

Chapter 5 — Organizational Learning through Knowledge Workers and Infomediaries

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Knowledge management is defined and compared to information management and the institutional research function. In order to promote transformational change, new tools such as learning histories are needed; mistakes must be valued; and dissatisfaction recognized as part of the learning process. Scharmer's (2002) concept of presencing is discussed as a new form of leadership necessary to effectively leverage knowledge workers.

Knowledge management or KM is difficult to define and, while its attraction for business receives much attention, its implications for higher education are not clear (Thorn, 2001). The term "knowledge management" is used in different ways and is sometimes confused with "information management" or IM (Kay, 2000; Roell, 2004). Bernbom defines KM as the "discovery and capture of knowledge, the filtering and arrangement of this knowledge, and the value derived from sharing and using this knowledge throughout the organization" (2001, p. xiv). It is this "organized complexity of collaborative work to share and use information across all aspects of an institution which marks the effective use of knowledge" (Milam, 2001a, p. 1).

Knowledge starts as data, which include facts and numbers. "Information is data put into context... Only when information is combined with experience and judgment does it become knowledge" (Kidwell et al, 2000, p. 29). Knowledge is described as a dichotomy between explicit knowledge, which may be codified, packaged, transferred, and communicated; and tacit knowledge, which is more personal, context-specific, and informal. This is why storytelling is an important tool in KM. Narrative describes action and images to convey complex, hidden meanings and tacit knowledge. As phrased by Agatha Christie in her 1942 novel The Moving Finger, "How

much do we know at any time? Much more, or so I believe, than we know we know!" (In Landauer and Dumais, 1997).

Knowledge assets within an organization are not measured just by employees' skills, work processes, education, or experience; but by their "capitalization as members of an organization" (Strassman, 1999, p. 14). KM strategies typically focus on best practices, training, customer relations management, business intelligence, project management, document management, search engines, the use of taxonomies, data warehousing, and supply chain management. The tasks of KM involve cultivating, nurturing, and exploiting knowledge at both the personal and organizational level to help get the right knowledge to the right people at the right time (Oliver et al., 2003).

Higher education institutions have "significant opportunities to apply knowledge management practices to support every part of their mission," explain Kidwell et al. (2001, p. 24). However, there are few examples of institutions that use "knowledge management as a way to operate" (Graham, 2001, p. 11). While there is a "high level of awareness" of the importance of KM in universities, research suggests that there is a "low level of actual implementation" (Oliver et al., 2003, p. 143).

This chapter provides an overview of knowledge management within the context of higher education. The parallels between capturing and sharing knowledge and the institutional research function are portrayed. A variety of tools such as learning histories and storytelling are discussed. Specific issues in organizational learning are described, including the need to value mistakes and dissatisfaction as necessary parts of the process. In understanding new forms of leadership that promote transformational learning and change, Scharmer's (2002) concept of "presencing" is discussed. This involves the use of intention and focusing on the now, more than reflecting on the past.

UNDERSTANDING KNOWLEDGE MANAGEMENT

A great deal of confusion exists about the meaning of the terms knowledge and information. Some practitioners argue that KM is nothing new and that it is simply a reworking of library science and information management (IM). Where IM is focused on storing and retrieving information, KM is more concerned with organizational outcomes. KM strategies move beyond disseminating knowledge to sharing and using it, especially within a community of practice (Bouthillier and Shearer, 2002).

As knowledge is identified, captured, and codified, it moves from something that is bound to human beings to something assimilated as objects of learning. Or as Roell (2004) explains, "Once it is 'explicated', it becomes information" (p. 2). The real work of knowledge is "mostly invisible" and its "observable end-products such as reports or decisions do not show from what process they have emerged" (p. 4).

Information Overload

The problem of information overload is both organizational and personal. Many employees are "awash in rising tides of content and data" and "waste many hours searching for, sorting, and assessing information, incurring a significant organizational productivity cost" (Rao, 2003, p. 29). It is very difficult to quickly find relevant information because it involves "digesting poorly or apparently featureless piles of documents. Thus, organizations don't draw on reservoirs of information that could influence a particular decision, task, or project. Ultimately, this leads to uninformed decisions, overlooked risks, and lost opportunities" (p. 29).

Knowledge as Competitive Advantage

Drucker (1995) explains that knowledge is the key economic resource in learning organizations and the dominant source of competitive advantage (Stevenson, 2001). KM strategies help organizations retain expertise during downsizing and turnover in personnel. In her

article “KM Pays Off,” Delio explains that while “knowledge does not result in a physical product... it can yield demonstrable results” (2000b, p. 36). These include increased speed of processes, improved quality, better customer service, and rapid innovation.

THE FUNCTION OF INSTITUTIONAL RESEARCH

There are myriad processes in higher education that involve a sustained and thoughtful commitment to organizational learning; among them accreditation procedures, national association activities, the search for best practices, governance structures, quality improvement initiatives, accounting standards, and program review. There is a strong focus at many schools on improving key performance measures such as student persistence and engagement. In this era of public accountability and budget shortfalls, there are extensive efforts to measure institutional effectiveness and document the efficient use of scarce resources.

The functions of institutional research (IR) and assessment are usually considered central to these efforts. However, the IR function is difficult at times to understand. It may be centralized or spread throughout an institution. IR is not always labeled as such (Muffo and McLaughlin, 1987). In the most recent Primer for Institutional Research, Knight (2003) explains that “Despite the maturation of the profession, the question ‘What is institutional research?’ seems to be perpetual” (p. vi). While “there is no consensus definition (or single reality) of what institutional research is,” there is recognition that it is a “dynamic profession” that is “changing and expanding” as a “significant administrative support function on most postsecondary campuses” (Howard, 2001, p. v).

IR covers the “full spectrum of functions (educational, administrative, and support) occurring within a college or university” in “their broadest definitions” to support decision-making (Middaugh et al., 1994, p. 1). It is tasked with collecting, extracting, editing, analyzing, and presenting information and data about enrollment, finance, courses, admissions, facilities, peer

institutions, human resources, and assessment for management decision-making. There are many tools and products of IR including print and electronic factbooks, data-driven websites, online surveys, data marts, data warehouses, inter-institutional data exchanges, online workflow applications, executive information systems, digital dashboards of performance indicators, and other types of attention management systems (Borden, Massa, and Milam, 2001).

The role of Infomediary

IR professionals are comparable in many ways to what Costello (2000) terms “infomediaries” in KM. The infomediary “creates or manages systems to connect employees with the knowledge they need” (p. 33). While they “may bear any of a range of titles and may not be designated on the org chart as knowledge controllers,” these knowledge workers “keep their finger on the pulse of the knowledge flowing around the organization” (Costello, 2000, p. 33).

The Changing Nature of IR

Borden, Massa, and Milam (2001) define the skills needed for the changing profession of IR. These include managing information flow, operating system competency, software application competency, systems planning and management, administrative systems, and information design. Perhaps the most critical, managing information flow, involves “the contextual grasp of how data and information enter the realm of institutional research and flow through storage, analysis and processing, output (as in reports) and into new storage” (p. 16). The transformation of IR through KM is discussed in greater depth by Serban and Luan (2002) and Milam (2001b).

Despite rhetoric to the contrary and the somewhat obvious parallel to KM, most IR offices are not seen as vital to their institutions, but as an appendage. Theirs represents a function mandated by federal and state law and, in some regions accreditors, to comply with guidelines for institutional effectiveness. While there are notable exceptions such as Alverno College for assessment; Johnson County Community College for IR at two-year colleges; Arizona State

University and the University of Arizona for data warehousing; and Cabrillo College for data mining¹; the impact of IR at a high level of decision-making is often minimal. There is, though, a growing number of presidents with IR backgrounds.

In order for institutions to move forward in their use of KM for more than traditional IR and IM, these roles and responsibilities must be turned upside down to view them from an entirely different perspective. Recognizing that most KM initiatives do not start at the top (Delio, 2000a), IR professionals are uniquely positioned to be the grassroots leaders of KM. Most other mid-level managers are bogged down in the day to day work of operations management. The critical question to be asked is: What can facilitate this change? The answer is not to be found in better marketing of the IR profession; in attracting more administrators to the professional development activities of the Association of Institutional Research, although this is welcome; or in rethinking about IR in terms of KM. There is a much larger problem - the need for a new type of dynamic organizational learning that occurs through transformation and personal change.

IR must be thought about differently in terms of how it can help serve new types of learning at the organizational and personal level. The important lessons that may be learned through IR involve more than documenting the flow of information. New tools such as learning histories are needed which address the problems and inefficiencies within an institution. In order to get at this deeper and more powerful type of learning, personal change must take place and organizations must undergo a radical transformation in how they share and leverage knowledge as an asset. As the following discussion will show, it is not enough to maintain the status quo of administrative information systems and IM.

¹ See Jing Luan's (2003) discussion of data mining in higher education, which "has quickly emerged as a highly desirable tool for uncovering hidden patterns in vast databases and predicting individual behaviors with high accuracy" (p. 1).

BEING UNCOMFORTABLE AND LEARNING THROUGH TRANSFORMATION

“All learning is not the same; some learning is dysfunctional, and some insights or skills that might lead to useful new actions are often hard to attain” (Nevis, DiBella, and Gould, n.d., p. 2). Based on the work of Lewin, Schein (1995) explains that “all forms of learning and change start with some form of dissatisfaction as frustration generated by data that disconfirm our expectations and hopes” (p. 2).

While acceptable when voiced by students, there is little tolerance on campus for vocal dissatisfaction among faculty and staff. This would contrast noticeably with the public face that is presented to alumni, donors, and the larger community. Yet if administrators look closely at the data and information prepared by institutional research and assessment staff, there is much to be dissatisfied about. The percentage of minority faculty is often too low compared with the student population, while the attrition rate of minority students is too high. Graduation rates are far lower at many institutions than desired. Faculty salaries by discipline differ significantly by gender, while new hires are predominantly white male. Many students change majors, resulting in fewer minorities and women entering science and engineering fields than hoped for.

If one values dissatisfaction as necessary to organizational learning, then some form of “disconfirmation” starts to take place when these numbers are faced for what they say about colleges and universities. The status quo is then disrupted, hopefully motivating people to change. Rather than merely being unhappy about performance measures in an equity scorecard, administrators must be so dissatisfied that they cannot tolerate further inaction.

Change is discussed at length in the higher education literature through a variety of lenses. In terms of learning for KM, what is important is for faculty and staff to recognize that the feelings of being uncomfortable and dissatisfied with the data about their institution are normal and necessary.

They are a necessary part of the process. While discomfort and dissonance are unpleasant, the natural tendency towards homeostasis must be resisted.

Valuing Mistakes

Senge (n.d.) explains the value of mistakes.

if we admit to ourselves and others that something is wrong or imperfect, we will lose our effectiveness, our self-esteem and maybe even our identity. Most humans need to assume that they are doing their best at all times, and it may be a real loss of face to accept and even “embrace” errors. (p. 3)

Despite their commitment to promoting student and adult development, colleges and universities do not necessarily promote the kind of “psychological safety” needed by faculty and staff to overcome the anxiety brought about by recognizing and valuing mistakes. Roth and Kleiner (1995) explain how “a corporate culture should be cultivated in which admitting and publicizing mistakes is seen as a sign of strength” (p. 5). Few want to admit that a valued intervention, especially one that involved a noticeable investment of time and resources such as a risk identification system for freshmen, has had little impact. This kind of insight often gets buried with a myriad of unanswered questions or with criticism over the use of methodology in the conduct of the institutional research. This is the “kill the messenger” reaction to institutional research which works against what is a difficult and painful change process.

Unfortunately, there is a compliance mentality among administrators that drives their use of institutional research. IR staff are used to complete mandatory paperwork. Managers are overwhelmed with their own personal KM problems and because of this don't always take the time to ask tough questions about data until there is a problem. Where there is a determined interest in improving a specific performance measure, this occurs because of a new state report, national commission study, or media scrutiny. Internal tracking systems such as affirmative action reports

about hiring statistics are designed primarily to satisfy federal and state regulations and simply monitor compliance, not address how to fundamentally change the results. Because of this, they have little net impact on equity.

The management philosophy held by many administrators makes it “harder for employees to be good learners and sharers” because staff “fear being penalized for revealing mistakes or seeking help” (Sugarman, 2001, p. 2). There is a “tacit norm” about not bringing up unresolved problems. Institutional researchers are often viewed as the harbingers of “bad news” instead of as a source of information for change.

Within many types of organizations, personnel have “naturally concealed their problems, reporting nothing, until they were close to a solution” (Sugarman, 2001, p. 2). In order to be more creative, managers and staff must discover and test their mental models and go through “significant personal change” (p. 3).

The Problem with Short-term Fixes

In most organizations, there is a preoccupation with incremental improvement and “trying to do things a little bit better” (Roth and Kleiner, 1995). There is also an emphasis on obtaining short-term results that is contradictory to the long-term work of process improvement. Managers task IR offices with finding out why a performance measure makes the institution “look bad,” wanting them to find the “right data” that will “explain away” the problem.

One example of this phenomena is space utilization. Classroom use may average 30 hours per week per room, but there is a perception of overcrowding and the need for more space. IR offices are asked to “improve” the utilization rate. While professional ethics preclude outright misrepresentation, additional data can be found through weekend use of space for non-credit activities such as CPR training and meditation classes. If these non-credit courses are counted, as reporting specifications permit, the utilization rate for classrooms can be increased to an

acceptable level that does not raise alarms about inefficient use of space. Assumptions about preferred teaching times, student schedule preferences, and the prestige of priority scheduling are not addressed. The only thing that changes is the data for the performance measure.

In order to move beyond short-term, incremental fixes, a more transformational approach is needed. “This often means letting go of our existing knowledge and competencies and recognizing that they may prevent us from learning new things. This is a challenging and painful endeavor” (Roth and Kleiner, 1995, p. 5). Part of this difficult process involves critical self-reflection about one’s own work and changing roles.

Sugarman (2000) describes a case study in organizational learning at a federal agency that addressed the problem of having a backlog of reports to produce.

What led them to the solution was to question the real purpose for the reports. The breakthrough came when they realized that the reports were not an end in themselves, but a means to improve the quality and effectiveness of services to students with disabilities. By focusing on the results that mattered, on the true purpose of their program, they were able to view the problem in a totally different light. Once the problem was reframed, a solution that was previously inconceivable now became obvious. Stated with a little irony, the solution to having too many reports to produce was to produce fewer reports – because they saw that the reports per se did not really matter. What mattered was the corrective action that the reports were supposed to lead to – and there were more direct ways to get there. (p. 19)

Senge (n.d.) discusses the work of Deming and the need for “personal transformation” that requires “basic shifts in how we think and interact.” This requires an appreciation of how organizational culture has become dysfunctional because of fragmentation, competition, and reactivity.

The Problem of Fragmentation

Human beings are taught from an early age to break problems into pieces. This act prevents us from seeing the “increasingly systemic” whole. There is a natural desire to separate organizational functions into walls and silos, for example the distinction between academic and student affairs. Even natural opportunities for organizational learning such as the release of an annual fact book, five-year program reviews, a schedule of board of trustees presentations, and annual affirmative action reports are segmented by the perceived importance of the offices which prepare them. Rarely does the entire breadth of data and information across the institution get put into larger context.

At some times, silos of information are challenged with innovations such as an online program that requires new roles for faculty and new types and modes of delivery for student services. The “mental models that created the walls in the first place” must be challenged (Senge, n.d., p. 2). This example of virtual learning highlights how a systemic look at the institution is fragmented and compartmentalized. Data may be used for enrollment projections and space planning for the new program, but the impact on consumption of courses by virtual majors and the contribution of courses by departments is often overlooked, as are cost implications. Decisions are too often made in a vacuum because they are purposely kept insular.

The Problem of Competition

Competition in organizations often “makes looking good more important than being good. The fear of not looking good is one of the greatest enemies of learning” (Schein, 1995, p. 2). This environment encourages staff to work out problems in isolation in order to “protect ourselves from the threat and pain that come with learning, but also remaining incompetent and blinded to our incompetence” (p. 2). IR offices typically report to the vice president for finance or the chief

academic officer function and work only within this sphere of influence, promoting another kind of silo. Cross-departmental collaboration is not always actively encouraged because of “turf battles.”

The Problem of Reactiveness

Senge (n.d.) explains how “We have grown accustomed to changing only in reaction to outside forces, yet the well-spring of real learning is aspiration, imagination, and experimentation” (p. 3). The “reactive stance” focuses on management by problem solving. In some ways, this is very much the male model of leadership. Whether it is a low rate of course completion, high faculty turnover, or a growing reliance on part-time instructors, administrators as problem solvers try to “make something go away” (p. 3), rather than understand all of the inter-relationships between the issues.

Reactiveness usually takes place in an atmosphere of crisis. When a problem arises, IR offices are asked to quickly review the higher education literature, contact peer institutions to see how they addressed it, and compile a new report or white paper. A new committee or task force is charged with investigating the problem, gathering feedback from the community and recommending solutions. These are standard approaches to organizational learning which, despite the best of intentions, promote the status quo. Their inquiries and reports will not dramatically change or transform anything and the net effect on relative performance measures will be minimal.

If a higher order of organizational learning is desired, this requires a very different mindset. One KM tool which helps with this effort is the use of “learning histories” for storytelling. IR and assessment are central to telling these new kinds of stories.

LEARNING HISTORIES AND STORYTELLING

Part of promoting creativity is documenting what Roth and Kleiner (1995) call a “learning history.” They argue that the measurement and assessment processes which occur in most

business and governmental organizations, which are roughly comparable to the role of institutional research, are not appropriate rubrics for organizational learning. A more useful approach is to “capture and convey the experiences and understandings of a group of people who have expanded their own capabilities. The resulting document may become a new and much-needed form of institutional memory” (p. 2).

A learning history tells a story about how an organization learned something important through some kind of concerted effort. Rather than focus on incremental changes, the topic is usually one of transformation or re-examination of a pressing issue relative to performance. The resulting history can take many forms, including written documents and multimedia products. Whatever the form, it needs to describe the “false starts and failures” of how people tried to solve a problem and how they wrestled with the issues involved. The history is designed to bring out into the open all of the messy psychological and emotional problems which were encountered during the process.

Learning historians use qualitative research and ethnography to triangulate narratives, data, and interview results in order to ensure validity. Through the use of these histories, the focus shifts from finding solutions to promoting inspiration. This is comparable to qualitative assessment efforts such as interviewing freshmen to learn “What stands out for you about your first year of college?” Grounded theory building and the emergence of themes are more important than documenting student success with quantitative measures. In learning histories, a naturalistic, constructivist perspective is used that involves “capturing and constructing stories, gathering data from a wide group of people so that judgments can be made about whether or not a story is typical” (Roth and Kleiner, 1995, p. 4). It is the honesty of these learning histories which lets people “speak more truthfully about underlying issues” (p. 8).

Looking for Contradictions

While the act of learning through reflection has its place, this process sometimes carries a burden or pressure to “prove results” or “serve a political agenda.” Instead of immediately trying to identify problems and look for solutions, uncertainty should be valued, not seen as “a sign of indecisiveness.” This new approach to learning “inevitably leads people to think about muddled, self-contradictory situations” (Roth and Kleiner, 1995, p. 5).

NEW KINDS OF LEARNING LEADERSHIP

It requires courage and commitment by organizational leaders to value the difficult processes of writing learning histories, valuing mistakes, recognizing contradictions, and focusing on long-term solutions. This approach requires very different skills and experiences in managing creativity. Institutional research and assessment must be viewed as integral parts of a new toolset.

Jaworski and Scharmer (2000) describe the importance of observing, sensing, knowing, crystallizing, and executing. Observing means “seeing reality with fresh eyes.” Sensing involves recognizing and opening oneself up to or “turning into emerging patterns that inform future possibilities.” Knowing requires “accessing inner sources of creativity and will.” Crystallizing means “creating vision and intention,” while executing requires “acting in an instant to capitalize on new opportunities” (Scharmer, 2002, p. 2).

In the use of institutional research for organizational learning, sensing and knowing are particularly relevant. Scharmer (2002), cofounder of the MIT Leadership Lab, explains that sensing involves “paying attention to things you are normally not aware of: activities you perform by rote, interactions you take for granted, expectations you’ve never questioned, or meanings you’ve never explored. The more you succeed in suspending your habit of judgment about what you notice and observe, the more clearly you will see what is going on around you” (p. 3). Institutional researchers must be asked to go beyond the data and information they convey with routine and ad hoc reporting to examine larger questions. While short-term fixes such as increasing faculty out-of-

class interaction with students can be put in place to try and increase a measure such as student engagement, the problem of engagement is much more multivariate in nature than this type of simplistic innovation implies.

Knowing

Knowing involves asking “What needs to be done here?” This involves telling stories with data to get at the heart of contradictions and dissatisfaction. Instead of being fixated with short-term solutions so as not to appear uncertain, intense questioning needs to be done, asking “Who is my Self and what is my Work?” (Scharmer, 2002, p. 3). New information can then be synthesized and experiences analyzed until new insights begin to emerge through learning histories. IR staff are best positioned to serve as these new learning historians.

Presencing

Scharmer (2002) defines a new term, presencing, as “when the highest possible future that wants to emerge is beginning to flow into the now” (p. 3). Presencing involves paying close attention to the inner processes of thought. In preparing and using learning histories, this means letting oneself feel emotionally about the topic. It means questioning and examining every assumption about an institutional research issue, including beliefs about why graduation rates are low; what contributes to them, and attachment to certain innovations or strategies, despite the lack of data to support them.

Most theories of organizational learning build on Kolb’s work about experiential learning, which promotes reflection about the past. This learning strategy does not go far enough to promote transformation, because “leaders cannot meet the challenges they face by operating on a past-driven learning cycle” (Scharmer, 2002, p. 3). Successful innovation and change depend not just on “what leaders do and how they do it, but the inner place from which they operate” (p. 3). The term presencing blends “pre-sensing” and “presence,” placing an intense focus on attention.

With this new approach, presidents, chief academic officers, and other leaders use learning histories to tell the stories that need to be told; stories that strongly convey difficult and uncomfortable information and that stir people to action. These stories let institutional leaders and managers confront problems and inefficiencies in new ways by focusing intensely on the thought processes involved, including the most basic and dearly held assumptions about their work and why they do it the way they do. These stories are not about the past, but about seizing critical opportunities for change in the present.

CONCLUSION

KM requires a serious commitment to organizational change that comes through experimenting with new tools such as learning histories and storytelling and by challenging fundamental assumptions about the higher education enterprise. This is only possible if administrators are willing to tolerate being uncomfortable, dissatisfied, and uncertain and if they learn to value long-term processes over quick fixes and problem solving. Out of these shifts comes a new level of inner attention to thought, presencing.

While the description of this new type of KM leadership may seem far removed from the day-to-day business of higher education administration, this represents a pivotal choice for managers. Colleges and universities are very complex and their flow of information for operational decision-making is adequate at best, even with the latest technology for attention management. The problems of information overload and lost productivity that occur because of inefficient searching for knowledge appear insurmountable. The reliance on strategies of information management only takes institutions so far.

While organizational learning appears at first to be widespread, this essential KM strategy is either dysfunctional or lacking. Many activities of institutional research, assessment, and institutional effectiveness appear to address this need, but only superficially. These staff roles

need to be reconceptualized as “infomediaries” and charged with documenting the flow of hidden, tacit knowledge and organizational memory. However, this strategy is not enough in itself and gets only at the most basic layer of KM.

Institutions will fail to leverage the full potential of organizational learning unless they promote a climate where dissatisfaction and mistakes are valued, where contradictions and conflict are welcomed as learning opportunities, and where organizational change promotes transformation at the most personal level in how administrators, faculty, staff, and students use knowledge in a community of practice. The highest good of society’s institutions of higher education will not materialize until this lesson in learning is understood and actualized.

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