Leadership Education for Knowledge Organizations: A Primer

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Abstract

As we move rapidly into the 21st century leaders face the challenge of being effective in a global knowledge environment. Now, more than ever, leaders must play the key role in helping organizations cope with the challenges they face from expanding knowledge and knowledge systems. Leaders must guide changes in a climate of increased competition to fill customer demands. This paper addresses the nature of the rapidly changing knowledge organization through an exploration of the traditional leadership paradigms, an examination of current trends in knowledge management and the learning organization, and by finally considering the role of leaders and leadership education in the emerging knowledge organization.

Introduction

To be certain, the role of leaders in the short-term future is impacted by the current information revolution. Nearly every modern organization is confronting the change in information systems, from ledger cards to a digital era. Today, information flows in directions and with speed that only 10 years ago we could not even imagine. The change has been nothing short of a revolution. This trend toward "informatics" effects the process of leadership by speeding up the inputs, requiring faster and more personal transformation of the product, all in a business climate that builds competition through "response time" to customer demands.

None of these elements alone is enough to prepare organizational citizens to engage in knowledge management. Some level of experience in knowledge management tools is also very important, but possibly beyond the purview of the leadership classroom.

In addition to the content issues, leadership educators must enact a teaching strategy that not only reflects effective collaborative leadership, but also embraces the use of knowledge management skills. Even basic learning theories clearly point to the importance of practicing the skills built from knowledge. Our instructional strategy can maximize student learning if it is focused on those activities that transcend the content of leadership in knowledge organizations, and at the same time provide practical experience with the use of knowledge management tools. Herein lies the classic rub, often leadership education has focused more on the personal aspects of leadership, perhaps to the exclusion of other technological tools. Furthermore, it is common to avoid those tools that we ourselves may not have used extensively. While our pedagogical strategy should remain centered on the person, our techniques must advance to the point where leadership educators can effectively model knowledge management skills.

Conclusion

To leadership educators, the trend toward knowledge management is perhaps just another issue in the leader/follower/situation/environment relationship. But, as the stakes become higher, and more organizations are forced to take the path toward knowledge management, the leaders we educate will seek specific answers to questions regarding this issue. As a field, leadership educators would be well served to embrace the inevitable changes we are facing and move forward with a pedagogy that provides our students with the necessary skills to face the challenges of tomorrows faster, global, knowledge based workplace.

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Additionally, the information age has put great pressure on organizational outcomes. "Just in time" solutions have replaced "on hand" inventory, and product quality is more important than ever before. Finally, one of the most serious issues facing the modern organization comes in the form of an uncertain future and a rate of change that seems staggering today, but will only geometrically intensify as information systems become widely instituted. In short, the modern organization is forced to produce something faster than ever and better than ever for a rapidly evolving market.

Historic Leadership Education Models
in the Context of Knowledge

Broadly speaking, leadership education models developed over the past century fall into three traditions. Each of the three, in their own niche of time, made sense and was, perhaps, useful. The treatment of knowledge within each model, while not well documented, emerges as obvious from their discussion.

The Command and Control Tradition

The first tradition in leadership education was based on the understanding that the primary purpose behind leadership was to accumulate and use authority and control. This tradition was expressed in the formal academic training in business schools all the way to practical training of managers in line work. During the early years of management education there was a clear focus on maximum human output allowing for minimal human intervention – a clear attempt to control error through prescriptive strategy. Leadership educators were charged with giving managers the tools to work people more efficiently through developing clear policy and finding incentives and disciplines to control follower behavior.

Instruction during this time centered almost exclusively on building business skills to manage an uneducated workforce. Largely, these skills were based in rigid policy and control, implementing formal authority, and minimizing choice. Knowledge management focused squarely on finding ways to access relevant data from the workforce and information collection by management with the purpose of building reports on efficiency and profitability. Data, information, and knowledge control resulted in a strong hierarchical orientation that served to propagate itself.

Figure 1. Knowledge in the Command and Control Tradition.

Purpose of Knowledge	1. Promote corporate profitability. 2. Support the authority of management. 3. Minimize human error.
Role of Employees in Knowledge Management	1. Passive reception of directions and policy. 2. Minimal responsibility for collection of data. 3. Production is central element of employee worth, information plays a tangential role.
Role of Leaders in Knowledge Management	1. Policies created, implemented, and enforced from the top. 2. Ultimate responsibility for collection of data. 3. Control distribution of knowledge.

The Human Resource Tradition

As the traditional factory environment began to give way to the modern service environment, leaders began to embrace a different model. More studies began to focus on the employee as a productive part of the systemic equation rather than as a cog in a machine. Human resource management emerged during this time in an effort to maximize the potential of workers in the profitable bottom line of the organization. Rather than seeking to factor out the person, this trend in leadership education sought to preserve some level of basic human rights for employees. Through training programs employees were given necessary information to do their jobs better. Much of the "important" information was tightly controlled, but sharing basic policies and processes increased the overall level of competency of the employee base dramatically.

Knowledge management during this juncture was concentrated on two areas: internal management and external relations. The human resource organizational system focused on maximal output from minimal resources. Employees were the key component in transformation and needed management to set the most productive direction. Information systems were developed to measure process and output; reports were generated so that management could adjust the course. The external relations component was essentially how the company represented itself to the customer and the industry. During this era the role of mediated advertisement campaigns directed at markets debuted. Knowledge management focused on marketing data than internal process reflection. Basic information technology like the telephone was a mainstay, but no organization wide method of tracking this consumer contact was available.

Figure 2. Knowledge in the Human Resource Tradition.

Purpose of Knowledge	1. Promote corporate profitability. 2. Inform employees of processes for efficiency. 3. Provide a vehicle for employee input into managerial decision making.
Role of Employees in Knowledge Management	1. Passive reception of job duties 2. Closely self-monitor processes and training 3. Thoughtful input given to management when prompted
Role of Leaders in Knowledge Management	1. Control of workflow through sharing information throughout the organization 2. Make and implement decisions based on the latest information 3. Solicit input as needed to monitor employee satisfaction and process control

The Post-Industrial Era

The shift toward a participative, collaborative leadership environment is increasingly documented in the leadership literature – both academic (Rost, 1990) and popular. The expectation of leaders today is quite distant from either of the paradigms of the past. This evolution is in no small part due to the widespread integration of communication and information systems. Other factors, not the least of which would include a more educated and specialized workforce, have forced an evolution in way that leadership is conducted in the modern organization. Just twenty years ago, the mantra would have been "command, control, and centralization", but the attitude of the progressive workplace has evolved into an "empower me or lose me" chorus (Brungardt & Crawford, 1999). More than ever, the workplace focuses on leaders and followers collaborating through self-managed teams in an effort to mobilize their collective knowledge and effort into a synergistic outcome. Leadership in this post-industrial era focuses much more on the needs of the followers, and less on the personality of the leader. Leadership becomes a relationship between leader and follower, situationally dependent, of course (Rost, 1990).

Figure 3. Knowledge in the Post-Industrial Trend.

Purpose of Knowledge	1. Develop more efficient processes based on team members' input. 2. Create an organization that values knowledge and spends time to learn. 3. Build shared meaning in knowledge communities.
Role of Employees in Knowledge Management	1. Partner in learning. 2. Reservoir of explicit and tacit knowledge. 3. More than a factor of production, the means to production of knowledge enhanced product.
Role of Leaders in Knowledge Management	1. Provide direction and vision for all organizational members. 2. Focus attention on the process of knowledge management. 3. Empower all organizational members to become part of the learning community and share explicit and tacit knowledge.

An Emerging Knowledge Organization

Over the past 15 years the term "knowledge management" has evolved to represent the changing nature of the workplace – a true paradigm shift. In coining the phrase "knowledge society" Peter Drucker convincingly argued that land, labor, and capital – the classical factors of production – had been largely replaced by knowledge (Drucker, 1993), "that knowledge has become *the* resource, rather than *a* resource, is what makes out society 'post-capitalist'"(p. 45). The modern knowledge organization has become a social environment designed by the specialists, to meet the needs of the market and the specialists, in the most efficient and quickest way possible. Lang (2001) clarifies the importance of the knowledge worker in this new age, "while the knowledge worker may need the tools of production the organization owns, while she may well have to work in organizations, she nevertheless owns the means of production" (p. 44). Hitt (1995) further argues, "It seems evident that the learning organization is a paradigm shift from the more traditional organization. Indeed, it is a paradigm shift of the highest order. We are witnessing the emergence of a radically new perspective on organization: how they should function, how they should be managed, and how they should cope with change" (Hitt, 1995, p. 17). Rowley (1999) definitely suggests that "the knowledge based society has arrived, and those organizations that can succeed in the global information society are those that can identify, value, create, and evolve their knowledge assets" (p. 416). Rowley continues by suggesting that effective management of knowledge, change, and innovation are central or "core competencies" that must be mastered

for organizations to succeed. Neef (1999) expanded the more micro-level view of knowledge management by commenting,

> A knowledge based revolution is taking place, and it comes in a matching set: knowledge management for organizations and the knowledge-based economy for nations themselves. Both are part of a major evolutionary economic movement which is beginning to reshape the global economic structure, and knowledge management should be seen as one of the most concrete and important set of practices and policies than an organization can adopt, marking a significant step in an enterprise's evolution toward becoming a global, learning organization that can survive in the knowledge based economy (p. 72).

One can safely assume that the changes to come will certainly be as staggering as the organizational and global paradigm shift we have encountered over the last 20 years.

Basics of Knowledge Management

As a preliminary consideration, it seems important to define the seemingly self-evident term – knowledge. While *prima facie* it seems obvious, the reality is that knowledge is quite complex (Clark & Rollo, 2001). Knowledge is often situated within the context of other cognitive elements as Figure 4 displays (Clark & Rollo, 2001).

Figure 4. Cognitive Elements.

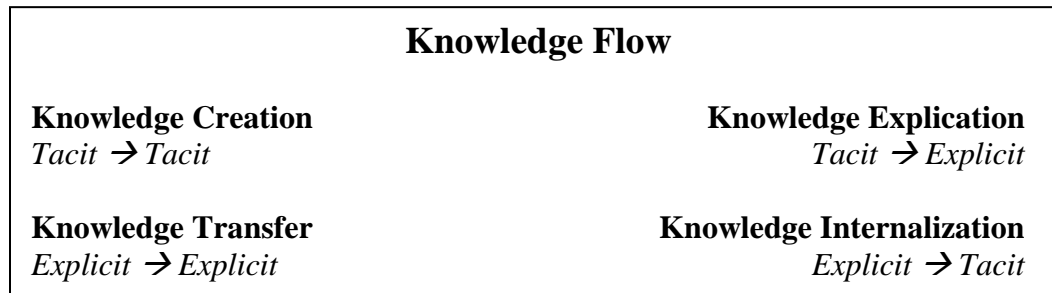| Cognitive Elements	
Data	• Discrete objective facts without judgment or context. • Becomes information when it is summarized, placed in context, and becomes accessible to a recipient.
Information	• Data endowed with relevance and purpose. • Becomes knowledge when it is used to make comparisons, access consequences, establish connections, and engage in dialogue.
Knowledge	• Seen as information that comes with insights, framed experiences, intuition, judgment, and values. • Represents the truth and serves as a basis for action. • Becomes wisdom when applied throughout time, and adapted with success.
Wisdom	• The best use of knowledge, always tacit. • Knowledge become saturated with meaning through analytical thought.

Of central importance is the type of knowledge that organizations are forced to manage. If all knowledge were codified and formal, or explicit, then the function of knowledge management would be little more than compliance and management. Bollinger and Smith (2001) define explicit knowledge, "Explicit knowledge is clearly formulated or defined, easily expressed with ambiguity or vagueness, and codified and stored in a database" (p. 9). Nevertheless, the reality is that much of the information that organizations try to manage is held within the personal and collective experiences of the workforce; it is tacit knowledge. Bollinger and Smith (2001) explain, "Tacit knowledge is unarticulated knowledge that is in a person's head that is often difficult to describe and transfer. It includes lessons learned, know-how, judgment, rules of thumb, and intuition…it is key characteristic of team-based learning organizations" (p. 9). Lang (2001) further clarifies, "knowledge is both produced and held collectively rather than individually in tightly knit groups or 'communities of practice'…organizational knowledge is social in character" (p. 46). Tacit knowledge is an important resource of organizations given that 42% of corporate knowledge is held within employee's minds (Clarke & Rollo, 2001).

Knowledge management is jointly a goal and a process. As an outcome or goal, knowledge management is entirely focused on sharing information for the benefit of the organization, as Bollinger and Smith (2001) conclude. They reasoned, "the knowledge management process is not so much about control as it is about sharing, collaboration, and making the best possible use of a strategic resource" (p. 14). Explicit knowledge is generally easy to access and manage, but tacit knowledge often defies capture given its highly personal and subjective, but critical, nature. Clarke and Rollo (2001) assert that knowledge management is primarily about making tacit knowledge more accessible since it accounts for a majority of an organization's collective knowledge. Lang (2001) makes obvious the goal of knowledge management, "Knowledge management systems must connect people to enable them top think together and to take time to articulate and share information and insights they know are useful to their company" (p. 44). Stonehouse and Pemberton (1999) definitively suggest, "it is the role of knowledge management to ensure that individual learning become organizational learning" (p. 132). Birkinshaw (2001) refers to this process as 'recycling' old knowledge.

The process of knowledge management is based on the ability of all members of the organization to add value to the basic business processes through the creation, communication, codification, and coordination of both explicit and tacit knowledge stores (Nonaka & Takeuchi, 1995). Specifically, Nonaka and Takeuchi (1995) theorized that the flow of knowledge transitions from socialization, to externalization, to combination, and finally to internalization – basically from the raw experience, to understanding, then to categorization, and

finally to the creation of personal mental models that transcend the experience. Clarke and Rollo (2001) define the relationship in Figure 5.

Figure 5. Knowledge Flow.

Knowledge Flow

Knowledge Creation	**Knowledge Explication**
Tacit → Tacit	*Tacit → Explicit*
Knowledge Transfer	**Knowledge Internalization**
Explicit → Explicit	*Explicit → Tacit*

Seng, Zannes, and Pace (2002) theorize five distinct steps in the process of managing knowledge:

1. *Capturing knowledge*. Record steps involved in solving a problem.
2. *Storing knowledge*. Captured information must be stored in a database, warehouse, application, or some other production system.
3. *Processing knowledge*. Involves sorting, filtering, organizing, analyzing, comparing, correlating, and mining the knowledge.
4. *Sharing knowledge*. Distributed through information systems or through personal interaction, synchronously or asynchronously.
5. *Using knowledge*. Solving problems to advance the objectives of the organization.

Various authors discuss the specific processes associated with knowledge management. Galagan (1997) proposed the following sample list of knowledge management processes:

- Generating new knowledge,
- Accessing knowledge from external sources,
- Representing knowledge in documents, databases, software, etc.,
- Embedding knowledge in products, processes, or services,
- Transferring existing knowledge around an organization,
- Using accessible knowledge in decision making,
- Facilitating knowledge growth through culture and incentives,
- Measuring the value of knowledge assets and the impact of knowledge management.

Baines (1997) puts the knowledge management process squarely at the intersection of technology, organizational structures, and cognitive based

strategies. In this case, technology becomes the tool, the organizational structure becomes the context, and the knowledge becomes the 'stuff' of great advances. Of the conclusions that could be drawn regarding the specific processes of knowledge management, two quickly come to mind for these authors. First, each of the knowledge management process has been traditionally the domain of leaders. Second, these processes, as in the past, require much more than just a technological solution.

This discussion obviates the need to understand what we should be doing regarding knowledge management. Bollinger and Smith (2001) suggest that the goals of knowledge management should be to effectively manage explicit knowledge through better systems and to build an organizational culture supportive of sharing and creating tacit knowledge. Davenport and Prusak (1998) identified specific objectives of any knowledge management project:

1. To create knowledge repositories to store knowledge and information,
2. To improve knowledge access or transfer,
3. To enhance the knowledge environment to facilitate creation, transfer, and use of knowledge,
4. To manage knowledge as an asset and to recognize it's value.

Organizational Learning and Knowledge Organizations

In much of the knowledge management research, the term learning organization and knowledge organization are used interchangeably to reflect a workplace that "are continuously seeking data from the environment, are fluid and adaptable, and learn from their previous experiences. They share knowledge and contain systems and process for sharing knowledge" (Johnson, 2002, p. 242). One oft cited definition of the learning organization comes from Pedlar, Burgoyne, and Boydell (1991), a learning organization is one which facilitates the learning of all members and continuously transforms itself. Rowley (2000) summarized the concept of the learning organization as follows:

- Facilitates the learning of all its members and continuously transforms itself,
- Facilitates participative and innovative development with and between people and institutions commercially, technologically, and socially,
- Forms the strategy, structure, and culture of the enterprise into a learning system,
- Encourages double loop learning in which learning informs and impacts on strategic directions,
- Responds to changes in the internal and external environment of the organization by detecting and correcting error

- Has is its primary aim rapid and continual regeneration of the total organization depending on rapid and continual learning.

Hitt (1995) gives two reasons why learning organizations are needed. First, the survival of the organization demands that learning must be equal or greater than environmental change or death is imminent - Revans Law. Second, an organization must strive for excellence in the global market economies. Lang (2001) suggests that learning is "a way of looking at the world, of coming to possess that perspective embedded in a particular discipline and common wisdom about cause-effect relationships" (p. 45). It is both content as well as context for Lang.

Three specific models of learning emerge from this cursory review of the literature. The first model, presented by Argyris (1992), posits that two types of individual learning occur in organizations. The first type, single loop learning, is a reactive condition where some automatic action is triggered by an external stimulus. Double loop learning requires reasoning and knowledge, rather than mere reaction. Double loop learning would be relatively close to the current vogue trend toward 360-degree feedback, which requires self-examination and reflection instead of unilateral reaction to a situation. While this model generally reflects the status of individual learning, there is little in the model that points to a broader consideration of the organization. Stonehouse and Pemberton (1999) considered the issue of an interaction between individual and organizational learning. In their model, they link the processes of individual and organizational learning together through a four-stage process:

1. Organizational knowledge is diffused and coordinated into individual learning,
2. Individual learning generates explicit and tacit knowledge,
3. Individual explicit and tacit knowledge becomes formalized into organizational learning, and
4. Organizational learning generates organizational knowledge.

Smith (1999) also considered individual learning reasoning that the learning cycle takes the form of a circle where:

1. Enablers (anything used to improve the way one carries out a role) are developed,
2. The learner carries out their role,
3. The learner sees the results,
4. The learner thinks about the results.

Throughout this process, in Smith's estimation, the learner engages in a continuous collaboration with other organizational members – the basis for action

learning. In sum, these theories of organizational learning (or the learning organization, depending on your perspective) give substance to exactly what goes on in a knowledge-enabled organization. These mechanistic events are replicated thousand-fold to give the impression of a group of people adapting to a changing environment. Marsick and Watkins (1999) lend an optimistic flavor to organizational learning, "Engaging people in learning around their work can release incredible energy that can revitalize people and the organization itself" (p. 207).

Role of Leadership in Building Knowledge Organizations

Mahoney (2000) crystallizes the position well, "Let me say from the start that in my view leadership must exist at all levels in an organization, regardless of the size, for it to consider itself a learning organization….there is no excuse for them [leaders] not creating an environment where everyone can participate in this process" (p. 241). But Bailey and Clarke (2000) discuss the real disconnect in how leadership has not kept pace with the need to understand the role of knowledge, "for some reason many managers have yet to grasp the clear personal relevance, utility, and organizational significance of knowledge management" (p. 235). They further reported that many leaders felt that knowledge management was more fad than reality, or struggled to both conceptualize and practice knowledge management.

Baines (1997) suggested that leaders, first and foremost, were responsible for learning – both personally as well as organizationally. Scharmer (2001) charges leaders with a nearly impossible task, "Leaders…face a new challenge. Leaders must be able to see the emerging opportunities before they become manifest in the marketplace" (p. 137). Stonehouse and Pemberton (1999) suggest that leaders play a crucial role in building and maintaining an organizational culture of learning. They specifically infer that leaders must attach a high value to knowledge, encourage questioning and experimentation through empowerment, build trust, and facilitate experiential learning of tacit knowledge. Bollinger and Smith (2001) echo the same sentiments when suggesting that leaders need to focus on:

- Establishing a culture that respects knowledge, reinforces it sharing, retains its people, and builds loyalty to the organization,
- Ensuring that anyone in a supervisory position receive training, empowerment, and support to promote the desired culture,
- Establishing a knowledge infrastructure and support system that enhances and facilitates sharing and application of knowledge.

Davenport and Prusak (1998) also give very specific recommendations to would be leaders regarding their role in knowledge management. They suggest that leaders:

- Advocate the importance of learning and knowledge in an organization,
- Design, implement, and oversee an organization's learning infrastructure,
- Manage relationships with external knowledge providers,
- Provide ideas to improve the process of knowledge creation in the organization,
- Design and implement a knowledge codification approach.
- Measure and manage the value of knowledge,
- Manage the organization's professional knowledge managers,
- Lead the development of learning and knowledge strategies, focusing the organization's resources.

Lang (2001) provides further substance when arguing that human relationships within an organization are crucial for knowledge creation, sharing, and utilization. Lang opines, "The real task of knowledge management is to connect people to people to enable them to share what expertise and knowledge they have at the moment" (p. 55). Hitt (1995) also identified that leaders needed to empower all members of the learning organization by developing a shared vision, providing resources, delegating authority, celebrating success, and most important, by being a learning architect.

Some limited empirical findings on the role of leadership in the knowledge organization have been published, but this type of investigation has not been the norm. On the basis of several case studies of knowledge organizations Waldersee (1997) concluded that leaders should target five specific areas:

- Maximize message reception,
- Create and embed an intellectual transformation of the workforce,
- Motivate to learn,
- Raise self-confidence,
- enable navigation through a changing environment.

In a limited interview of leaders Johnson (2002) found a common theme, "A critical point, though, is that they paid attention themselves [sic] to the learning organization initiative….The idea that everyone in the organization pay attention to learning ran through the data" (p. 246). Johnson (2002) made several conclusions based on the data, but of most significance is the idea that knowledge management applies to the entire organization, from top to bottom. Finally, in a more substantial empirical piece, Politis (2001) looked at the relationship between self-management, transformational/transactional leadership, and various

knowledge management attributes. Politis found that self-management, transformational, and transactional leadership styles are related to dimensions of knowledge acquisition. Specifically, Politis concluded:

> It is the participative and self-management leadership style that encourages and facilitates these attributes (behavioral skills and traits of knowledge workers) that are essential for knowledge management (acquisition) and knowledge sharing. It is the participative and self-management leadership style that has clear and conscious knowledge strategy if the enterprise is to take advantage of the knowledge available in impacting efficiency, effectiveness, productivity, and competitive position (p. 362).

Politis also makes comment about the need for leaders to act within an empowered environment. The empirical findings, though limited, seem to lend some support to the theoretical assumptions made by many authors speaking of the need for participative collaborative leadership in the face of the transition to the knowledge society.

Confronting the Challenge Through Leadership Education

Leadership education, while still largely in its infancy theoretically, must embrace this challenge of knowledge management. In the field of leadership education, the past century has seen a transition in content from Tayloristic principles of efficient management to the collaborative interactive method of working with other organizational members to achieve a common goal. Leadership educators must concentrate on changing both our content as well as our pedagogy to embrace this new and enduring trend of building organizational learners.

In terms of the content aspect, it seems apparent from the literature that several important leadership skills that are currently taught need to be emphasized. Specifically, leadership educators must attend to the following pertinent issues related to knowledge management:

- Knowledge management
- Organizational learning
- Distributed leadership
- Organizational culture
- Empowerment
- Interpersonal trust
- Visioning and strategic planning
- Collaboration
- Self-management

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