INTELLIGENT LEADERSHIP IN KNOWLEDGE-BASED ORGANIZATIONS: AN EMPIRICAL STUDY

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Abstract

This paper examines how leadership influences organizational learning. Leadership always had a major impact on the learning capabilities of a corporation. In particular 'leaders' play a key role to facilitate and foster the process of innovation and organizational learning in knowledge-based organizations. Based on a conceptual framework and an empirical study, seven propositions will be developed about specific elements that support organizational learning. The study covers opinions from 125 leaders in various companies, industries and geographic regions, with a strong focus on large enterprises of the high-tech industry. Feedback shows that intelligent leadership in knowledge-based organizations goes far beyond a traditional understanding of leadership: Social intelligence and shared leadership are key dimensions.

Keywords: knowledge management, organizational learning, individual leadership, organizational leadership, knowledge-based organization.

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Suggested track: H Leadership and HRM in knowledge-based organizations

Intelligent Leadership in Knowledge-based Organizations: An Empirical Study

1 Introduction

One of the central challenges of modern organizations is leadership. This is particularly true in *innovative* and *knowledge-based* organizations that act in a dynamic environment in which the lack of continuity and structural stability requires stronger leadership. Nevertheless, the correlation between leadership, knowledge management and organizational learning has been largely neglected in research. Specifically, there is a lack of empirical studies (see Crossan and Hulland, 2002; Easterby-Smith, Crossan and Nicolini 2000; Harvey and Denton, 1999, Miner and Mezias, 1996; Richter, 1998, Sadler, 2001).

This paper takes a modest step to close this gap, by showing how specific leadership qualities are demanded in knowledge-based organizations and how they can be achieved. Leadership in knowledge-based organizations is viewed in this paper from two perspectives, the individual and the organizational. Such an understanding does not only refer to persons but also includes the capability to design effective organizational structures and to guide organizations strategically to achieve their goals. Therefore, this paper addresses both organizational and individual contextual constraints of current leadership practices, taking into consideration company culture, strategy and structure as well as individual capabilities.

Since there has not been any previous comparable research and theory building is embryonic, our study is not intended to argue empirically by showing correlation between individual variables. Instead, we are pursuing a more qualitative research strategy that builds on developed theory. Accordingly, we will base our propositions on the findings of this study and use these propositions to describe promising directions for creating an intelligent leadership system in knowledge-based organizations. The theoretical framework will be presented in the following section.

2 Question the traditional concept of leadership

In recent literature, the concept of leadership has been moving gradually from one centered on the individual to one centered on the organization:

Individualized leadership theories focus on the skills, behavior, values, and actions of the leader. In this theory, company performance is primarily explained by the characteristics of top management (Finkelstein and Hambrick, 1990 and 1996; Hambrick and Mason, 1984). Weber et al. (2001, 582) differentiate between two ways to assess and predict leadership performance: The first approach concentrates on characteristics that a successful leader should possess—charisma, self-trust, rhetorical ability and such—then attempts to find people with these skills. The second approach evaluates leaders according to past performance, as in increasing company value or successfully turning a company around, and asserts that past performance is a good indicator of future performance. Charisma theory takes this one step further (see the early work by House, 1977; Conger and Kanungo, 1987; and, more recently, studies by Awamleh and Gardner, 1999; Hunt, 1999; Hunt et al., 1999; Shea and Howell, 1999). In this theory, a company's performance depends on the charisma of its leaders and their ability to motivate their employees.

Existing individualized leadership theories, however, do have several weaknesses (Comparable criticism is found in Marion and Uhl-Bien, 2001, 391). Their strongest is the belief that the performance of companies can be traced exclusively back to the behavior of certain individual persons, particularly the CEO:

- Individualized leadership theories presume that there are specific leadership qualities that are applicable in all situations, i.e. core capabilities of leaders expressed by the individual's personality and qualification. It is easily seen that this theory, which tends to oversimplify and generalize, doesn't match reality. For example, a person managing a company in time of crisis or when a company is being restructured obviously needs to have a different set of abilities than a company founder or a manager during rapid expansion.
- Individualized leadership theories also do not sufficiently consider the environment of the organizations. Different environmental conditions may require different leadership strategies and skills. Furthermore, possibly the only reason a leader has been successful is that the environment has been very favorable. Therefore, we

need to differentiate between relative and absolute performance: A slight increase of absolute economic value in a highly positive environment could, considering the circumstances, be a relatively poor result.

- Finally, approaches that concentrate on individual leaders are further flawed in that they have not considered, as critical success factors of organizational leadership, the influence of the management team on company performance and the role that the organizational context plays in, for example, the configuration of the organization, especially the architecture of the management system (Mintzberg, 1979). A positive exception is the principal-agent theory (Jensen and Meckling, 1978; Grossman and Hart, 1983), which deals with questions of corporate governance architecture.

From these three points of criticism, we can therefore derive that, within the leadership theory, a contextual consideration is absolutely necessary to arrive at scientifically valuable statements. This comprises both the spatial context (leadership system, organization, and environment) and the temporal context (development phase of the organization). We consider as particularly important the integration of the individual business leader in the entire leadership and governance system of the organization.

Organizational leadership theories start with these points of criticism and seek to extend the classical individual-centered and behavioral science leadership approaches to include the organization, its culture, strategy and configuration. (See in particular the early work by Cyert and March, 1963; Mintzberg, 1979; more recently approaches by Ghoshal and Bartlett, 1998; Hunt, 1991; Schneider, 2002; Senge, 1999; Zaccaro and Klimoski, 2001). Senge (1999, 16) views leadership "… as the capacity of a human community to shape its future, and specifically to sustain the significant processes of change required to do so." Gilley and Maycunich (2000, 100) define leadership "… as a process of making decisions regarding how to interact with employees to motivate them, then translating those decisions into actions." In this sense the primary purpose of leadership is to motivate others to take actions to accomplish predetermined goals. Leadership in the context of this research is not limited to senior executive leaders, but is seen as a requirement and an attitude *on all levels* of an organization.

Following the organizational learning approach of Argyris and Schön (1978), Schein (1985), and Senge (1990), we assume that there is an interrelationship between the organizational level and the individual level. This means that individual leaders (their skills, behavior, values, and actions) impact organizational leadership (the organizational strategy, configuration and culture) and vice versa. This interrelationship can be seen as the seed for organizational change, which consequently forms the base for organizational learning. The feedback process (organizational leadership impacts the individual) initiates a learning process on the individual level (see also Nonaka and Takeuchi, 1995, 13). The stronger the alignment between individual and organization, the better the organization will be able to learn.

Therefore we attempt to integrate both leadership dimensions, the individual and the organizational. We understand *intelligent leadership* as a capacity that an organization develops as a whole to shape its own future successfully. The term *intelligent* in this sense can be understood as a measure for the probability (and at the same time capacity) of future success (see Gardner, 1995; Sternberg, 2003). Similar to the personal IQ a high degree of intelligent leadership in this sense leads to a high capacity of the organization to create its own future successfully. This includes also the capacity for organizational learning (Senge, 1990).

3. Leadership in knowledge-based organizations

In accordance with Zack (2003) we understand a *knowledge-based organization* not by what the organization sells but by what the organization does and how it is organized. Therefore the main characteristics of a knowledge-based organization can not so much be found in their intangible and knowledge-intensive products and services but instead in their underlying knowledge-based structure, strategy and processes. This includes among others the following actions (Zack, 2003, 70f.):

- Define the organization’s mission in terms of knowledge
- Define the organization’s industry and position within it in terms of knowledge
- Formulate strategy with knowledge in mind

- Implement knowledge management processes and structures that directly support the company's strategic knowledge requirements
- Transform the company into a learning organization
- Treat the cost of learning as an investment, not an expense.

3.1 Individual Leadership in knowledge-based organizations

Organizational learning starts at the individual level. In a knowledge-based organization, *training and learning* are basic parts of corporate strategy and individual objectives. Senge (1990, 139f) considers personal mastery, i.e., the capacity to produce results by mastering the underlying principles, a form of motivation. His approach assumes that money, power and status symbols are not the only motivators for people. Instead, people will be committed because they want to learn in order to perform well, and to be recognized as people. Therefore individual leadership should be responsible for executing a development plan for employees. This not only increases the knowledge level of the individual and the consequent support of organizational learning; it also leads to a higher level of associate satisfaction and employability. But is this really true in practice? We will begin our study by looking at the average time spent for training and learning per employee in an organization.

Quantity is not enough, quality and content matter: In our analysis, we will examine to what extent leaders see *soft skills* like motivation, self-motivation, communication, the ability to create an environment of trust, to develop and share visions, supporting individual leadership in learning organizations. We will also verify the criticality of hard or *technical skills*, i.e., the technical and educational background, for effective leadership. In this context, the term "technical skills" refers to the theoretical and practical capacity to perform any given task (product knowledge, sales experience, and accounting knowledge).

Besides skills, *personal reputation* of success or failure impacts individual leadership behavior. An example can be seen in consulting work, where career success depends to a high degree on the reputation within the organization. We have observed that performance contests within an organization are not driven only by monetary rewards for the winner or winning team, but more importantly by the pride and reputation gained

by winning or being part of the winning team. Setting the benchmark in certain fields within the organization (highest sales, highest growth rates, and highest customer retention) brings job satisfaction and motivation. At the same time, it raises the benchmark level and increases the overall performance of the entire organization. We will examine the leaders' view on personal reputation and how this can further support organizational learning.

3.2 Organizational Leadership in knowledge-based organizations

Organizational leadership is about *shared leadership*. At the beginning of the 21st century, Western corporate culture is still struggling to have a group or team representing an organization (internally as well as externally). Tradition requires having one person at the top. Leadership in a learning organization shifts from traditional "one-at-the-top" leaders to a community of leaders. Such a community consists of executive leaders, networking leaders and local line leaders (Senge, 1997, 32). By acting as a leadership community, they ensure alignment across all organizational functional areas as well as the highest degree of strategic alignment. In such a model, the whole system of organizational leadership, not the individual leader, is accountable for the well being of an organization. Kotter (1996, 163f) draws similar conclusions as he promotes teamwork at the top. In his approach, succession at the top of a corporation may no longer be a question of choosing one individual, but at least the core of a team. On a rotational basis, each team member is appointed as the leader to represent the organization externally. Internally, the team leader has the status of a "primus inter pares." Shared leadership makes leaders more accessible. Our research will disclose the views of individual leaders on shared leadership.

The alignment on the organizational and individual levels depends on the ability of individual leaders to create shared mental models and shared values. We will verify to what extent *support from executive leaders* (Senge, 1997), i.e. living the values as role models on the highest organizational level, facilitates the alignment process from the individual to the organization and from the organization to the individual. In our study, we will examine the importance of executive sponsorship in practice and its impact on major change initiatives and organizational learning.

We will also raise the important question of how much strategic attention leaders give to organizational learning. *Strategic attention of learning* refers to the extent to which individual and organizational learning is an integrated part of the organizational strategy. Learning organizations operate based on a vision that is documented and shared with all members of the organization. Strategic goals and measures are clearly communicated. Artifacts and values (Schein, 1985) that focus on innovation, and are supported by a learning strategy, facilitate organizational knowledge creation. Furthermore, the linkage and alignment of the learning strategy to other strategies of the organization are crucial for the innovation process. Such alignment can be achieved through objective setting and performance monitoring.

How does *networking and communication* impact the organizational learning process? Depending on the organizational culture, networking can be seen, at one extreme, as unproductive time or, at the other, as a pre-requirement to eliminate learning barriers and facilitate knowledge sharing. We will examine how leaders view the importance of a culture that supports horizontal, vertical, and diagonal networking and communication in the organizational learning process.

4 Methods and Data

In the period from September 1 to October 1, 2001, 125 managers and leaders from various companies, industries and geographic regions participated in our survey. 86 participants represented the IT/Telecommunications industry (63 Avaya associates[1], 23 other). In addition, input from 39 selected managers or leaders from other industries was used to validate the feedback received from representatives of the high-tech industry. The goal was to analyze:

- Opinions on key leadership criteria
- Opinions on key drivers of leadership behavior
- Opinions on the importance of learning and related barriers

from managers and leaders in a dynamic, fast-changing industry, to identify commonalities and contradictions in how leaders see their role in the organizational learning process, and to utilize the findings to develop propositions for leadership requirements in knowledge-based organizations.

To perform the survey, a web-based tool was chosen. The questionnaire consisted of 30 questions, of which eight served a statistical purpose (age, gender, geographic area of origin, company location, line of business, number of employees, function, and level). From the 22 non-statistical questions, 21 were closed questions, offering the possibility to add individual comments if required and appropriate. One question requested text input. Participants were chosen to achieve a wide variety of performed functions, managerial level, age, and geographic territory.

Prior to the official launch, a test run was made with three individuals to verify how the questionnaire was perceived with respect to clarity and time required for completion, along with the technical functionality, integrity, and ease of use of the survey tool. All responses were kept anonymous, i.e. feedback was not analyzed on the individual level. Of the initial 105 managers invited, 81 (77%) responded. In addition, all participants were given the opportunity to pass on the survey to managers and leaders they know (except within Avaya). This resulted in 77 additional invitations, with 44 (57%) responses. The total responses of 125 represent a rate (direct and indirect invitations) of 69%.

The following findings consider details if they reflect a significant number of responses in a certain category[2]; otherwise, categories are merged in order to achieve meaningful results.

5 Findings

5.1 Individual Leadership

97% of the responses confirm that continuous learning is a key requirement for the success of an organization. There is a high level of agreement across all industries and functions. Among respondents, as age and management seniority level increase, there is a tendency to view the importance of learning slightly lower.

On the other hand, in 39% of the organizations in the survey, individuals spend an average of fewer than 5 days per year for training and learning[3], followed by 31% reporting between 5 and 10 days (see table 1):

	Average days spent for training & learning per associate per year				
	< 5 days	5 - 10 days	10 - 15 days	15 - 20 days	> 20 days
Total	39%	31%	19%	7%	4%
IT/Telecomm. Industry	29%	36%	20%	10%	5%
Non-IT/Telecomm. Industry	61%	18%	16%	3%	2%
< 1000 Employees	48%	19%	16%	10%	7%
> 1000 Employees	36%	34%	20%	7%	3%
Sales/Sales Support/Ops.	48%	25%	19%	8%	0%
Finance	26%	44%	12%	9%	9%
HR/Education/Training	40%	10%	50%	0%	0%
Lower Management	50%	25%	25%	0%	0%
Middle Management	34%	34%	19%	7%	6%
Top Management	43%	29%	14%	11%	3%

Table 1: Average time spent for training and learning

These results can be interpreted as contrary to the consensus on the question regarding the importance of learning for organizational success (97% agree/strongly agree). This disconnect can lead to major gaps between a learning strategy and its execution. Since organizational learning requires alignment and execution throughout all levels, objectives should be cascaded down the organization and performance monitored accordingly.

Putting the contradicting feedback on overall importance of learning and time spent for learning into the context of organizational learning, we formulate the first proposition:

Proposition 1: Training and Learning, integrated into the objectives of each member of an organization, will support the necessary focus for execution on the individual level and form the base for organizational learning.

98% of all respondents agree/strongly agree that the ability to motivate others is a key leadership requirement, while 97% express the same opinion on communication and

networking, 96% on creating an environment of trust and self-motivation, and 95% on developing and sharing visions. The importance of these soft skills for effective leadership is underscored by a comparatively low rating on hard skills, since only 59% of respondents consider technical skills, i.e., the educational background, as critical for effective leadership. Unlike input on soft skills, which shows a high degree of consistency, feedback on hard or technical skills varies depending on area of origin, location of headquarters, function, management level, and company size.

Proposition 2: Soft skills, which support organizational knowledge creation, knowledge sharing, and organizational learning (motivation, communication and networking, creating an environment of trust, self-motivation, developing and sharing a vision) are more critical for effective leadership in learning organizations than hard skills, which can be considered as a minimum leadership requirement, depending on industry, business strategy, and function.

74% of all respondents agree, and 16% strongly agree, that personal reputation of success versus failure impacts performance as much as compensation does. Further examination shows that the impact of personal reputation on motivation increases with increasing age (78% of respondents less than 30 years old, 89% of those between 31 and 40, 92% of those between 40 and 50, and 95% of those older than 50).

While responses are consistent across company sizes and functions, responses of agree and strongly agree increase with increasing level of management (79% for lower management, 91% for middle management, and 94% for top management).

We assume that the feedback on reputation on the individual level also applies to team, department, group, division, and organization levels. Utilizing the findings that personal reputation impacts performance, we formulate the following proposition:

Proposition 3: The perception that personal reputation is an indicator for personal success can be leveraged in an environment of high reputation for knowledge sharing, thus expanding the impact of reputation on

performance from the individual to the organizational level in support of organizational learning.

5.2 Organizational Leadership

57% of respondents agree, and another 18% strongly agree, that shared leadership, i.e., a leadership team, is more effective than a single individual leader. Closer analysis of this positive response of 75% on the question of shared leadership reveals the following details:

Gender, geographic area of origin, geographic location of headquarters, line of business, company size, and function do not affect the view of shared leadership.

With increasing age, positive feedback on effectiveness of shared leadership decreases gradually (younger than 30 years = 80%, 31 to 50 = 77%, older than 50 = 63%). With increasing seniority level of management, positive feedback on effectiveness on shared leadership decreases gradually (lower management = 85%, middle management = 75%, top management = 71%).

The overall (75%) positive feedback on shared leadership leads us to the following proposition:

Proposition 4: Alignment and a common understanding across all organizational functions is a precondition for knowledge sharing and organizational learning. Shared leadership facilitates this alignment and increases the effectiveness of the organizational learning process.

87% of the responses indicate that top management initiates organizational changes, 4% say middle management, 5% cite an internal work force combined of various management levels, and 4% say external agents/consultants. A similar distribution is seen among all industries and company sizes in this survey. With this documentation that top management initiates a vast majority of changes, it is crucial that executive leaders communicate the purpose and the goal of changes throughout the organization

to ensure full commitment for execution on all levels. Also, executive leaders have to commit to support a change process throughout its life cycle to minimize the risk of a project getting stalled in its early phases. If middle management can be considered the engine of a change initiative, top management is the fuel. Since change processes form the basis for knowledge creation and organizational learning, the efficiency of change management in an organization directly impacts its organizational learning process.

Proposition 5: Changes initiated, supported and sponsored by executive leaders facilitate knowledge sharing and increase the knowledge base of an organization.

78% of the responses in the survey indicate lack of time as the main roadblock to organizational learning, followed by lack of budget (42%), too much internal focus (27%), lack of sense of urgency (27%), lack of top management support (26%), and lack of leadership (24%). Results show a high degree of consistency across age, gender, function, industry, and management level. Lack of time, as the main barrier for learning, can be interpreted as lack of priority, i.e. there are no tools and processes in place to foster training and learning at the individual level. The feedback also indicates that, in almost half of the companies, investment in learning does not have high priority.

The organizational learning process, like any other goal of an organization, requires intention and proper prioritization on all levels. To achieve these preconditions, we formulate the following proposition:

Proposition 6: A learning strategy that is embedded in the overall strategy of an organization, and communicated through all levels, will support proper execution on the individual level and form the basis for organizational learning.

Concerning time spent for networking, a vast majority, 79 % of responses, indicates lack of time as the number one reason preventing networking. The age analysis shows increased networking time with increasing age. In terms of management levels,

responses are consistent across all. The only exception is middle management, where, compared to lower and upper management, twice as many respondents indicate more working time spent networking.

Regarding area of origin, responses from North Americans and Western Europeans show a similar pattern. Significantly more time for networking is spent by respondents from Central and Eastern Europe, as well as other regions (Asia, Middle East). This can be interpreted as influenced by cultural habits. Traditionally, business in areas like Central and Eastern Europe or the Middle East has been dominated by relationships, whereas Western business culture is based more on digital communication (see also Marc and Picard, 2000, 65). On the other hand, associates in North American or Western European companies spend slightly more time networking than their colleagues in companies based in Central and Eastern Europe or the Middle East. This documents that both the company environment and the individual (cultural) background affect the networking culture in an organization.

According to the survey, industry itself does not impact the networking culture of an organization. Concerning company size, feedback does not indicate a clear pattern, leading to the conclusion that company size does not automatically enable a networking culture.

In terms of functions, responses are consistent across all (exception: HR/training/education spends the most time networking), i.e., networking does not depend on functions.

In terms of geographic origin, Western Europeans indicate that lack of time is less of an issue (39%) than other geographic areas (around 50%). In the categories of headquarters, industry, function, or company size, the survey feedback is consistent, i.e. lack of time is the critical issue preventing networking. Only 19% of respondents say they spend the right amount of time networking.

In summary, we conclude that, for various reasons, networking does not get a high priority. Besides lack of time (equivalent to lack of priority), networking, in many cases,

is considered unproductive time. The importance of networking for innovation is obviously being ignored. Drawing on these conclusions, we formulate our seventh proposition:

Proposition 7: An organizational culture that fosters horizontal, vertical, and diagonal networking increases the efficiency of sharing knowledge.

Although our survey covers a wide range of industries and company sizes, the feedback is dominated by input from Avaya associates. A different selection of survey participants, with focus on other industries or company sizes (e.g. small enterprises), may lead to different conclusions for selected industries. Based on our propositions, future empirical research (e.g. targeting different industries, specific company sizes, countries, etc.) may disclose additional factors related to leadership requirements in knowledge-based organizations.

6 Requirements for enabling intelligent leadership in knowledge-based organizations

Based on the characteristics of leadership as described in chapter 2, the roles of leadership in knowledge-based organizations according to chapter 3, and the analyses of our survey in chapter 5, leadership requirements that support organizational learning will be proposed. The resulting intelligent leadership model adds an additional dimension to traditional leadership functions. It refers to a much broader leadership definition than traditional leadership and is not limited to top management. The main criteria that differentiate intelligent leadership from traditional leadership are *social intelligence* and *shared leadership*. In a learning organization, intelligent leadership will take place on all levels.

6.1 Social Intelligence as a necessary requirement at the individual level

Intelligent leadership starts with *social intelligence* as a necessary requirement at the individual level. 97 % of all respondents of our leadership survey see communication and networking as key requirements for effective leadership. Communication and networking form a solid base for a successful execution of a learning strategy. Communication and networking are driven by social intelligence and vice versa. Merriam-Webster's Collegiate Dictionary defines "social" in the following way: "involving allies or confederates", "relating to human society, the interaction of the individual and the group, or the welfare of human beings as members of society", "tending to form cooperative and interdependent relationships with others of one's kind". The same source refers to "intelligence" as "the ability to learn or understand or to deal with new or trying situations", "the skilled use of reason", "the ability to apply knowledge to manipulate one's environment …", "the act of understanding".

Following these definitions, human interactions and *networking* in combination with constant learning are pre-requirements for leadership based on social intelligence. According to the results of the survey, 54 % of the participating managers spend up to 10 % of their working time for networking. Only 19 % of all participants indicate that they spend more than 20 % of their working time for networking. The ultimate goal of leadership based on social intelligence is to create an environment that fosters and facilitates networking across the entire organization and beyond. It requires a significant mind shift that eliminates existing mental models with respect to leadership and accountability.

Communication is part of an organizations culture. The way in which members of an organization communicate with each other and with individuals or groups outside the organization, impacts its culture and vice versa. Everything an individual in an organization is doing results in communication. Whether it is through speaking, writing, acting, by gesture, and even by doing nothing. It sends signals to others that can be interpreted in various ways. The more an individual is aware of the importance of such signals and the more he/she ensures that they are interpreted in the desired way, the more this individual will become an effective leader, independently from being in a traditional leadership position or not.

With the world-wide-web, the internet, intranets, virtual private networks, video conferencing, mobile telecommunication and fiber-optic technology enabling communication at the speed of light with almost no technical limitations, the focus of this research is on the human and cultural aspect of communication. It is not that technical means of communication are not important, in fact they facilitate to a great extent knowledge transfer and organizational learning. But unless leaders fail to use these tools effectively within their organization, they do not differentiate leadership in learning organizations from management in traditional organizations. The use of 21st century communication technology may even result in less productivity for an organization lacking proper culture, structure, and processes. In other words, more data or information with no value will be spread faster and to a larger number of recipients, abusing network resources as well as people's attention and time (Davenport and Beck, 2000).

In a *relation-based organization* (Marshall, 2000, 81), the leadership structure reflects an emphasis on dialogue, exchange, and interaction. Communication in the leadership team flows in all directions. Communication is based on open dialogue and honest and candid discussions. *Dialogue* is an instrument for collective thinking and learning, based on deep listening, sharing, high-quality two-way communications, and the free exchange of thoughts, ideas, and feelings. It is an interaction that enables to understand the perception of oneself and others. Jaworski (1996, 107) describes the power of dialogue as the harmony of being, speaking from the heart. The word "dialogue" has Greek roots, "dia" and "logos" and translates as "meaning flowing through". It is the opposite of "debate" (to beat down) and "discussion" (from "percussion" and "concussion" – "to break things up"). Sustained dialogue fosters coherent thinking at the conscious as well as at the tacit level. The goal of a dialogue is not to get agreement among people, but it will lead to coordinated actions as a result of shared meaning. Dialogue does not require verbal communication. Absorbing and self-reflection can lead to a high level of alignment of a group, a team, or an organization. Dialogue allows individuals to tap their inner resources that are seldom used. It builds trust and respect among the group, both being key criteria for effective leadership. Dialogue enables to reframe references, to shift context, and to broaden awareness and consciousness. It is the base for collective or shared leadership.

6.2 Shared Leadership as a necessary requirement at the organizational level

With 75 % agreement respectively strong agreement on the effectiveness of *shared leadership*, the survey discloses very positive opinions. Shared leadership makes leaders more accessible and ensures alignment on the vision of an organization across all functions. Shared leadership creates an *identity* on the organizational level and strengthens the common bond across all functions. It fosters the awareness of organizational reputation and highly leverages individual contributions for organizational performance. Shared leadership ensures *alignment* across all organizational levels and functions through a common vision and strategy. The vision has to clearly address the purpose of the organization (What are we here for? What will our purpose be in the future?), and the goals aimed to be achieved. The strategy identifies the tasks and processes necessary to achieve the goals. Traditional strategies mainly focus on financial goals that can be clearly measured, such as revenue growth, ROI, or E:R. People are seen as liabilities or expenses rather than assets. Leadership in learning organizations embeds soft criteria as core parts of the strategy. Investment strategies in human and social capital, even if there are no common defined measures available yet, have to be made explicit in order to grow the knowledge base of the organization. Strategic thinking has to exist throughout the entire organization. Each member has to verify existing processes within the own area of responsibility and align them to the overall strategy. The core question each individual has to raise is: “How do the outputs of my work support the overall strategy of the organization?” To the utmost this may result in questioning the justification of ones position. Shared leadership facilitates that both vision and strategy are communicated to, understood by, and supported by all members of the organization and implies accountability across functional competence levels.

Handy (1995, 106f) states that the leader(s) must live the vision, i.e., if the leader(s) fails to believe in the vision and to live it, credibility will suffer and the vision will fail. In the same context the leader(s) must remember that it is the work of others, i.e., the vision will remain a dream without the work of others who will make it happen. Roehl (2001, 217) defines vision as a snapshot of the future to be shaped, described in present tense, like things would happen right now. From a meeting with Francisco Varela in 1993, Jaworski (1996, 178) concludes that “… we do not describe the world we see, but we see the world we describe”. It means that the world is created through language. At the same time, by creating the world through description, distinctions that

govern actions are created. In combination with the definition of Senge (2000, 16) of a learning organization as one that shapes its future, a vision can be seen as the first step for organizational learning. Consequently, unlike in traditional organizations, learning organizations are involved in creating the future versus simply reacting to an existing environment. Intelligent Leadership in learning organizations creates a domain of continuous learning and understanding of reality.

6.3 Intelligent Leadership: Leadership and Organizational Learning combined

Figure 1 illustrates in four phases the impact of social intelligence and shared leadership on organizational learning.

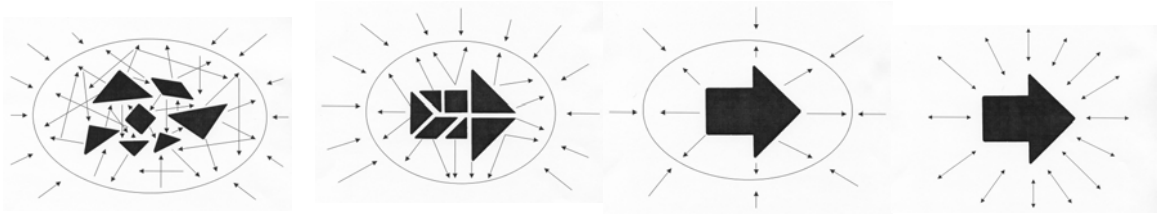

Figure 1: Developmental phases of leadership

Phase one indicates an organization with no, respectively insufficient leadership and management. Individual contributors act uncoordinated and isolated; there is no clear picture of how individual contribution impacts the overall performance of the organization; learning is neither existent on the individual, nor on the organizational level; communication and networking is insufficient.

Phase two represents an organization under traditional management. Roles and responsibilities of all members are well defined, each member knows where own responsibilities start and end. Most of the members have a more or less clear picture of the goals of the organization, but due to a lack of social intelligence and shared leadership, knowledge sharing and innovation is prevented.

Phase three reflects an organization that works with a high degree of social intelligence. Well established communication and networking channels support knowledge-transfer, the performance of the organization is higher than the sum of all individual performances. Still organizational learning and knowledge creation is limited to the internal system and does not fully utilize external networking.

Phase four represents an open system at the highest degree of organizational learning. Fully utilized external networking and shared leadership prevent knowledge barriers. In this phase, intelligent leadership exists throughout the entire organization; there is no risk of an over-managed and under-led corporate culture (Kotter, 1996, 28).

7 Conclusions

The importance of organizational learning and knowledge sharing is growing: As a result, innovation is more and more becoming the driver for value creation and sustainable success in commercial enterprises. Knowledge-based organizations require specific leadership skills and behaviors to successfully create an environment that supports innovation strategies. Our study shows that intelligent leadership in knowledge-based organizations goes beyond traditional leadership. Individual leadership *and* organizational leadership are equally important for successful leadership in a learning organization.

Intelligent leadership is based on *social intelligence* on the individual level. Even though competition among individuals, as in a capitalistic market, constantly increases development and performance, it does not always support knowledge sharing and organizational learning. Soft skills, in this regard, are more important than hard skills. Enhancing the level of awareness for personal and team reputation is an important motivator supporting knowledge sharing and organizational learning. Unless individuals can trust that team or group performance will support their career development, they will continue to protect their knowledge against “internal competition.” The perception that sharing knowledge is equal to losing knowledge will not be eliminated. Without operating principles based on trust, the innovation potential will remain sub-optimal. An

organizational culture that fosters horizontal, vertical, and diagonal *communication and networking* increases the efficiency of knowledge sharing and organizational learning.

Shared leadership seems to be more effective than the approach of a “single leader takes it all”. Shared leadership ensures alignment across functions and fosters knowledge sharing. On the other hand, executive support is important. Such support can be provided in the form of a steering committee consisting of executive leaders. That steering committee not only offers escalation support to middle management responsible for the execution of a project (quick decisions in case of lack of consensus within the project team). It also sets the pace, ensures solid progress, and can remove unexpected barriers beyond the authority level of the project team (e.g. approval of additional budget). It is crucial that executive leaders communicate the purpose and the goal of changes throughout the entire organization to ensure full commitment for execution on all levels. This includes a learning strategy that is a part of the overall organizational strategy and embedded in the organizational configuration and value system (Slocum, McGill and Lei, 1994). Organizational learning can also take place without being linked to strategy, but the likelihood of less efficiency or failure increases.

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[2] At least 10 % of the total number of responses

[3] Includes all kind of training and learning like technical, managerial, language, systems, preparation for the job, etc.