, designs, supplier relationships and client contacts add value and generate wealth. The difficulty that most firms face is how to translate this value to their bottom line. Managers will typically under-utilize an asset when they cannot quantify its value. The problem will persist until a consistent and effective measurement is developed that can be shared with investors. Organizations that

have not adapted to this new reality will quickly lose competitive ground and disappear. de Geus (1997) discusses “living companies” that adapt and survive. He notes that, by 1983, one-third of the 1970 *Fortune* 500 companies had been acquired or broken into pieces, or had merged with other companies. This study indicated that the average corporate life expectancy was below 20 years; only large companies that had started to expand after infancy continued to live, on average, another 20 to 30 years (de Geus, 1997). This article will not help to assign a value to knowledge, but will examine why it is important to develop ways to measure and cultivate organizational learning. This article also explores corporate strategy because it is important to understand where a company is going before it can decide what knowledge it needs, what resources are required and how it will measure progress and success.

Organizing to learn within complex and contemporary structures referred to as learning organizations have become the new beacon for managers navigating the white waters of the “new economy”. The concept of organizational learning offers models to unleash and harness the power of the individual. In his book, *The Fifth Discipline: The Art and Practice of the Learning Organization*, Senge (1990) articulated and popularized the newly-conceived concept of organizations that continually adapt to their changing environment. Senge explored how organizations get stuck within their own systems and provided a blueprint for extracting themselves from their mental and structural routines. The question is whether this represents part of a fundamental change in business management (Bartlett, 1997) or is it the latest corporate mantra from a list of current fads that include downsizing (rightsizing), reengineering, total quality management, empowerment and team building?

The objective of this article is to understand how training and communication help an organization to learn and gain a competitive advantage. This article will explore the link between training, communication and measurement, with individual and organizational learning. To accomplish this a specific literature search was conducted looking for insights into how the concepts sometimes work and why they fail. The

article will also touch on the general themes that have shaken management and employees through the past 15 years as they struggle to survive and prosper in the global village. The article will also compare this concept with ideas that have been with us since the early 1970s and to determine what has or has not changed since then. The objective is to understand how organizations can tap into their intangible assets and increase the value of those assets to the organization, to the individual who holds the knowledge and to the society that benefits from a healthy economy. The initial place to begin in this article is with the current state of organizational learning and foundations upon which it has been developed.

Organizational learning: the theoretical base

Argyris and Schön (1978) point out that the expression organizational learning is widely used and usually not clearly defined. Before they made their earlier, as well as current, contribution to the theory, they identified some disciplines which promulgated different learning approaches according to different metaphoric views of what organizations stand for. Although providing great variety, these disciplines presented a fragmented picture and had not been put together in a unifying framework. In order to remedy this gap, Argyris and Schön (1978) proposed to group existing theories of organizational learning depicting for each discipline the associated image of the organization and explanatory details (see Table I).

An ulterior typology has been drawn by Easterby-Smith (1997) in a Table which presents several disciplines and their contributions to organizational learning. Table II reproduces part of the original table.

In addition, there are two more definitions of organizational learning found in the literature. First, McGill and Slocum (1993) define organizational learning as the process by which managers become aware of the qualities, patterns and consequences of their own experiences and develop mental models to understand these experiences.

Table I Some previous organizational learning theories

Image	Learning approach	Details
Group	Social psychology	Organizations are collections of persons who interact on a regular basis and share a sense of collective identity Learning is a term applicable to individuals within the context of a group, but when individuals learn to interact with one another so as to carry out shared tasks, one can speak of the group itself as learning
Agent	Instrumentalism Management theory	Organizations are seen as instruments for the achievement of social purposes. The organization itself is a subject which is conceived as sentient, active, intelligent and purposeful One could intervene so as to improve organizational learning by increasing the organizational store of useful knowledge, by improving the design of organizational programs, and by increasing the problem-solving capabilities of individual decision-makers
Structure	Sociology Theory of bureaucracy	Organizations are regarded as an ordered array of role-boxes connected by lines which represent flows of information, work, and authority Organizational learning has to do with change of structure. An organization may be said to learn when it restructures itself in response to change in internal or external environment
System	Cybernetics Information theory	Organizations are thought of as self-regulating entities, as complexes which maintain certain essential constancies through cycles of action, error detection and error correction Organizational learning consists of the self-regulating process of error detection and error correction itself, whether or not maintenance of the organizational steady state is mediated by the self-conscious efforts of individual members of the organization
Culture	Anthropology Ethno-methodology Phenomenology	Organizations are perceived as small societies in which people create for themselves shared meanings, symbols, rituals and cognitive schemata which allow them to create and maintain meaningful interactions among themselves and in relation to the world beyond their small society Organizational learning may refer to: <ul style="list-style-type: none"> • the processes by which individuals become socialised to the culture of the organization; • the processes by which organizational category schemes, models, images, or cognitive modes are transformed in response to error, anomaly or inconsistency; or • the process by which members of an organization become cognisant of the social reality they have jointly constructed, subject that sense of reality to critical reflection, and seek deliberately to transform it
Politics	Political theory Theory of socio-political movements	Organizations are political systems in the sense of both government and of interplay of contending interests and associated powers Organizational learning might consist of the processes by which members of an organization learned to invent and apply, in concerted organizational action, the strategies most appropriate to the task of winning the game in which they are engaged with other organizations Organizational learning might also consist of a process of converting organizational politics to organizational inquiry, i.e. achieving collective awareness of the processes of contention in which members are engaged, gaining thereby the possibility of converting contention to cooperation

Table II Different disciplines' contributions to organizational learning theory

Discipline	Contribution
Psychology and organizational development	Hierarchical organization Importance of context Cognition Underlying values Learning styles Dialogues
Management science	Knowledge Memory Holism Error correction Informating Single and double loop
Sociology and organizational theory	Effects of power structure and hierarchy Conflict is normal Ideology and rhetoric Interests of actors
Strategy	Organization-environment interface Levels of learning progressively more desirable Networks Importance of direct experience Population-level learning
Production management	Importance of productivity Learning curves Endogenous and exogenous sources of learning Links to production design
Cultural anthropology	Culture as cause and effect of organizational learning Beliefs Potential cultural superiority

Second, Edmondson and Moingeon (1998) believe that there is confusion about the meaning of organizational learning and thus propose a definition that would dissipate it. They define it as a process in which an organization's members actively use data to guide behaviour in such a way as to promote the ongoing adaptation of the organization. It is a process that requires individual cognition and supports organizational adaptiveness.

The least we can extract from Tables I and II is that there are many ways to approach organizational learning, and Argyris and Schön's (1978; 1996), even though much celebrated, is only one among many. The next

section of this article examines the broader picture of the external/internal environment within which organizational learning is operationalized.

The new economy: faster and more fleeting

Sacred cows make the best hamburger (Mark Twain).

The technological revolution that has been shaping our society since the latter part of the 1970s has brought more changes in management practices than in any other previous period. The speed of change is blurring; we used to talk about the world's collective knowledge doubling every ten years. Now our language is jammed with technological terms and corporate thinking and is being driven by concepts such as Moore's Law (computing power doubles every 18 months) and terms such as Net speed (the Internet infrastructure is doubling every three months).

In an article in *Fortune* magazine (Field and Yang, 1990) executives were looking for a new paradigm of the successful business organization. In the 1980s over half of the *Fortune 500* put themselves through the exercise usually relabeled restructuring. Executives were not convinced that these new "decentralized, lean and mean" structures would meet the challenges ahead. Furthermore, they believed that they would not be:

- *Fast enough* to match foreign competitors' product development or identify an opportunity in the marketplace.
- *Keen enough* to deliver higher levels of customer service or achieve leaps in productivity.
- *Smart enough or sensitive enough* to manage a polyglot workforce or satisfy the needs of its best employees.

The double bind for corporations is that at the same time that they were disfranchising their employees (the people with the information) with poorly thought out changes (downsizing, rightsizing and reengineering), technology was increasing the power of information. The new economy was about ideas and knowledge first, services second and products a distant third and fading. Many companies found themselves in the position of needing to

re-hire employees as expensive consultants. Why? Because their accounting systems could not assign a value to what those employees already knew. Our 500-year-old Venetian “double entry” accounting system is having trouble keeping up in the Net speed world.

There appears to be a paradox of the new economy. Individuals are allowed to work more independently, more innovatively, more individually, to think faster and work smarter, while, at the same time, they are asked to do more with less, take on new responsibilities and hit higher targets. The individual knowledge worker is the company’s “core process” (Weber, 1994). In an age where technological change happens at a rapid fire pace, the 19-year-old kid who just learned how to operate your computer-controlled equipment is important for what he/she knows, not the fact that they feed the machine.

This reality is somehow lost when an organization restructures or does not appreciate what the employee actually brings “to the table” in today’s workplace. When an older employee is replaced instead of retrained, an individual is lost who may share the values that a company desires but cannot teach the neophyte replacement. The cost of those displaced workers is borne by society at large, but the inefficiency linked to the transition is deducted from shareholders’ returns. There is a great cost to everyone.

What we are talking about is intellectual capital (IC) which is the combination of:

The human capital, or aggregate individual capabilities in the system that go home at night, and structural capital generated through the embedding of capabilities as strategies, systems, structure, culture and customer base (Labarre, 1996).

The tasks that an employee performs do not always require the total knowledge they possess. They are often remunerated for the tasks, when it is actually the specific knowledge that the firm values. The fact that they do not employ the knowledge in every activity (like data stored in a hard drive) leads them to be undervalued. When they leave or they do not add to or protect their knowledge, it is usually because they were conditioned to believe that it is not important.

Kaplan and Norton (1996) use a balance of performance drivers and outcome measures to determine if an organization is making progress toward its goals (see Table III). With these broader measures, it is possible to take a holistic view of a successful organization by taking non-financial factors into consideration. Kaplan and Norton (1996) suggest “flying an airplane with the altimeter is fine, until you run out of fuel”. This is a vivid analogy for organizations who solely focus on the monthly or quarterly bottom line.

The vision and strategy of the organization dictate what needs to be measured. The goals must be linked to each other and cannot be mutually exclusive.

This implies that the organization has taken the time to develop a strategy and envisions the importance of communicating that strategy to its employees. The idea of measuring non-financial performance is an important step in communicating (what is important), training (what to look at, what to train for) and organizational development (how performance in one area impacts upon the group). Selecting the appropriate measurements is critical. A firm runs the risk of gaining in a single area but sub-optimizing the organization if it ignores critical variables (Sheridan, 1997).

The emphasis on profits and on the maximization of shareholder value ignores the two most significant forces acting on companies today – the shift to knowledge as the critical production factor and the changing world around the companies . . . To cope with a changing world, any entity must develop the capability of shifting and changing, of developing new skills and attitudes – in short, the capability of learning (de Geus, 1997).

In the same article by Sheridan (1997), Chairman F. Kenneth Iverson readily cites the attitude and learning ability of Nucor’s employees as the primary factor driving the success of his firm. “We’ve tried a lot of technologies,” Iverson says, “and our success is probably 30 per cent the result of new technology – and 70 per cent due to our people”. This is an important aspect of the new economy – as companies invest in technology, they often overlook that the payback will be dictated by the people that use the equipment and systems.

In fact, these important investments are often only catching up to all of the

Table III The balanced scorecard: a framework to translate strategy into operation

Area	Focus	Objectives	Measures	Targets	Initiatives
Customer	To achieve our vision, how should we appear to our customers?				
Financial	To succeed financially, how should we appear to our shareholders?				
Internal business process	To satisfy our shareholders and customers, what business processes must we excel at?				
Learning and growth	To achieve our vision, how will we sustain our ability to change and improve?				

employee suggestions and ideas that we have failed to capture and implement over the years. Jim Morgan at Applied Materials also agrees:

There are two fundamental ingredients. I think you need a good strategy, but you also need to do the dailies well. Building an effective global company is 10 per cent strategy and 90 per cent implementation of the daily requirements (Sheridan, 1997).

Applied Materials has enjoyed a 30 per cent average compound growth rate for the last 20 years. There are several learning points which can be teased out here.

The implications of the New Economy for organizational learning are:

- (1) Companies making decisions based only on accounting information will not fully utilize all of the assets that they have at their disposal.
- (2) Investment in technology, although important, is not the final answer. Often, developing an organization that captures the ideas and knowledge of the people that engineer the system will have a greater return. This process allows for incremental change that is less damaging for the organization than total re-engineering which is undertaken to fix everything, all at once, because nothing works.
- (3) Next year's speed of change and the flexibility (organization and employees) that it will demand will make this year's chaos look good. To compete, an organization needs more people, to know where to get information, know how to share information, know how to store it, retrieve it, and use it.

The next area to explore will be the process of strategic planning as a foundation for learning organizations.

Strategic planning: the roots of organizational learning

Where there is no vision, the people perish (*Proverbs 29:18*).

The best game plan in the world never blocked or tackled anybody (Vince Lombardi).

It is no mistake that most business analogies come from the world of sports and war. These two areas provide observers with the immediate results of strategy, training, communication and knowledge. However, when a manager, as a spectator or reader of history, uses the analogy, the sense of depth is lost; for example:

- the *vision* that brought the strategy to life;
- the *discipline* to train and take nothing for granted;
- the *system* that allowed information to flow throughout the organization (in many directions at the same time); and
- the *respect* for knowledge (about the competition, the environment, the technology and the organization's own abilities).

Porter (1980) lays out a blueprint for evaluating and guiding an organization. In its time, strategy was the hottest new concept in North American business. Porter felt that competitive strategy must grow out of a sophisticated understanding of the rules of competition that determine an industry's attractiveness. Managers, who felt strategy was easy and implementation more difficult, did not put enough effort into strategy. Porter

remarks that, “You can’t get a sophisticated understanding from a three-day retreat” and “You can’t implement any strategy if you haven’t developed a plan, communication tools, or a feedback system while you formulate your strategy”. The two quotes at the beginning of this section of the article suggest that an organization without a plan cannot compete for long, and one with a plan that cannot be implemented is not much farther ahead. Strategy went from being a hot concept to a burdensome chore in many corporations.

Recent research has revealed that senior management is devoting less than 3 per cent (40/30/20 rule) of its energy to building a corporate perspective of the future (Labarre, 1994). Managers spend about 40 per cent of their time looking at external issues. Of that time, about 30 per cent is spent looking three or more years into the future. And of the time spent looking forward, less than 20 per cent is spent building a collective view of the future (40 per cent × 30 per cent × 20 per cent = 2.4 per cent).

Thinking about the future is intellectually demanding. The first thing you have to do in senior management is to admit that your intellectual capital has depreciated without you knowing it, that you are out of date. The “installed base of thinking” derived from education and training, consultants and career experience can congeal into a dominant managerial frame [which is] as pervasive and influential as genetic coding (Labarre, 1994).

Once senior managers identify the direction for the organization, they must invest time developing a checklist of items that their managers need to address to move the organization in the intended direction. Like a checklist before a launch, the list does not say in what way “how” indicates “what” needs to be done. The list, or performance measures, should give all employees a sense of the organization’s priorities and provide a frame of reference for decision making. Understanding direction and priorities is integral to effective organizational learning. Hitt (1996) provides a systems model of a learning organization by incorporating Senge’s principles (1990) (see Table IV) from *The Fifth Discipline* within the McKinsey *Seven-S Framework* (see Table V) (Pascale and Athos, 1981; Peters and Waterman, 1982).

After examining these models to understand learning models as well as strategy formulation, it is important to look at

knowledge management in the context of your overall strategy and integrate your knowledge-management approach within that strategy:

For example, say one of your critical strategies is to become more customer-focused. Your knowledge-management capabilities should then be targeted to building greater customer intimacy (McCartney, 1998).

Organizational learning is more than just having employees returning to a B-school; it is about the ability to harness and use the knowledge for competitive advantage. It is also about the ability of an organization to learn from itself, its mistakes, its inefficiency and its employees. Managers must identify gaps between what they have and what they need to have if they are going to create the organizational structure to implement the strategy. There is a method to this “madness”.

The implications of strategy for organizational learning are that:

- (1) if senior management has not understood the importance of defining a strategic intent for their organization, defining the direction and how the firm will change its industry, then they cannot know what the organization needs to learn;
- (2) if senior management is unable or unwilling to support the slow grind of answering all of the details of how to implement a strategy *beforehand*, then it probably does not have the willpower to set up a learning organization; and
- (3) if senior management is still looking for the quick fix or “home run”, then organizational learning will be the next fad that washes through the organization and employees will be saying “BOHICA!” rather than embracing the new concept (bend over, here it comes again).

Once the learning and strategic issues are considered, then the real “litmus test” is the execution of these two integrative variables in terms of execution or managerial practices.

New (?) management practices

A rose, by any other name, would smell as sweet (William Shakespeare)

Table IV The learning disciplines^a

Learning disciplines	Essences: the state of being of those with high levels of mastery in the discipline	Principles: guiding ideas and insights	Practices: what you do
Systems thinking	Holism Interconnectedness	Structure influences behavior Policy resistance Leverage	System archetypes Simulation
Personal mastery	Being Generativeness Connectedness	Vision Creative tension vs emotional tension Subconscious	Clarifying personal vision "Holding" creative tension Making choices
Mental models	Love of truth Openness	Espoused theory vs theory in use Ladder of inference Balance inquiry and advocacy	Distinguishing "data" from abstractions based on data Testing assumptions "Left-hand" column
Building shared vision	Commonality of purpose Partnership	Shared vision as "hologram" Commitment vs compliance	Visioning process Acknowledging current reality
Team learning	Collective intelligence Alignment/Dia Logos ⁴¹	Integrate dialogue and discussion Defensive routines	Suspending assumptions Acting as colleagues Surfacing own defensiveness "Practicing"

Note: ^a Senge goes to great lengths to differentiate dialogue (thinking together) from discussion (a clash of opinions)

Source: Senge (1990)

Table V McKinsey's "Seven S" definitions

Strategy	Analysis of environment, competition, customer needs and one's strengths and weaknesses leading to a plan or course of action which determines the allocations of a firm's scarce resources, over time, to reach identified goals
Structure	Salient features of the organization chart (i.e. functional, decentralized, etc.). Alternatively, a description of how the separate entities of an organization are tied together (solid or dotted line relationships), patterns of status and control
Systems	Proceduralised reports and routinised processes. On the tangible side, includes routinized processes such as meeting formats and norms of conflict management
Staff	Characterizations of the major groupings of people within the firm by education, functional discipline or work background (i.e. engineers, entrepreneurs, MBAs, etc.)
Style	Description of behavioral patterns or common traits of key managers and of the organization as a whole
Shared values	The significant meanings or central beliefs that organization imbues in its members. These overarching values act as "tie breakers", often dictating the organization's orientation toward quality, financial objects, employees, society, etc.
Skills	The one or two distinctive capabilities of the organization, which authentically differentiates it from the competition

Source: Pascale (1994)

The challenge for many companies attempting to implement organizational learning is:

Knowledge management has become the next silver bullet – in effect, the successor to the reengineering and downsizing efforts that marked the last decade (McCartney, 1998).

Good ideas and good intentions, that were poorly designed and improperly implemented, have been costly disruptions of a lot of people's lives. Training,

communication and measurement (re-bundled as organizational learning) give managers another opportunity to wreak havoc because expectations, resources and commitment are not aligned.

One of the recent management trends (fads) was the idea that we could exploit employees' knowledge by putting them in charge. Empowerment, in many companies, was another phrase for cutting out a level of management (not those who implemented the

idea) and abdicating responsibility to employees. On this issue, Burke (1997) quotes Warren Bennis (1996) from a *Los Angeles Times* interview concerning empowerment where executives were espousing empowerment on the one hand and downsizing on the other:

... empowerment is an increasing Orwellian term, not simply a lie, but an infuriating inversion of the truth. A demoralizing sense of powerlessness is what many jobholders are feeling (as they worry about being downsized) ... How can you have workplace empowerment in the absence of trust? ... Empowerment and restructuring are on a collision course. It's impossible for a company to reengineer and empower at the same time, even though many firms are attempting it.

Empowerment was not the only “magic pill” that management tried to treat its symptoms with. Consider, for example, the consequences of downsizing in terms of organizational memory loss and erosion of valued skills and experience (Burke, 1997). Service companies are highly susceptible to such loss. The problem is not with downsizing so much as it is with the lack of energy that went into the process. Managers who have been fed on a diet of ten second news bites, MTV and complicated ideas summarized between advertisements, grossly underestimate the amount of preparation that is required. Companies trying to follow an industry leader amplify the problem. Burke (1997) refers to this as organizational cloning:

Organizational cloning can take a number of forms: for example, mimicking other organizations with respect to such management techniques as TQM, reengineering, self-directed groups and, of course, downsizing. Cloning is particularly prominent within industries, each company wanting to mimic what the best in its field is doing. And when executives want to measure how well their cloning process is going, they call it benchmarking.

Organizational learning cannot be another “Me too” experience. It requires much work. A company has to consider what it wants to be and what resources it has (strategy). It needs to share the strategy with employees (communicate). It must define progress and success (measurements); then look for gaps between their current reality and future reality (feedback). Finally, it must strive to narrow the human resource gaps (hire, train and develop). The process is never complete and, once started on the path, the sequence disappears. Ultimately, all of these

activities become interdependent (Garvin, 1994). The following quote illuminates this point:

the learning organization should be meaningful, manageable and measurable. The three Ms may indicate why it is so difficult to find examples of learning organizations, each M is independent, yet like the learning organization itself, is interdependent. Thus although many definitions have attempted to capture the essence of the learning organization it still remains difficult to move the theory to reality without effective measurement tools. Measurements must be taken to assess the current, in order to determine which actions must be taken to manage the progression towards a learning organization (Appelbaum and Reichart, 1998a).

The new technology has also given managers and companies new tools to work with that support the learning organization better than ever. These include search engines, data mining and expert systems (McCartney, 1998). It is more a way of doing business than it is a piece of software; it is more about business processes than systems.

The technical solutions being offered under the knowledge-management rubric simply make it possible to address certain business issues more effectively and more comprehensively.

The implications of past management practices for organizational learning are:

- (1) The experience of the past 20 years has shown us that time and again managers take complicated concepts, oversimplify them, expect too much out of them, do not make adequate preparation for implementation and then give up on them too quickly. Disillusionment generally leaves the company in a worse position than the one it started from.
- (2) Learning organizations do not have to replace the other concepts (downsizing, business process re-engineering, total quality management, etc.). These organizations may incorporate some of these concepts; the difference is that they become part of the process and not a means to an end.
- (3) Managers should be wary of “pre-packaged” or “canned” solutions. This is not a quick fix or home run solution. Organizational learning is about culture, values and competing over the long term.

How the manager can conceptualize and internalize these new management concepts is usually in the domain of learning, training and development.

Training, learning and development

Give a man a fish and you feed him for a day.
Teach him how to fish and you feed him for a lifetime (Lao Tsu).

It is beyond the scope of this article to discuss the components and variables associated with training that are related to organizational learning. What is important, however, is that managers realize three things:

- (1) there is not one *training* plan for the entire organization or one that is permanent;
- (2) the *tools* that today's managers were trained under are out of date; and
- (3) an organization must *evaluate* how it learns and how well it supports learning.

Training must be designed to help close the gaps between an organization's current reality and its future transformation. Managers must develop training that suits many different needs, which implies that different people will need different skills at different times. Managers will have to develop people to train others, transfer knowledge, use current technology and prepare for their next job. Training and development has also become a way to retain employees who are interested in personal growth and challenges an incentive equal to salary. Employees that possess the values that an organization desires will have to be protected against obsolescence and retrained before their skills are outdated.

Tools to train with and develop systems that teach and facilitate learning abound. The difficulty will not be in finding them, it will be in not losing focus of the outcome. These powerful tools can absorb considerable organizational energy, and people can get distracted just using the tools.

The Internet is a good example of how often people have logged on to search for information and become so fascinated by the tool that their search loses its original meaning. These tools include:

- Data warehousing, data marts and data mining let companies create knowledge out of data by combining various

databases into one and then using mining tools to spot trends and extract hard-to-get data.

- Groupware, running on intranets, can provide platform-independent knowledge sharing. Alan Baren, GroupWare and Internet strategist for Coopers & Lybrand, says, "... interactive forms, threaded discussions, and even personal Web pages for all 16,000 employees" (Patterson, 1997).
- Intranets: by the year 2000 all major corporations will have intranets up and running with most employees connected, predicts Waverly Deutsch of Forrester Research. The fastest-growing technology within the past two years, intranets leverage a company's intelligence by allowing users to easily create access and distribute company information (Patterson, 1997).

Evaluating a company's ability to learn will facilitate the development of a learning organization. Identifying obstacles to learning that are part of an organization's culture is a necessary first step to implementation. Organizations that are unaware of, or in denial about, these mental blocks will not have a high success rate. The majority of the literature written about the learning organization tries to define the general characteristics (Appelbaum and Reichart, 1998). This search has produced definitions that focus on:

- the importance of acquiring, improving and transferring knowledge;
- facilitating and making use of individual learning; and
- modifying behavior and practices to reflect the learning.

These authors (Appelbaum and Reichart, 1998b) have developed a model that identifies the characteristics that have been found in many successful learning organizations which encompass learning orientations and facilitating factors, which is presented in Table VI. The learning orientations identified are the methods for sharing, developing and utilizing knowledge. The facilitating factors are the difference between how easy and how hard it is for useful learning to occur.

The implications of training for organizational learning are:

Table VI Definitions of the learning organization's orientation and facilitating factors

Learning orientations ^a	Facilitating factors ^b
<i>Knowledge source: internal-external</i>	<i>Scanning imperative and performance gap</i>
Preference for developing knowledge internally versus preference for acquiring knowledge developed externally	Shared perception of a gap between actual and desired state of performance, performance shortfalls seen as an opportunity for learning. Information gathering about conditions and practices outside the unit, awareness of the environment
<i>Product-process focus: what?-how?</i>	<i>Concern for measurement</i>
Emphasis on accumulation of knowledge about what products are versus how organization develops and makes its product	Considerable effort spent on measuring key factors, striving for specific quantifiable measures, discussion of metrics as learning activity
<i>Documentation mode: personnel-public</i>	<i>Experimental mind set</i>
Knowledge is something individuals possess versus publicly available know-how	Support for trying new things, curiosity about how things work, failures being accepted, changes in work processes, policies and structures are a continuous series of learning opportunities
<i>Dissemination mode: formal-informal</i>	<i>Climate of openness</i>
Formal prescribed organization-wide methods of sharing learning versus informal methods	Accessibility of information, open communication, problems/errors are shared, debate and conflict are acceptable ways to solve problems
<i>Learning focus: incremental-transformational</i>	<i>Continuous education</i>
Corrective learning versus radical change	Ongoing commitment to education at all levels of the organization, support of members' growth and development
<i>Skill development focus: individual-group</i>	<i>Operational variety</i>
Development of individuals' skills versus team and group skills	Variety of methods, procedures and systems, appreciation of diversity, pluralistic rather than singular definition of value competencies
	<i>Involved leadership</i>
	Leaders articulate vision, are engaged in its implementation, frequently interact with members, become actively involved in education programs
	<i>System perspective</i>
	Interdependence of organizational units, problems and solutions seen in terms of systemic relationships among processes, connection between the unit's needs and goals and those of the organization

Notes:

^a The learning orientations identified are the methods for sharing, developing, and utilizing knowledge

^b Facilitating factors are the difference between how easy and how hard it is for useful learning to occur

Source: Appelbaum and Reichart (1998a)

- (1) A training program, no matter how well thought out, does not constitute a learning organization.
- (2) The tools to support training, especially self-learning, are available and are as sophisticated and simple as the business they are designed to support. The challenge is not in finding them, or implementing them, but in giving employees free reign to learn faster than the organization and then to bring that information back to the group and train others. In line with this is the problem of ensuring that what employees learn supports the business plan, and in recognizing that what they learn may not help today, but may be the skills we need tomorrow.
- (3) Understanding the orientation of the organization and how well it supports learning provides a good indication of

whether or not an organization can expect to implement the culture that supports a learning organization.

One of the underpinnings of organizational learning is the transmission of information and knowledge through the process of communications, which is presented next.

Communication

You are responsible not only for what you say, but also for what you do not say (Martin Luther).

Communication is widely recognized as a critical factor to the successful implementation of any change in an organization. This is even more critical for a learning organization. What is often missing in a manager's definition of communication is

the listening aspect. Listening provides an opportunity to understand what the other person heard and perceived. This is especially critical when a message (e.g. the corporate strategy) is passed through many layers of the organization with each layer filtering the information through their own bias before passing it on to the next. A model is proposed of how the communication loop needs to be closed for an organization to progress in the intended direction (see Figure 1).

In essence, the learning organization is all about dialogue (Senge, 1990). The flow of ideas throughout the organization creates a competitive advantage by redefining its industry and differentiating it by changing the rules that the company competes by. An organization communicates by its measurement system, with its reward system and through its structure. Communication includes teaching, training and developing. An organization really communicates when it creates objectives. Managers overlook the power that they let loose in an organization when they make these decisions. Once defined by objectives, measurements and rewards, an organization will perceive that

everything not on the list is unimportant. This is its null hypothesis.

Brache and Rummler (1990) highlight the problem and address the issue of gaps in the organization by focusing on performance needs and levels (Table VII). This is a final tool that an organization can use to establish the learning environment as a reference that cuts across departments to ensure that all of the participants in a process are communicating with each other. All of this is intended to highlight the difference between the amount of work that is required to communicate effectively and putting up banners with the “slogan of the month”.

The implications of communication for organizational learning are:

- (1) communication, sending and receiving, ties it all together;
- (2) managers need to realize that they are communicating in everything that they say and do, and they communicate most clearly when the two align; and
- (3) filters are everywhere; just because your message was clear in your mind does not mean that it is clear for everyone to whom it may have been intended.

Figure 1 Communication: was the message they got the one that we sent?

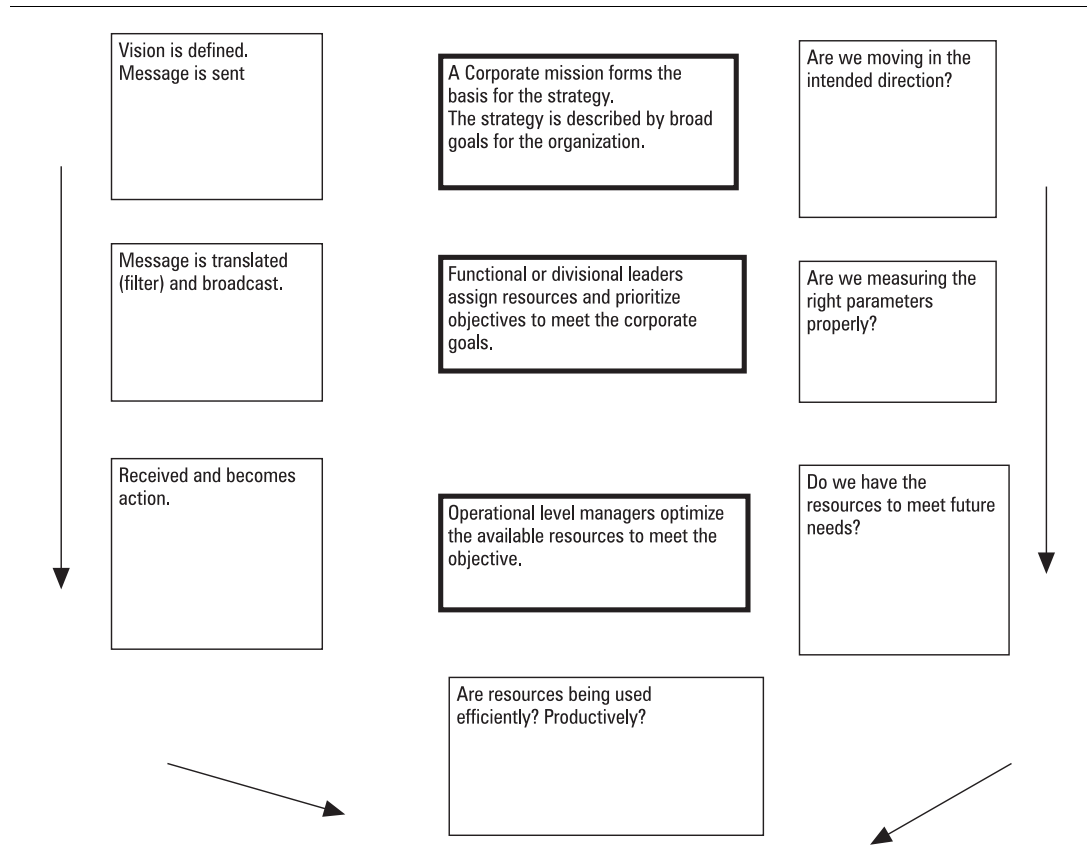


Table VII The nine performance variables with variables

Goals	Design	Management
<i>Organization level</i>		
Has the organization's strategy/direction been articulated and communicated?	Are all relevant functions in place?	Have appropriate function goals been set?
Does this strategy make sense, in terms of the external threats and opportunities and the internal strengths and weaknesses?	Are there unnecessary functions?	Is relevant performance measured?
Given this strategy, have the required outputs of the organization and the level of performance expected from each output been determined and communicated?	Is the current flow of inputs and outputs between functions appropriate?	Are resources appropriately allocated?
	Does the formal organization structure support the strategy and enhance the efficiency of the system?	Are the interfaces between functions being managed?
<i>Process level</i>		
Are goals for key processes linked to customer/organization requirements?	Is this the most efficient/effective process for accomplishing the process goals?	Have appropriate process sub-goals been set?
		Is process performance managed?
		Are sufficient resources allocated to each process?
		Are the interfaces between process steps being managed?
<i>Job/performer level</i>		
Are job outputs and standards linked to process requirements (which are in turn linked to customer and organization requirements)?	Are process requirements reflected in the appropriate jobs?	Do the performers understand the job goals (outputs they are expected to produce and the standards they are expected to meet)?
	Are job steps in a logical sequence?	Do the performers have sufficient resources, clear signals and priorities and a logical job design?
	Have supportive policies and procedures been developed?	Are the performers rewarded for achieving the job goals?
	Is the job environment ergonomically sound?	Do the performers know if they are meeting the job goals?
		Do the performers have the necessary knowledge/skill to achieve the job goals?
		If the performers were in an environment in which the five questions listed above were answered "yes", would they have the physical, mental and emotional capacity to achieve the job goals?

Source: Rummler and Brache (1990)

Some recommendations

Take my advice, I'm not using it (Unknown).
There is no single right way or only one way. There is no roadmap (Appelbaum and Reichart, 1998b) available to follow that will take a traditional organization down the path to being a learning organization. In many ways, it is the journey that creates the learning organization. It is clear that each organization must find its own way, but the principles to apply are becoming clearer. The journey is not a simple one, for it requires challenging many of our most fundamental beliefs and operating principles. This can be extremely difficult. It takes a sustained effort and time to

change individual behaviors, perceptions and beliefs.

Burke (1997) adds, in an agenda for an organizational dynamics practitioner, that to accomplish the above challenge what we must keep in mind are:

- (1) *Expectations*. The greater an employee's ambiguity regarding the employer's expectations related to role and task responsibilities . . .
- (2) *Performance feedback*. The absence of feedback also contributes to insecurity and reduced motivation.
- (3) *Reward systems*. If employers want to keep their above-average performers but cannot guarantee long-term employment, then they must make it

worthwhile for these employees to stay with the organization.

If a needs analysis could be executed for the learning organization, there would be a number of critical success factors required to build and maintain effectiveness. Thompson (1995) examines the factors that are critical to build learning organizations. He states that the CEO and the senior managers make a critical difference by the example they set. He furthermore identifies some critical success factors:

- senior management committed to making learning capability a key part of its ongoing competitive advantage;
- compelling vision of the desired learning organization that people feel part of and excited by;
- clear blueprint for change;
- identified, achieved and celebrated milestones;
- committed leadership willing to model desired changes and drive fear out of the organization;
- immediate corrective action with leaders who resist change;
- senior management committed to significant investment of time and resources;
- a performance management system that links compensation to achievement of the desired vision;
- encouragement and acknowledgement of experimentation, collaboration, innovation and new paradigm thinking;
- urgency, but no quick fixes;
- multiple feedback structures; and
- multiple learning channels.

In McGill and Slocum's (1993) research, to become a learning organization, an organization must initially go through knowing, through understanding, thinking and then through learning. As a result, the learning organization brings a teaching/learning orientation to its relationship with its customers, which reflects in an open and ongoing dialogue between both parties. The learning organization believes in informing its customers and also being informed by them through a continuous conversation/dialogue that enhances the experiences of both parties.

The research of Dovey (1997) suggested that it is through the development of empowered work teams who manage their

daily work practices collaboratively that the learning organization makes possible work as a collective human project. Furthermore, a central concern with the learning organization is the creation of a culture of shared power and transformational learning. Therefore, the primary task attributed to leadership that wishes to create a learning organization is the need to create that culture. It follows that the ultimate goal of the learning organization is to create a culture of praxis within a community characterized by bonded relationships of shared power.

What is clear is that if organizations are to be competitive in the future they must change. What is less clear is how to do so:

We've grown into a multibillion-dollar company playing by an old set of rules, where there were relatively stable assumptions and relatively predictable futures. Where hierarchy was structure and command-and-control the management model. Where competitors were known, almost everyone agreed on the same sets of performance measurements, technology advanced regularly and assets were tangible.

Where we thought we knew who our customers were and what our customers wanted. Now those days are over and we are facing predictable unpredictability. We are traveling in uncharted territory and the old maps and compasses are wrong – and possibly dangerous (Weber, 1994).

Organizations that are willing to change, prepare the organization for change and learn how to manage without over-controlling have a better than average chance of living beyond the average corporate life span of 40 to 50 years. In his article, "The living company", de Geus (1997) identifies four characteristics that all long-lived companies possess:

- (1) they are in tune with the environment in which they operate;
- (2) they have a strong and cohesive sense of identity;
- (3) they generally avoid exercising centralized control; and
- (4) they tend to be fiscally conservative.

Those companies achieving longevity appeared to recognize that figures, even when accurate, describe the past. They do not indicate the underlying conditions that will lead to deteriorating health in the future.

In a study of over 200 companies, Cairns (1998) has developed a list of six trends that have been seen over the last 18 months.

These trends are:

- (1) processes to align executive development to the business objectives;
- (2) the parallel development of individuals and learning organizations;
- (3) the development of critical individual competencies;
- (4) the creation of a select but comprehensive menu of development options;
- (5) the development of global partnerships, networks and alliances; and
- (6) the creation of competitive advantage through learning.

The implications for organizational learning are:

- there are tremendous rewards for organizations that are willing to invest the time and energy to do it right;
- there are many tools to support managers, but no single path; and
- the accountants will eventually catch up and figure out how to quantify the value of these intangible assets (but do not hold your breath, the competition is not waiting).

More research on organizational learning?

Argyris and Schön (1996) identify eight areas of research that would logically follow from their previous research on organizational learning:

- (1) existence proofs of the transformation of learning systems;
- (2) analyses of change processes;
- (3) interactions between double-loop learning in organizational inquiry and interventions aimed at fostering learning organizations;
- (4) relationships between double-loop learning in organizational inquiry and other theories of organizational learning;
- (5) the methodology of collaborative action research;
- (6) ethical implications of the theory of action perspective;
- (7) research uses of educational settings; and
- (8) a social science of rare events/possible worlds.

Hawkins (1994) proposes an agenda for organizational learning that comprises the following elements:

- New understanding of the nature of the systemic learning of whole organizations.
- Development of an integrative model that shows the interconnection of the various approaches.
- Revising our basic metaphors for describing learning. We need metaphors that see learning as a flow process that needs to be released and unblocked, within individuals, teams and organizations, and between organizations and their environments.
- Positioning of the learning organization in relation to other approaches to organization understanding and development.
- Producing company-wide case studies of organizational learning.
- Moving beyond a social Darwinian view of organizational learning.
- Developing a relationship-based view of learning.

Ulrich *et al.* (1993) summarize the facts that are known about learning organizations:

- the concept of learning organization is grounded in diverse streams of management history;
- learning matters for workforce competence, capacity for change and competitiveness;
- learning within organizations comes from both individuals and organizations;
- learning can occur along a continuum from superficial to substantial;
- learning comes from many small failures; and
- learning often follows a predictable set of processes.

With respect to the study of learning organizations, Ulrich *et al.* (1993) point to some main remaining challenges:

- the concept of learning organization must avoid the trap of becoming all things to all people;
- learning organization metaphors need to avoid concept clutter; and
- management actions to improve learning capability need to be identified, tested and assessed through multiple research methods.

Starkey (1998) criticizes other studies of the learning organization and says that they attribute too much attention to process and not enough to content. For him, scenario

planning provides a fuller exposition of how a truly learning organization might function in its concern with the process of learning and with the content of learning, particularly the strategic implications for the organization.

Senge (1990) says that researchers are only beginning to learn how microworlds accelerate organizational learning. He presents a list of the issues that are being studied and remain to be elucidated:

- integrating the microworld and the real world;
- speeding up and slowing down time;
- compressing space;
- isolation of variables;
- experimental orientation;
- pauses for reflection;
- theory-based strategy; and
- institutional memory.

Senge's list, developed a decade ago, continues to be an outstanding challenge for organizational researchers obsessed with how organizations learn or fail to learn.

Final thoughts: some conclusions

This article has examined empirical as well as the applied research from 30 sources of data dealing with learning organizations and how they gain competitive advantage by extracting core theories often found in and linked with training, communications, measurement and organizational learning. There is no single methodology or route to automatically transform a traditional firm into a learning organization. The journey is often the method required to become a learning organization.

Many theorists have contributed their perspective and expertise to this novel journey. Burke (1997) has developed an agenda for organizational development professionals to have their client firms actualize the journey via expectations, performance feedback and reward systems. Thompson (1995) has further identified change champions as CEOs responsible for developing and actualizing the change blueprint. Dovey (1997) has highlighted empowered work teams being critical in creating a learning culture. de Geus (1997) has identified four key characteristics of organizations achieving longevity and major changes required to support this. Cairns

(1998) has further supported this finding by illuminating trends within the past year for organizations making the dramatic transition to a learning culture and finally a learning organization.

The challenge for ongoing research has been lucidly identified by Argyris and Schön (1996), Hawkins (1994), Ulrich *et al.* (1993) and finally by Senge (1990) in his classical landmark work which continues to serve as the outstanding challenge for organizational learning researchers determined to further understand the complex enigma of why many more organizations fail to learn while the very few learn to learn and to succeed.

The critical challenge is to formally classify "organizational learning" as a major structural underpinning of organizational behaviour, organizational development and, most critically, organizational strategy. This is, in essence, the discipline from which its competitive advantage originates via contemporary research as it is applied to those organizations learning not to fail by competing successfully. This is the core advantage of the contemporary learning organization.

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