

ORGANIZATIONAL LEARNING: FROM INFORMATION TO KNOWLEDGE

by

Charles L. Forbes

B.A., Anthropology, 1990

Connecticut College

Submitted to the Department of Urban Studies and Planning in partial fulfillment of the requirements of the Degree of Master of Science of Real Estate Development

at the

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Signature of Author.....

Department of Urban Studies and Planning
August 9, 1996

Certified by.....

Gloria Schuck
Lecturer, Department of Urban Studies and Planning
Thesis Supervisor

Accepted by.....

William C. Wheaton
Chairman, Interdepartmental Degree Program in Real Estate Development
MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

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Abstract

The purpose of this thesis is to explore how individual experience and knowledge can be capitalized and learned from at the organizational level. Many consider this process fundamental to the learning organization concept. What is a learning organization? It is an organization which is able to adapt readily to today's changing environment. Progressive companies such as Royal Dutch Shell, Motorola, General Electric, Andersen Consulting, and Ernst & Young are often viewed as examples. The concept is important because it represents a dramatic shift in the way business has traditionally been conducted. In this paradigm, human capital, rather than physical or financial capital is viewed as the company's most valuable asset.

Like many service industries, real estate has undergone tremendous change during the last decade. What was once a transaction business is now a service business where customer satisfaction and performance depend on the ability to deliver the best solutions. Today, the customer is asking for more services and better judgment. What may have been a standard solution ten years ago, is now embraced by a variety of options which are limited only by the experience and knowledge of the real estate professional. To survive and flourish, the best professionals have learned to align themselves with organizations which have access to both the customer and a diversity of resources.

Specifically, this thesis looks at the role of information technology and how it is being used to leverage the resources and "knowledge" of Colliers International, a global real estate organization. Technology is implemented in the hope of fostering a learning environment. However, the case illustrates several challenges to the technology solution. These include some of the basic qualities of human nature such as our ability to communicate, to ask questions, to trust, to share, and to learn. This thesis concludes that the challenges to establishing a learning environment can be alleviated by aligning the more tangible aspects of an organization with the technology effort. These include: the structure of the organization, its business strategy, its professionals, and its leadership.

Thesis Supervisor: Dr. Gloria Schuck
Title: Lecturer, Department of Urban Studies and Planning

Acknowledgments

Earlier this spring when I was searching for a thesis topic, I was interested in real estate topics that were familiar to me; property management, corporate services, and consolidation within the industry. Part of this was due to a number of recommendations to work on something I was familiar with. At about the same time, we were getting into the “learning organization” part of Gloria’s class. What was a learning organization? Though many of the concepts seemed simple enough; empowerment, sharing, learning, collaboration, the ethereal nature of it made it difficult to really understand. Though many companies liked to characterize themselves as learning organizations, the fact remained that when one looked closely, not a single example existed. Perhaps because of this, it is even more difficult to understand. I could understand the difference between information, knowledge and learning, but applying them to business, let alone the real estate industry, was difficult for me to accomplish. This was something I felt was important and something that could help me beyond the “business world.”

Though it sometimes was difficult to look my classmates in the face and tell them what my thesis was about, my primary objective was to teach myself something about organizational learning. To the extent I could help someone else to understand it, then all the better.

I am indebted to my classmates, Jim Kwasnowski and Sue Dengenis, who became my “soulmates” in defending our topic to our peers. Much of our research overlapped and we shared a number of valuable resources. I would also like to thank Stewart Forbes, my father, who takes much of this to heart and struggles on a daily basis with the management of the organization that is the focus of my thesis, Colliers International. His insights were

invaluable toward my efforts with this thesis. Finally, I would like to thank Gloria Schuck, my advisor. Her guidance and patience have been much appreciated as this student struggled to find the “light.”

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Introduction

*Where is the Life we have lost in Living?
Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?*

-T.S. Eliot, Choruses from "The Rock," I Collected Poems 1909-1919(Davis & Botkin, 1994).

Davis & Botkin (1994) use this quote from T.S. Eliot to show that long before the age of the computer, someone was able to recognize the link between information, knowledge and wisdom. How is the connection made? The answer is that we learn.

In 1982, who would have thought a little known company named Microsoft would become one of the most dominant forces in international industry? Likewise, who could have predicted the future restructuring of the then dominant IBM? Undoubtedly, we live in a world that is constantly changing. Even as our best efforts attempt to predict the future environment, more often than not, we are simply wrong. In 1980, for example, IBM calculated that the total possible personal computer sales during the next decade would be 275,000 machines. The actual figure was 60 million. (Bertals, 1996).

Technology has played a leading role in the way the world has changed. Change is a constant we are all well aware of, but over the past twenty years the speed of that change has increased dramatically as our ability to communicate has improved. When Columbus discovered the new world, it took months for the news to reach Europe. Centuries later, when Neil Armstrong first stepped on the moon, the entire world knew it and saw it instantly! Improved communication has provided enormous opportunities for business and

increasingly, we are seeing the world become smaller; the global economy, strategic alliances, and McDonalds' in far away places. It will not be long before a single phone call can locate a person anywhere in the world. As brilliant as the new and growing technology is, however, it has brought a certain volatility to today's business environment. Opportunities come and go with incredible speed and require the utmost agility to be able to capture and capitalize upon them.

Ten years from now, who knows if Microsoft will still be a market leader? Consider the fact that two-thirds of the firms that made the 1960 *Fortune 500* list no longer exist today! (Chawla, 1995, p.85). This volatility is what makes the Learning Organization concept such a hot topic in management theory today. A company may be successful at some point, but how can it continue to be a market leader? Increasingly, we are hearing not just about a company's ability to act, but its ability to think and to learn.

What is a "learning organization?" If ten different executives were asked this question, they would likely give ten different answers. Words frequently used, however, would include, flexibility, innovation, empowerment, adaptability and collaboration. Is the learning organization just another buzzword, a new management concept that will fade away when a new buzzword arrives? Words like "reengineering", "kaizen", and "Total Quality Management" come to mind. Or does the learning organization concept stand a chance of really changing the way business has been conducted during the past one hundred years?

Like other businesses, the real estate industry has also undergone tremendous change. In the past decade, a fundamental shift has occurred where the companies that used to just sell or build real estate are now providing services for their customer. Trammell Crow, for

example, has shifted from being the largest developer of real estate only seven years ago, to the largest service provider today, managing more than 300 million square feet of property (Commercial Property News, 1995). Furthermore, the role and needs of the customer have become more dynamic, shifting from a developer to a corporate user to an institutional owner. One particular challenge is that as information has improved, the real estate customer has gained greater control and discretion. Today, the “customer” is asking for more services and better judgment. What may have been a standard solution ten years ago, is now embraced by a variety of options which are limited only by the experience and knowledge of the real estate professional. To survive and flourish, the best professionals have learned to align themselves with organizations which have access to both the customer as well as a diversity of resources. Also, real estate organizations continue to grow in an effort to provide the maximum amount of resources unlimited by scope or geography to both their professionals and their clients.

The purpose of this thesis is to explore how individual experience and knowledge can be capitalized and learned from at the organizational level. Consider the following definition; “learning in organizations means the continuous testing of experience, and the transformation of that experience into knowledge -- accessible to the whole organization and relevant to its core purpose.” (Senge, 1994, p. 49).

In a business environment, we are constantly striving to solve problems and are thus, action oriented. We have a tendency to “just do it,” rather than ask how to do it best. Though many of us would welcome the opportunity to reflect on what we do or find out how to do it best, more often than not, our answer is that we don’t have the time. New technology, however, allows us to act quickly and electronically and alleviates our demands on time and

space. Technology has the potential to make our lives easier. It allows us to communicate, to collect, to document, to categorize, to search and to learn with it. It is possibly the most powerful tool in a learning environment. It can collect knowledge, categorize it, and make it accessible. A common mistake, however, is to assume that because the technology has been implemented, a learning environment exist. It does not, and the business world is littered with examples of technology strategies which have failed because they have not been aligned with the people and processes of the organization. These include an organization's structure, its business strategy, its leadership and its people.

This thesis investigates the technology strategy implemented by a real estate services company, Colliers International, as documented in the 1995 Harvard Business School Case Study, *Colliers and the Technology Solution*. Colliers is a federation of independent real estate firms located throughout the world. Its flat organization structure and its "service bureau" strategy provide a unique opportunity to implement "knowledge sharing technologies." The hope is that with a clearer understanding of the challenges it faces, Colliers will be better equipped to become a learning organization.

Part One of this thesis addresses the differences between information and knowledge as well as the concepts surrounding the learning organization model. It explains how they can be managed and why are they relevant to today's business climate.

Part Two introduces the Experiential Learning Model of David Kolb and reviews some of the existing theories on learning. Two fundamental components of the learning model, action and thought, are explained and related to some of the challenges facing today's learning

organization. In addition, other learning models are presented which show the commonality of Kolb's approach.

Part Three of this thesis presents the Harvard Business School Case Study, *Colliers and the Technology Solution*. This case documents some of the challenges involved in implementing new technology, particularly those involved in what is viewed today as one of the key "knowledge systems," Lotus Notes.

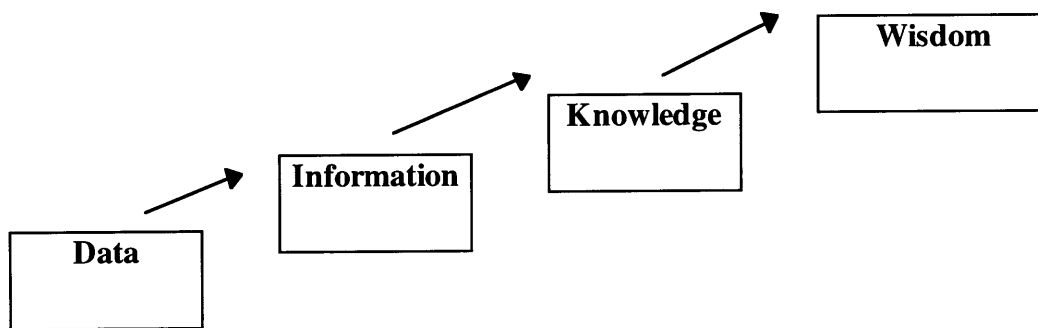
Part Four utilizes Kolb's Experiential Learning Model to analyze the Colliers Case Study.

Part Five draws conclusions and present opportunities for further research.

Part One

From Information to Knowledge

A classic progression model describes four steps to wisdom; beginning with *data* which is then “arranged” into *information* which when utilized becomes *knowledge* and ultimately provides *wisdom*. (Davis & Botkin, 1994).



Four Steps to Wisdom (Figure 1)

“*Data* are ways of expressing things, and *information* is the arrangement of data into meaningful patterns. *Knowledge* is the application and productive use of information, and *wisdom*, finally, is the discerning use of knowledge. Each step does not necessarily lead to the next, but they must be taken in proper sequence to achieve the final goal.” (Davis & Botkin, 1994, p. 42). What does this mean? An analogy was made with the use of “language”, where the building blocks or data, include nouns, verbs, and adjectives. When the words are arranged in a meaningful pattern, like sentences, they become information. As these sentences are put to use in the form of literature, knowledge and wisdom might prevail. (Davis & Botkin, 1994).

The definition of information as “arranged data”, used by Davis & Botkin above, seems to be most applicable to this paper. When this data is categorized, managed and utilized it becomes valuable. When this information is applied and made productive, it becomes knowledge. (Davis & Botkin, 1994). Knowledge, therefore, is information that has been made valuable.

There is a discrete difference because with information, a “quantity” of data is implied. With knowledge, the implication is the “quality” of information. Nevertheless, their importance and the need to organize and administer both is illustrated by a number of new “corporate titles.” These include; Chief Information Officer, Chief Knowledge Officer, Chief Learning Officer, Chief Transformation Officer, Chief Cultural Officer, and Chief People Officer. (Wall Street Journal, Sec. B1, 7/8/96). The companies where these positions have been put into place include some of the largest companies in the world -- Coca Cola, Coopers & Lybrand, and General Motors.

The successful businesses of tomorrow are realizing today, that human capital is more valuable than physical and financial capital. It is the foundation upon which information and knowledge can be harnessed in order to transform a business into a successful learning organization. A company’s greatest asset is embodied by its people -- what they know and what they can learn. (Senge, 1994) In a world which is increasingly being defined by “limited” resources, knowledge stands out as the one resource which is unlimited. For example, consider limited resources such as financial capital and labor, and natural resources such as oil and land. Daniel Kim, Director of the Learning Lab Research Project at the MIT Organizational Learning Center, presents a scenario which may be relevant in considering the role of the individual and the importance of learning in an organization:

Imagine an organization in which all the records disintegrated overnight. Suddenly, there are no more reports, no computer files, no employee records, no operating manuals, no calendars - all that remains are the people, buildings, capital equipment, raw materials, and inventory. Now imagine an organization where all the people have mysteriously disappeared. The organization is left intact in every other way, but there are no employees. Which organization will find it easier to rebuild to its former status, to continue to take actions, and to learn?" Although a few might argue that replacing people would be easier than replacing the systems and information, it should be obvious that "the essence of the organization is embodied in its people, not its systems. (Wardman, 1994, p.43).

The view that knowledge is a company's greatest asset is fundamentally different than the bottom line focus on financial results and the way Wall Street has traditionally dictated "performance." Fred Kofman, a professor at MIT's Sloan School of Management compares outdated accounting systems to a means of "keeping score" in the game of business. "However, this is like coaching a team by looking at the points on the scoreboard rather than watching the action on the field." (Wardman, 1994, p.27). Kofman goes further to suggest that "most organizations don't measure what is important, they measure what is measurable. (Wardman, 1994, p. 28). Indeed, the age-old strategy of "if it isn't broken, why fix it?" has signaled the collapse of a number of businesses which have failed to adapt to new opportunities and challenges. Furthermore, many businesses seem to be content just being able to do business rather than striving to learn how to do it best. The problem many companies face, however, is that "just doing it" is difficult enough. (S. Forbes, 7/12/96).

Charles Handy, author of *The Age of Paradox* and fellow at the London Business School, suggests that the companies of the future will be:

organizations of consent, not of control. They will be able to maintain a feeling of togetherness despite their size and far-flung locations. They will make many mistakes, but will have learned from them before others realize they have occurred. They will invest hugely in their people and trust them hugely and save the salaries

of ranks of inspectors. Above all, they will see learning not as a confession of ignorance but as the only way to live. It has been said that people who stop learning stop living. This is also true of organizations. (Chawla, 1995, p. 55).

Handy estimates that “managers and investors woefully neglect intellectual inputs and outputs. These far outweigh the assets that appear on the balance sheets. The intellectual assets of a corporation are usually worth three-to-four times tangible book value. No executive would leave his [or her] cash or factory space idle, yet if CEO’s are asked how much of the knowledge in their companies is used, they typically say, about 20%.” (*Fortune*, 10/3/94, p.69). Betty Zucker, who studies knowledge management at the Gottlieb Duttweiler Foundation in Switzerland, replies to this, “Imagine the implications for a company if it could get that number up just to 30%.” (*Fortune*, 10/3/94, p.69).

Knowledge is the critical asset which allows us to adapt to a changing environment. For a business, harnessing that knowledge is critical to the process of organizational learning. It is particularly true for the “Learning Organization” that is so prevalent in management theory today.

The Learning Organization

What is a Learning Organization? David Garvin, Professor of Business Administration at the Harvard Business School, summarizes it as the following:

A learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights. (Garvin, 1993, p.80).

Peter Senge, Director of the Center for Organizational Learning at MIT's Sloan School of Management and author of *The Fifth Discipline*, defines Learning Organizations as "organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together." (Senge, 1990, p.3).

Similarly, Ikujiro Nonaka characterizes a "knowledge creating company" as one whose sole business is "continuous innovation, that can consistently create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products." (Nonaka, 1991, p. 96). In today's changing environment, the company that can learn quickly has a distinct competitive advantage because it can adapt quickly.

Though somewhat "touchy/ feely," the notion of a "learning organization" has undoubtedly appealed to a number of executives who are faced with the challenges of managing a large organization in today's changing environment. Considering how many businesses struggle

to maintain the status quo, it is not unlike trying to teach Tyrannosaurus Rex the agility of an Olympic gymnast.

If the process through which individuals learn, that is, their ability to transfer information into knowledge, is the foundation of the learning organization, the challenge becomes how to stimulate that process and make it both tangible and manageable. Furthermore, as we begin to understand what a “Learning Organization” is, the more relevant question is how to become one? Part of the solution rests with the role of information technology. How is the knowledge of the individual collected, how is it stored, categorized, displayed, and most importantly, how is it utilized within an organization?

Knowledge Management

Booz Allen has “Knowledge On-Line,” Andersen Consulting has “Knowledge Xchange,” and Hughes has the “Knowledge Highway.” (Ronnow, 1995). More and more often today, we are hearing about these super “systems” and their distinct competitive advantage. These include; the World Wide Web, the Internet, the Intranet, Groupware, Shareware, and Lotus Notes. In each case, knowledge is being promoted as a critical advantage. Are people talking about knowledge or are they talking about information? There is a difference between simply documenting experience and being able to leverage and build off of that experience. Suppose, for example, that all the information you could possibly want were available to you. How would you organize and prioritize it? Perhaps today’s perfect analogy is the Internet. It is like a giant pipeline of information which some might argue provides too much information! How is value created from this information? How is it used? Categorizing it is a first step.

Consider, for example, the role of E-mail today. Although it is hard to argue with the convenience, people spend much of the time forwarding, attaching and sending information to someone else. E-mail is a great delegator which allows people to believe that they have taken care of something, when in fact, they have actually dealt with or absorbed very little. They simply shuffle things around. Information needs to be related to people and processes able to absorb it and utilize it if it is to become knowledge.

New technologies are allowing information to be accessed at an alarming rate. Increasingly, “groupware” and “shareware” products such as Lotus Notes, Microsoft Exchange and the Internet, are viewed as a solution to a company’s competitive needs. These technology

“systems,” however, seem to be used more often as communication tools to “interact” and to “document” rather than to “share” and to “learn.”

Having the technology “tool,” however, is at least a great step forward. To achieve this, the information that technology provides will need to be matched to the people and processes of an organization if it is to become “something more.” More often than not, the structure of an organization, the business strategy, the leadership and performance incentives for its people are not aligned with the technology. Overlooked in the technology equation are the strengths and weaknesses of human nature and how human beings learn. Control and power are certainly fundamental to this equation. Equally important is the interaction of sharing and trust. Frequently, the only power employees feel they possess within the organization is the information and knowledge in their heads. Sharing this information with others brings the risk of no longer being needed. This is a classic database sharing problem, especially when the information is still providing profit and value to the individual. (Jones, 1996). Why bother to share it?

It has been argued that true learning happens in a social context where individuals can share their experiences. (Fortune, 8/5/96, p.173). The term “Communities of Practice” is a useful analogy. Brook Manville, Director of Knowledge Management at McKinsey & Co. defines a “Community of Practice” as: “a group of people who are informally bound to one another by exposure to a common class of problems.” (Fortune, 8/5/96, p.173).

“Communities of Practice,” which is often linked with the Institute for Research on Learning in Palo Alto, captures the social nature of learning. “However romantic the image of the scholar bent over his desk in a pool of lamplight, learning happens in groups.”

(Fortune, 8/5/96, p.173). The fundamental strength of “Communities of Practices,” however, is that they emerge of their own accord: “Three, four, 20, maybe 30 people find themselves drawn to one another by a force that is both social and professional. They collaborate directly, use one another as sounding boards, teach each other. You can’t create communities like this by fiat, and they are easy to destroy. They are among the most important structures of any organization where thinking matters, but almost inevitably undermine its formal structures and strictures.” (Fortune, 8/5/96, p.173). The benefit is that an individual is able to incorporate the experience of others into his or her own learning process. It is this social aspect of learning that may provide the connection between individual knowledge and organizational knowledge.

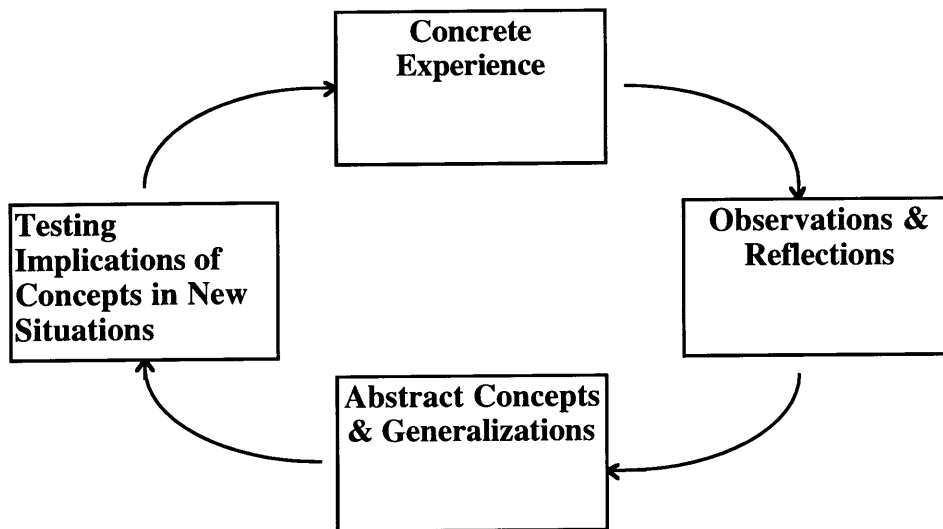
To better understand the learning process, Part Two of this thesis will introduce the Experiential Learning Model of David Kolb. This model draws a distinction between two aspects of learning: experience and thought. Rather than an either/or scenario, learning occurs when both sides of the model are integrated. In addition, a number of comparable learning models are presented in order to gain a better understanding of Kolb’s work.

Part Two

Learning Models

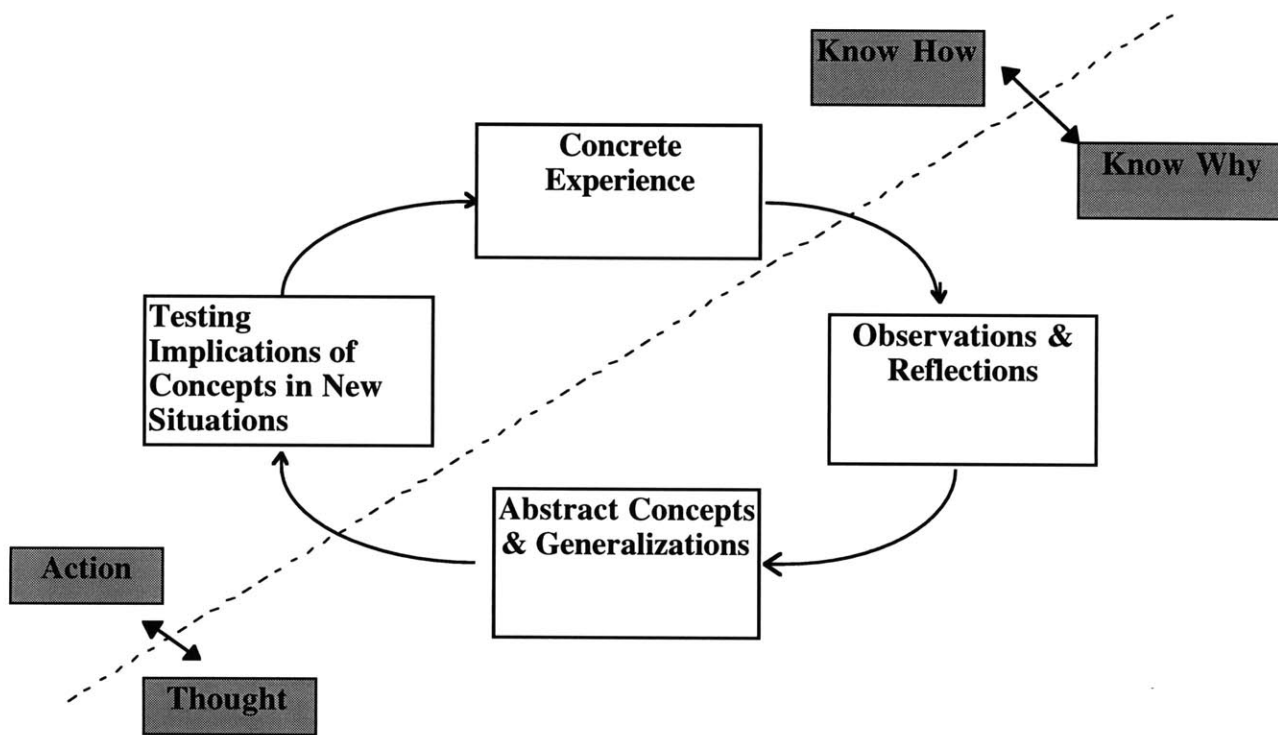
The core studies in the field of learning are rooted in sociology, educational theory and psychology. Leading masters in the field include Jean Piaget, Kurt Lewin and John Dewey. Perhaps the most relevant studies from an organizational perspective are those of Dewey who defined learning as a four-stage “continual process of discovering insights, inventing new possibilities for action, producing actions, and observing the consequences leading to insights.” (Meen & Keough, 1992, p.60). This link between action and insight is the foundation for the learning model proposed by David Kolb (1973).

Kolb builds upon what he calls “The Lewinian Experiential Learning Model.” (See Figure 2.) In this model, learning is perceived within a four-stage cycle. Kolb describes the cycle: “Immediate concrete experience is the basis for observation and reflection. These observations are assimilated into a ‘theory’ from which new implications for action can be deduced. These implications or hypotheses then serve as guides in acting to create new experiences.” (Kolb, 1984, p. 21). This basic learning cycle has been applied in many forms. In Total Quality Management literature , for example, it is reflected in the Deming cycle of Plan-Do- Check- Act or PDCA. (Kim, 1993, p.6). Similarly, Argyris & Schon refer to a Discovery-Invention-Production-Generalization cycle of learning. (Kim, 1993, p. 6).



Experiential Learning Model (Figure 2)

The focus of this model establishes a polarity between primary dimensions, the “concrete” *versus* the “abstract” and “action” *versus* “reflection.” If a diagonal line were drawn from lower left to upper right on the model, two sides become apparent: On the left side is the “know how,” or the acquisition of skill and the ability to perform a task. On the other side is the “know why,” that is the understanding of a skill and the ability to understand an action and its implications. For the purpose of this thesis, this model will be named the “Two-Sided Learning Model” (see Figure 3).



Two-Sided Learning Model (Figure 3)

Kolb makes a distinction between two kinds of learners, the business person and the academic, which may be helpful in considering his learning model. Business managers, for example, have been shown to “act” rather than “reflect” or to be able to learn the “know how” but not the “know why.” In contrast, academics tend to “reflect” but not “act.” They are able to learn the “know why” but not the “know how.” (Kolb, 1973). “Our research on learning styles has shown that managers on the whole are distinguished by very strong active experimentation skills and are very weak on reflective observation skills.” (Kolb, 1973, p. 12).

In this context, a strong connection can be made with Argyris’s idea of single loop (know-how) and double loop (know-why) learning (Argyris, 1991). Argyris gives a simple analogy to show the difference. “A thermostat that automatically turns on the heat when the

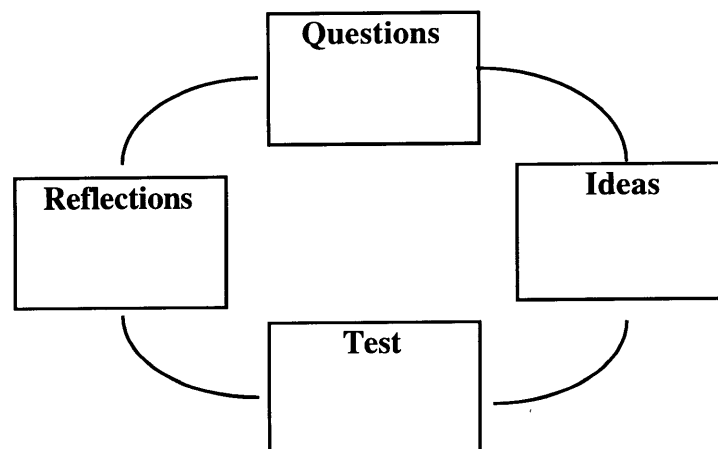
temperature in a room drops below 68 degrees is a good example of single-loop learning. A thermostat that could ask, 'Why am I set at 68 degrees?' and then explore whether or not some other temperature might more economically achieve the goal of heating the room would be engaging in double-loop learning." (Argyris, 1991, p.100).

Why is this important? Only by balancing both sides of the model and bridging the gap between action and thought can learning be maximized. Though a changing environment has forced the business world to embrace the concepts of learning and knowledge, a basic dilemma exists in the fact that most people misunderstand what they are. (Argyris, 1991). A common mistake is to confuse learning with "problem solving." (Argyris, 1991, p.99). Furthermore, the professionals that many assume to be the best learners are in fact, not very good at it ...the well educated, high powered, high commitment professionals who occupy leadership positions in the modern corporation." Similar to Kolb, Argyris argues that business professionals are very good on the action side (single loop) but lacking when it comes to the thinking side (double loop learning). (Argyris, 1991, p.99).

Similarly, Charles Handy describes a "wheel of learning" (see Figure 4.) with four stages beginning with *Questions* which turn into *Ideas* which are then *Tested* and then finally *Reflected Upon*. (Chawla, 1995, p.49). The "wheel" is a useful analogy because it explicitly states the "movement" inherent in other learning models. In Handy's model, learning begins with *Questions* which are triggered by "problems" or "needs" that require solutions. The second quadrant attempts to address those problems by generating *Ideas* which seek a solution. The ideas are then *Tested* under the third quadrant in order to find out if they work. Finally, the fourth quadrant *Reflects* upon the results until an appropriate solution has been identified. "Only when the entire process is complete can we truly say that we have learned

something. There are no short cuts. This process lies at the heart of individual growth and of corporate success. Too simple, some would say. They should try putting it into practice.” (Chawla, 1995, p.49). Handy goes further to suggest that keeping the wheel in motion at a corporate level...

“requires great leadership, immense energy, and a belief in the potential for excellence. There is little wonder at the fact that we have no examples of organizations that have got it all right. One reason is that it is so easy for a group or an individual to get stuck in one quadrant of the wheel, forever collecting more information without putting any of it to the test, or experimenting without pausing to reflect. Another pitfall is stopping after one set of tests proves successful, thinking that all the questions have now been answered. Like the wheel, the process is designed to move. To keep the wheel turning, we must continue to be curious, to ask the question again, to expect to find new answers.” (Chawla, 1995, p.49).



Handy’s “Wheel of Learning” (Figure 4)

In each of these models, learning is achieved when actions or experience are reflected upon and followed again with action. Though the particular “stages” may differ, what is important is that the process is continually moving and that the “polar opposites” of concrete

versus abstract and action *versus* reflection do not present an “either/or” scenario. Instead, the best learning involves some combination and balance of each.

Schuck suggests that the learning process consists of a movement from actions and objects to the “field of meaning.” (Schuck, 1985, p. 70). She argues that in today’s information technology environment, it is important that new tools be viewed not in terms of their automation capabilities, but in terms of developing the intellectual skill of the employees. Information technology needs to be used not only for operations and control, but for thinking and problem solving. (Schuck, 1985, p. 67). She suggests a transfer from an environment of “inquisition” to an environment of “inquiry” where an individual can be “liberated from the constraints of objects and actions” in order to make “the numbers talk,” to mean something. Information technology is “maximized” when there is a willingness to share experiences, ask questions, and find meaning. (Schuck, 1985, p. 67).

Shoshana Zuboff, a Harvard Business School professor, uses the terms “automate” and “informate” to describe the challenges facing today’s information technology. She characterizes a “fundamental duality” where information technology is used to automate or replace human effort and skill while at the same time it creates information, which allows it to informate. (Zuboff, 1985). While the implications for replacing human effort are self evident, she argues that technology’s “informating” capabilities are not equally understood. (Zuboff, 1985). In terms of informating, she talks about the “know why,” comprehending the actions and operations through which an organization does its work. For example, it is important that the professional learns not only to press a button to achieve some outcome, but why that button creates the outcome that it does (Zuboff, 1985).

Critical to this process, Zuboff says, is the ability of the organization to match its own strategies and processes with the technology:

When the informing process is pursued as part of a conscious strategy, the new information presence can be felt at every level of organizational activity. The information presence invites organization members to pose questions and generate hypothesis. As aspects of organization functioning are brought to light or seen in different ways, new insights are engendered. The organization can become a learning environment in that work itself becomes a process of inquiry, and that contributions that members can make are increasingly a function of their ability to notice, reflect, explore, hypothesize, test, and communicate. (Zuboff, 1985, p. 12).

Zuboff argues that information technology has been undermanaged. It would not be unusual, she says, “for an organization to spend millions on technology purchases and installation, while even the most rudimentary training fails to show up as a line item in the annual budget.” (Zuboff, 1985, p. 12). The future success for many companies will “depend less on competent execution of the *status quo* than it will on increased understanding of the functions, innovations in products and processes, opportunities to expand or develop new markets with customized services, and so forth. In these organizations, informing will be the core process.” (Zuboff, 1985, p. 17).

Whether it be action or thought, know how or know why, single loop or double loop, inquisition or inquiry, or just doing it or learning how to do it best, we need to find some way make a connection, to bridge the two sides of the models. By achieving this, we are able to elevate individual experience into a “field of meaning.” The following chart (see Figure 5) was developed by this author to illustrate comparable distinctions to the two sides of learning, action and thought:

<u>Know How vs. Know Why</u>		
action	vs.	thought
concrete	vs.	abstract
automate	vs.	informate
inquisition	vs.	inquiry
interaction	vs.	integration
know how	vs.	know why
just do it	vs.	doing it best
tangible	vs.	intangible
explicit	vs.	tacit
single loop	vs.	double loop
product	vs.	process

Figure 5

Part Three of this thesis presents the technology strategy implemented by Colliers International, a global real estate organization. Colliers has been subject to numerous research papers, including a number of Harvard Business School case studies. Background information on Colliers is provided through HBS cases 9-490-049, *Colliers International Property Consultants* and N9-396-108, *Colliers International Property Consultants, Inc.: Organizational Integration*. The technology focus of this thesis, however, is based on case N9-196-020, *Colliers and the Technology Solution*. Additional interviews were conducted with Stewart Forbes, President of Colliers International, in both May and July, 1996.

Part Three

A Case Study on Colliers International

Colliers International is a federation of independent real estate service firms located throughout the world. Headquartered in Boston, its goal is to provide customers the best real estate solutions by leveraging and integrating the local knowledge of its firms. Built as a brokerage network, Colliers enabled local firms to serve their clients beyond the traditional business market. Toward this effort, Stewart Forbes seeks out the strongest local real estate providers who can work cooperatively around the world. The hope is that by working cooperatively, rather than independently, Colliers can create a “whole which was greater than the sum of its parts.” (S. Forbes, Interview, 5/96).

Colliers is built on the assumption that as user demands grow in the global economy, real estate service will be necessary on both a national and international level. For example, in Boston, the local Colliers firm, Spaulding & Slye, has built a strong relationship with Digital Equipment, one of the leading multi-national corporations headquartered in Massachusetts. Where Digital might use Spaulding & Slye on local assignments, they would use other services providers when their requirements went beyond Boston. By “connecting” Spaulding & Slye to similar independent firms, Colliers provided a conduit so that Spaulding & Slye could provide services to Digital on a national and international level.

Local Service

Where competitors such as CB Commercial or Cushman & Wakefield created national coverage by sending two or three brokers to a city and to open an office, Colliers is built upon the existing expertise of established real estate firms. A number of Colliers firms are more than a hundred years old.

One way Colliers differentiates itself is by allowing its firms to use non-Colliers firms where it is in the best interest of the client. It would be reasonable for example, for a Colliers firm to use Cushman & Wakefield in a circumstance where they (C&W) provided the superior expertise. Conversely, Cushman & Wakefield would never allow this happen. By understanding the local practices and “culture” of their respective markets, Colliers firms are able to find the best solutions for their clients.

Membership

If approved to become a member of Colliers International, a firm purchases shares and is responsible for an initiation fee and annual dues. The federation is like a cooperative or a club where the dues pay only for annual operating costs -- mostly to support the Boston headquarters. Colliers is not a profit source, it is simply a conduit to pass on profits and experience. It is a flat organization with the Boston Headquarters acting as a “service bureau” for its clients -- which are the independent firms throughout the world.

Diversity

Where national firms attempt to implement a “standardized service,” Forbes has built in Colliers a group of real estate “leaders” who in many cases might address the same real estate opportunity differently. For example, a firm in Detroit might be responsible for the

repositioning of an outdated auto manufacturing facility. Though options for such a large property might be limited, the Colliers firm in Cleveland has specific experience with auto facilities and would cooperate with Detroit in order to find the best solution for the client. By having a variety of “best practices,” Colliers is more flexible and can react more quickly to a changing environment than a firm that simply had one “best practice.” The hope is that by keeping each firm’s autonomy, different perspectives could be shared in order to find a more effective solution for the client. In theory, knowledge sharing practices would be critical to the success of Colliers.

International Coverage

Though officially formed in 1985 through the merger of American Realty Services Group in the United States and Colliers International in Asia Pacific, the independent firms within each region had been cooperating with each other since the mid 1970’s. In 1990, Colliers had 26 international offices where its competition had only a few. CB Commercial, for example, had one. Between 1990 and 1995, Colliers has grown from a total of 97 offices in 12 countries to more than 184 offices in 34 countries. (Knoop, 1995). Similarly, almost all of its competitors have created “alliances” with other service providers throughout the world -- or at least Western Europe and much of Asia.

Information Technology

Once the firms had been identified and chosen, the question for Colliers became how to link these firms. Forbes was convinced that if he could learn new technologies, other people could as well. The real estate industry “lagged” the rest of the business world in its acceptance of new technologies. Because of this, Forbes saw technology as a tool which could link its local firms and potentially create a strategic advantage for Colliers. An

example of this would be the database which documented experience and “best practices” throughout the organization.

In addition, Forbes bet that the personal computer and new software development would allow an organization like Colliers to compete more effectively in the future. In 1990, a working E-mail system was unique by industry standards. The idea of a “shared database” would have been “cutting edge” for the real estate industry. Colliers had both. As “cutting edge” as the database was, however, questions were raised regarding the effort of participation and the accuracy of its data.

In the mid to late 1980’s, Colliers was the only organization of its kind that could deliver information (on clients, transactions and professionals) directly to the sales associates. While most of our competitors used mainframes, we grew with the PC. But, most Colliers firms accessed the system from only one workstation and then distributed the information internally, so we never fully benefited from the decentralized system we had created. Changes in local firm personnel made it difficult to keep users trained, and there were wide variances in the frequency and level of use. Only about 10% to 15% of our people - today its 20% to 30% - had laptops and the database required 50 MB of memory to download. And information received from the database could cost \$10 to \$12 depending on user experience. The database was distributed once a year on diskettes. After doing this for two consecutive years, we decided that we were not getting what we wanted. (Knoop, 1995, p. 2).

Colliers was taught several lessons by the experience with the database, as illustrated in the HBS Case Study (Knoop, 1995, p.3):

- Participants must not only have confidence in the accuracy of data but also be willing to input and maintain the necessary data.
- The system had to offer more than just the sharing of information - it had to facilitate collaboration and provide access to presentations that could help win business.
- Technology would not drive the service and would not add value by itself.
- Access to information had to be simple and training was essential.

- The system had to be flexible enough to accommodate a variety of different hardware and software as well as variations in volume and frequency of use.
- Finally, the databases should have common fields but allow for local customization.

Forbes described how technology could help Colliers leaders not only access information and expertise within the organization but also coordinate it to improve Colliers service capabilities:

The first step organizationally was to document the experience of one professional in Boston who had represented over 10 law firms. The second step was for someone to call that person to obtain his or her help in securing the right to represent a law firm in Louisville. The third step was to put the expert in Boston in touch with someone with similar expertise in Toronto. The two would then create a checklist of typical mistakes made in renewing leases and provide ways to avoid them. The concept is pretty simple. The challenge is to build a system that facilitates this type of interactivity and a culture that not only supports but enhances the system. (Knoop, 1995, p. 3).

In order to address some of the concerns from the database experience, Colliers moved forward in 1994 with the recommendation of a Wide Area Network (WAN) which provided a central point of contact and control through Colliers Headquarters in Boston. It was recommended because it could provide a cheaper means of access than CompuServe and would allow for a more sophisticated E-mail system. Within two months of this implementation, Colliers recommended additional technology in the form of Lotus Notes, a software system which provided both communication and database capabilities. (Knoop, 1995, p. 3).

It was presented as an appropriate platform upon which to build a series of applications beginning with basic communications and evolving to a worldwide network of shared expertise and opportunities. Headquarters set the following priorities for Lotus Notes applications areas: E-mail, Discussion Databases,

Transaction Experience, Professional profiles, Leads, HQ databases, Forms and Views. (Knoop, 1995, p.3).

The difference between the WAN and Notes really came down to a hardware *versus* a software solution. A potential problem with the WAN was that it required those sharing information to have the same software. Logistically, this presented a problem for the firms with limited resources to commit to new technologies. Tara Reilly, Colliers MIS Manager, commented on the move from the WAN project to Notes:

In hindsight we were looking at a hardware-based solution instead of a software based solution. Most MIS professionals in the member firms and I were looking at a much more powerful database engine. Notes is not known for its processing power therefore we were writing it off as a viable solution. But you have to learn to crawl before you can walk; Notes has really been driven by the sales force and mid and upper management. In particular, Colliers Corporate Services Group (set up to manage multi-city, multi-business assignments), started using it as their platform for communication. They are an influential group of top producers. This provided Colliers with an excellent pilot group to test the functionality of Notes on a small scale. The results were so positive that we decided to recommend it as our standard communication system throughout Colliers.

The good thing about Notes is that it gives firms the flexibility to decide to what extent they would like to implement Notes in their firm. Colliers does not require that each firm purchase a \$3,000 router. They could start with a few people on-line (i.e. the owner or administrator) and phase in the roll-out on a per user basis. Some larger firms elected to invest in a Notes server and get their entire organization on line. (Knoop, 1995, p. 4).

The fact that many firms had different capacities to commit and invest in technologies was a particular challenge in terms of collaboration and information sharing. Where the largest firm had close to 800 professionals and annual revenues of \$90 million, the smallest firm had only 4 professionals and revenues less than \$500,000. Also, the demands of each marketplace might be different in terms of the sophistication demanded by the customers. (Knoop, 1995).

Though leaders within the organization were aware that technology could “bind” the organization together, they were also sensitive to the fact that technology could fragment the independent firms between “haves” and “have nots.” Ultimately, smaller firms and emerging market firms could be forced to drop out of the organization. (Knoop, 1995).

Forbes, however,

believed that rapid roll-out and coverage were essential to prevent fragmentation. Colliers needed to respond to those firms wanting to improve their communications systems to deter them from seeking alternatives -- and potentially incompatible -- technology solutions. Colliers therefore decided to roll out Notes as rapidly as possible, and announced at the May 1995 International Meeting that the communications and training packages were immediately available. Forbes believed that Notes provided a unique opportunity to use a standard platform to customize communications while increasing the accuracy and ease of use of the databases. (Knoop, 1995, p. 5).

Forbes explained at the September 1995 US Sales Conference:

Notes is a common communications platform, it does not tell you how to collect information. We will have to develop programs that rest on Notes... The database will take time to develop and will have to wait in the interest of a speedy roll-out. Clearly they increase the value of the communication system. But if we wait for their development, we may lose the opportunity to have the whole organization on the same system. For the first time it seems possible to obtain agreement on a single system that could be used throughout the organization. (Knoop, 1995, p.5).

Tara Reilly also believed that the communications capabilities for Notes were at the time more important than the database. Being able to provide “personalized and confidential E-mail, the ability to attach documents to memos and set up mailing lists” was a giant step. Through Notes, the hope was that with the click of a button “people will realize the power of combined knowledge of Colliers and how shared information can be beneficial to everyone.” (Knoop, 1995, p. 6).

Skepticism, however, was evident in that several members believed that their own E-mail systems were more efficient. Additionally, some members doubted the concept of “best practices” in a global environment. Given cultural differences, a firm’s individual views of best practices might vary dramatically. (Knoop, 1995, p. 6).

By the middle of 1995, however, the challenge Forbes and John McLernon, Chairman of Colliers International, faced was being able to launch Lotus Notes by encouraging firm participation but not mandating it, sensitive to the needs of individual firms. (Knoop, 1995, p.6). As part of a pilot project, more than 70 professionals were already using Notes, including people in London and Hong Kong. That Fall, at the 1995 Sales Conference in Denver, several users gave testimonials:

We have been working on a project with people in Boston, Hong Kong and London. Taking advantage of time difference we responded to a request for a proposal in 48 hours. Also, we will be inviting the client to dial into the server and check on the status of [his or her] project and receive a constant update. That seems to be a very powerful selling point. We have done three presentations showing this and have won all three. We seem to be ahead of the competition at this stage. - Craige Coren, Colliers Erdman Lewis (London) manager for the United States (Knoop, 1995, p.6).

Since we are trying to do large consulting types of assignments with major companies throughout the world, a system like Lotus Notes will help us. At a presentation, we superimposed the clients’ areas of activity with our scope of work, which was a graphical way of showing that we can meet his needs. Our interlocutor liked it so much that he wanted a copy. So we E-mailed a copy of it to him so he could use this presentation to sell the project to his boss. Also, if our customers do not have Notes, we give it to them. This is a great innovation that we have instituted. Personally, it is a great advantage because with a single stroke of my mouse I can copy hundreds of people. So they can all know that I had dinner with Mr. X from GM about XYZ deal and this helps everyone who has a contact with GM. It is very powerful. - Kevin Manning, Colliers Jardine (Asia Pacific) manager for North America (Knoop, 1995, p. 7).

Notes is a huge step forward in our ability to provide seamless, professional service. As a symbol it allows us to chip away at the franchise view that people try to sell against us. Personally, Notes will allow me to communicate better with my peers and support network, which is vital. Since I am working in an emerging market, it will allow me to remain in better contact with people who can help me here, I can rely on them to tap into the collective expertise base. At Colliers, there is usually

someone somewhere who has done something similar to what you have to do someplace around the world. The trick is to find them. - Doug May, Managing Director of Colliers Hungary (Knoop, 1995, p. 7).

By November, 1995, the number of Notes users within Colliers had grown to 650. All but forty of these were located within North America. Nine servers were in operation and more than 70% of all Colliers North American firms had at least one Notes user, often the Colliers Manager. (Knoop, 1995).

Though clearly the organization had taken great steps, there was still a sense of confusion. Many firms had heard the message about Lotus Notes, but increasing awareness of other systems such as Microsoft Exchange and the Internet brought skepticism. (Knoop, 1995). Some felt the key was simply getting more people with Lotus Notes on their desk. (Knoop, 1995).

With Lotus Notes, Colliers had found something convenient enough to build a base of users. The dilemma, however, was that as more people begin to use it, the shortcomings of its database capabilities and “search engines” became clearer. It had succeeded as a communications device, but had not developed the flow of information necessary to develop the “knowledge” which might be valuable to both the individual and the organization. For example, while the concept of a “best practice” library seemed reasonable, Notes’ ability to gather, sort and deliver the quantity of expertise required for an organization the size of Colliers, was farfetched. The fact remained that a number of changes had to occur before a “click of the button” would reveal the “combined knowledge” of a “seamless organization”

Forbes talked about two projected phases of development. (S. Forbes, Interview, 7/12/96). First, is to document and organize the collective existing knowledge within Colliers. Though

the firms had essentially achieved this in 1987 with the database, the emergence of Notes has shifted the effort toward one of communication and interaction. The second phase was to increase the existing knowledge base through integration. Which should come first? It is a classic “chicken and the egg” scenario where the process is implemented before the “product” is deliverable. Companies familiar with launching new products will warn how dangerous it is to advertise before the product can be delivered. Colliers, however, may not have a choice. People want to see the technology working before they commit, but commitment and participation have to occur before the technology can work.

Though greater interaction is taking place through Lotus Notes, Colliers has stalled in its ability to document and categorize experience. Lotus Notes simply cannot manage the collective individual experience of an organization the size of Colliers, or at least in the form that Colliers is currently using it. Arguably, this documentation should be the first step to generating interaction among professionals. For example, Phase One might be to document both the individual and collective experience of its members. Who is a retail specialist or who manages medical facilities? Who has a strong relationship with WalMart? How much retail experience exists in Colliers as a whole? How much work has Colliers done collectively for WalMart? From this base of information, Colliers will then be able to expand upon it through interactivity and communication. This is where learning can occur.

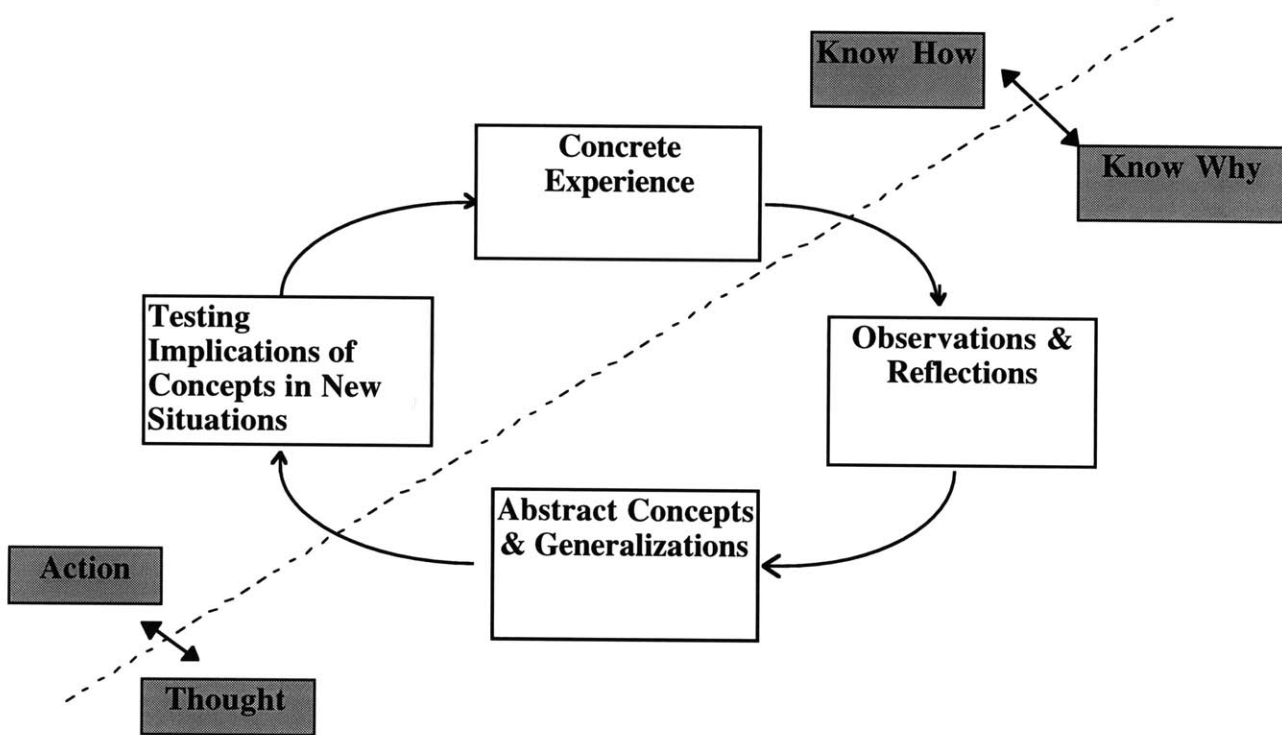
Lotus Notes excels in the interaction arena because it allows people to communicate quickly and privately. It is weak, however, in the integration arena because it lacks speed to process large amounts of information and ease of operation. Colliers has been able to get by to some degree, because the professionals who are currently using Notes know each other already. They are the owners, executives and managers who already do business beyond their local

markets. At some point, however, in order to leverage the collective experience of Colliers, all Colliers professionals will need to be connected and participating. This is an enormous task.

Part Four

Analysis

Colliers is a classic example of an organization looking at technology as a business solution. How does the experience of Colliers relate to the learning model? The case study raises several issues. Perhaps most important is the process through which individual experience can be learned from and leveraged at the organizational level. Like the learning model, Colliers needs to bridge the gap between action and thought and information and knowledge. Consider The Two Sided Model once again:



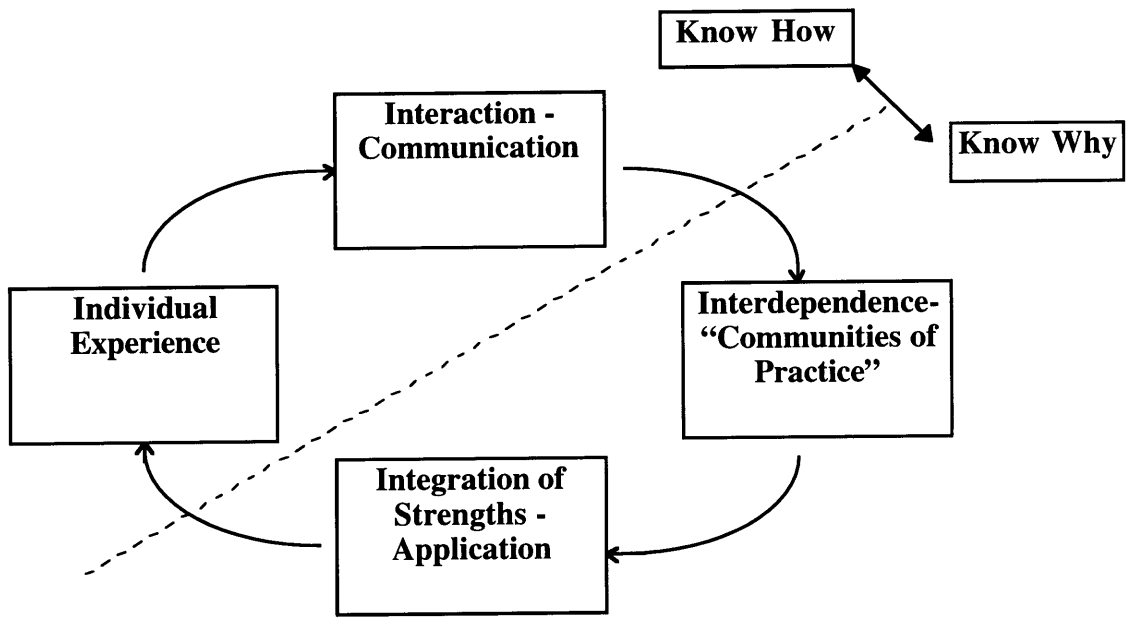
Two-Sided Learning Model (Figure 6)

The individual experience within Colliers is on the left side of the diagonal. The hope is that by collecting and categorizing that experience, making it accessible and providing a means to communicate it, the organization will be one that is able to “think” and to “learn.” Though

Forbes suggests that individual interaction is a crucial first step, he describes a gap between what he considers “interaction” and “integration” which ultimately might be bridged.

To create an environment of interaction, an individual needs to be familiar with the experience of peers and have a communication platform that facilitates contact. This is where Colliers stands today. It is struggling with the collection, documentation, and categorization of experience. All of this in an effort to determine which professional is the best one to call for a particular problem. Though it might seem a simple step, the challenges are real. For example, how does one differentiate between a number of the professionals? What happens when thirty different people consider their relationships with the same “client” to be strong? How does one sort through the quality of these relationships?

On the other side of the model, and presumably what Colliers is ultimately aiming to achieve, is integration. Integration consummates a learning environment where individual knowledge is harnessed at the organizational level. The difference is similar to the distinction in Kolb’s learning model between experience and reflection. To stimulate integration, individuals need to be willing to test their experience by asking questions and searching for better ways of doing things. Though information technology provides an important tool in the process, the vehicle most important in transferring individual experience to the organizational level seems to be the peer group or community of practice. It is in this social environment that experience and knowledge can be passed from the individual and built upon. Consider the following Colliers Learning Model:



Colliers Organization Learning Model (Figure 7)

Clearly, Colliers is trying to get from the “information” to the “knowledge” side of the model. It has the “know how,” it is now trying to implement the “know why.” On one side is the diversity and experience of the professionals. On the other side is the opportunity to leverage those resources to provide better solutions for the customer. Technology is used as one vehicle to make this connection.

The Colliers Learning Model represents a process of inquiry as well as interaction. Like Handy’s “Wheel of Learning,” it begins with questions, perhaps triggered by problems, which require solutions. Critical to this process is continual movement. Handy describes “getting stuck in one quadrant.” For example, possessing information that is never used. This is similar to the experience with the original Colliers database. The process only works if the individual is constantly looking to improve and makes the effort to participate and to learn from others. Ultimately, confidence builds as individuals are able to improve upon existing ways of doing things. They shift slowly from a level of interaction to one of

interdependence and integration. (S. Forbes, Interview, 7/12/96). This process is very similar to the learning model where experience becomes “something more.” The best of the individual is able to become the best of the organization because a learning environment is now viable at the organizational level. It is similar to Kolb’s “know how and know why”, Zuboff’s “automate and informate”, and Argyris’ “single loop and double loop learning.”

Barriers To the Solution

Forbes did not believe that Colliers was alone in its struggles, and felt strongly that other organizations faced similar challenges. “Many may use technology to secure an assignment, but few are using technology to actually do the assignment.” (S. Forbes, Interview, 7/12/96). Lack of cooperation and collaboration were viewed as natural barriers to the technology solution. (S. Forbes, Interview, 7/12/96).

It is implied that if Colliers is able to provide the right technology platform for communication and interaction, and if that interaction is able to grow into cooperative specialty groups, then Colliers will become a learning organization. Suppose, for example, that Colliers had a working technology that provided all the information anyone could possibly want. Would organizational learning occur at Colliers? Probably not. The technology only works when it is supported by a corporate environment, when “it matches strategies and processes to the technology.” (Zuboff, 1985). This includes the structure of the organization, its business strategy, its people and its leadership. It is important that we consider these in the context of organizational learning.

Organizational Structure

From a structural standpoint, Colliers seems to have an opportunity to benefit from “knowledge sharing technologies.” The quality of its people and its firms, their diversity of real estate skills and knowledge, allow a tremendous foundation from which to build. Independence, autonomy, quality, diversity, profitability are all words that come to mind

when thinking about the strength of the Colliers organization. Capturing these strengths, however, has proven difficult for the organization.

The equality and independence that Colliers firms share are as much a weakness as they are a strength. Issues of commitment, consistency, control and accountability need to be addressed if technology is going to provide the advantage that Colliers hopes it will. Forbes attempts to influence and encourage cooperation without any real means of control. This is a Catch 22 because on one side, cooperation seems to be most successful when it occurs on its own. Likewise, the best learning environment seems to be one that occurs naturally. At the same time, if cooperation is not occurring, then what can Forbes do? Colliers relies on peer pressure and trust in order to build a cooperative environment. Yet even the best technology system requires organizational support. This includes consistent training, standardized practices, defined objectives, and commitment. How can Colliers achieve these without sacrificing the diversity and independence of its firms? Clearly, some balance is desired. For example, control might be necessary to mandate change, but firms will hesitate to give up their independence. Standardized practices and processes might be demanded by global customers, but Colliers diversity of skills and practices are precisely what makes it valuable. Rewards and incentives need to be aligned with group cooperation, yet at the same time work for the professionals who act alone. These are difficult tasks and will require some balance in order to maintain the strengths of the organization.

Business Strategy

From a strategic perspective, it is clear that Colliers needs to define its objectives. First and foremost, is the goal one of individual success or organizational success? Today, Colliers is faced with an opportunity to service global customers. Servicing the real estate needs of AT&T, for example, is more than simply allowing the best broker in New Jersey to handle the job. They have succeeded, so far, by serving their own professional and his or her own clients. The broker in Boston benefits by referring a broker in another market. Success is measured by the compensation to the individual. Traditionally, this has been the nature of the real estate service business. As the business has become less transactional and more relationship and management intensive, however, Colliers is faced with an interesting dilemma. As a support service, they may need to invest in systems that are more management and “knowledge” focused than sales and “information” focused. More important, however, is whether Colliers can meet the demands of the global customer through the individual and their firms. Since its inception, Colliers has acted as a “service bureau” for its members. The Boston headquarters operates solely in a supporting role. This is fundamentally different than other real estate organizations. Unlike their competition, Colliers has been able to avoid issues of management and day to day operations of its firms by focusing only on providing resources in a supporting role. In some sense, they are as purely customer driven as any organization. But as the customer seeks central points of control, systems and accountability, Colliers faces the question of how best to achieve these. Would a greater investment in headquarters provide an answer? Is information technology the key? The “Communities of Practice” concept may provide a solution for Colliers.

Leadership

From a leadership perspective, it is imperative that whatever Colliers chooses to do, the top firms and top executives are fully committed to it. So far, this kind of commitment has not occurred. Name and logo issues, as well as many others, have dragged on for years because one firm refuses to do something that another firm has already done. (Knoop, 1995). Inconsistency seems to breed greater inconsistency. It is difficult situation because one would like the smaller firm to have the same voting power and influence that the larger firm does. At the same time, is it fair for the firm with \$100 million in annual revenue to have the same voting power as the firm with \$1 million in annual revenue? Though Colliers alleviates this by establishing executive committees which include a variety of firms, they will need leadership and commitment from its strongest people and its strongest firms if it is ever going to succeed as a learning organization. An important question is whether an organization can have many leaders or must it have one? Furthermore, if it can have many leaders, can the situation or opportunity dictate the leadership? Again, the “Communities of Practice” concept might provide the solution.

The Role of the Individual In the Learning Organization

The strength of Colliers lies in its diversity of resources as well as its depth of experience. What is now required is the evolution of individuals into cooperative specialty groups. As individuals learn to ask questions and to seek new solutions from the experience of others, they will improve themselves and, ultimately, the organization. As professionals find common interests, they will build relationships and eventually the base of interaction will grow. Examples of peer groups might include; retail specialists, property management,

investment sales and even Colliers owners. For the peer groups to be successful, it is important that each participant feels that he or she has something to gain. Though teamwork is a word commonly used by organizations, the peer group or specialty group concept is more comparable to the “Communities of Practice” discussed earlier. Forbes gives a collaboration analogy in terms of the game of football. On a particular team, a tackle might dominate his [or her] position. What can he continue to learn on that team? However, when the dominant tackles from a number of teams are able to learn from one another, that is collaboration. (S. Forbes, Interview, 5/96). The task at Colliers is not much different. As an organization, it provides the depth and diversity of resources for individuals to continually improve their knowledge in a collaborative environment.

Part Five

Conclusion

“Ignorance of the present, ignorance of the future, these are pardonable. But ignorance of how ignorant we are is unpardonable.” - Historian Arthur Schlesinger (Davis & Botkin, 1994)

The best technology is only as good as the organization that uses it. Colliers believes it has great people. The hope is that with the proper tools, a learning environment will prevail and Colliers will flourish. It is not enough. Technology alone, cannot create the learning organization. Only a more comprehensive approach to organizational learning can succeed.

This paper addresses two fundamental questions: What is a Learning Organization? How does a company become one? Perhaps the latter is more relevant in today's business environment. There are no easy answers. I believe, however, that a better understanding of what a Learning Organization is, is a crucial first step toward becoming one. I also believe that the opportunity to develop knowledge and wisdom begins and increases through the interaction of similarly committed people and “Communities of Practice.” Information and interaction are important steps on the road to organizational learning. These peer groups provide the right context for interaction to become “something greater.” As peers begin to rely on one another to learn and to develop solutions, interaction is able to grow into interdependence. When this interdependence is applied in order to deliver the best solutions for the client, the value of the individual will be maximized and what began as information is now the wisdom of the organization.

Information technology will continue to improve and will ultimately be able to perform the tasks that organizations would like them to. This is exciting news and the importance of technology as a vehicle cannot be overstated. The opportunities to share and to learn will only become greater. Will the Learning Organization represent a fundamental shift in the way business is done? In order to become a learning organization, an organization's culture needs to be "supportive of" and "aligned with" a learning environment. This culture will be embodied by individuals who are able to raise questions, to share and to learn. It will be supported by processes able to deliver the best of the individual so that the best of the organization can prevail.

This paper has raised a number of opportunities for further research. These include:

What more can we learn from "Communities of Practice?" What industries seem to be most appropriate and what examples might exist to look at them more closely in practice?

What companies seem to be closest to becoming Learning Organizations? What can we learn from their experiences?

Where have "knowledge based" systems been implemented "successfully." What are the "success" criteria and measures? What was learned from the experience?

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