

THE IMPACT OF ORGANIZATIONAL CULTURE ON ORGANIZATIONAL LEARNING AT SIX ESTONIAN HOSPITALS

Ruth Alas¹, Maaja Vadi²

¹ *Estonian Business School*, ² University of Tartu

Abstract. In 2002 six hospitals in Tallinn were merged as part of a project designed by Swedish consultants. Such a large-scale change provides an interesting case for studying how organizational culture intervenes in organizational learning. The impact of task and relationship orientations of organizational culture on the preference for individual and collective learning was investigated in groups having different sociodemographic characteristics. It was demonstrated that older people are better learners in terms of organizational learning than younger. Organizational learning among people with tenure of five years or less in a particular organization is influenced by task orientation of organizational culture only. Relationship orientation starts to influence organizational learning after five years in an organization.

Introduction

In the 21st century an organization's ability to learn has become a critical factor for its success. In order to increase the overall ability to learn and implement changes faster in Estonia, employers prefer to employ younger people. Consequently it is not easy for people over 45 years of age to get a job. At the same time, due to the low birth rate the work force is ageing. This preference for younger people in the Estonian labour market is also connected with the fact that for many people their work experience has mostly been in soviet organizations. As Estonia only started the transition from being a part of the former Soviet Union with a centrally planned economy to a politically independent country with a free market economy a decade ago, the majority of Estonian people obtained their first work experience in organizations managed according to the rules of a centrally planned economy. The criteria for success in these soviet organizations differed fundamentally from the criteria for success in organizations in a free-market economy.

The learning process in order to overcome the differences between the values and basic assumptions inherent in a centrally planned economy and those in a

market economy is time-consuming, and often leads to fundamental changes in organizational culture, leadership style and strategy. To increase an organization's ability to adapt to such fundamental change, experts (Garvin 1993, Senge 1997) have developed the concept of the learning organization. Although there are several definitions of the learning organization, theorists and practitioners have agreed on one thing: certain organizational traits are required for developing a higher level of learning. To put it another way: some cultures have a more positive effect on organizational learning than others. According to theorists, efforts to bring about change in post-modern organizations typically focus on the domains of process and attitude; and attitudes are embedded primarily in culture (Bergquist 1993:237). So, in order to change the organization, cultural components should be more fully understood and addressed.

Most East- and Central-European countries probably face the same problems – a socialist heritage and an ageing work force – a problem also faced by many European countries. At the same time few studies have investigated the connections between organizational culture and organizational learning among various organizational members. This has led the authors of this paper to explore data concerned with the impact of organizational culture on organizational learning in Estonia. In this paper a brief overview concerning organizational learning and organizational culture will be followed by analyses of results from empirical research in six hospitals in Tallinn going through a process of amalgamation.

Organizational learning and organizational change

Organizational learning has been generally defined as a vital process by which organizations adapt in their social, political, or economic settings (Rosenstiel and Koch 2001). Tsang (1997) defines organizational learning in more detail as learning which occurs in an organization and produces real or potential change after a shift in the relationship between thought, organizational action and environmental response. Emphasis on the connection between organizational learning and the environment in both definitions indicates that certain types of change in an environment may require a particular type of learning.

Levels of learning and types of change. Theorists distinguish between single-loop learning, double-loop learning and deuterio-learning. If single-loop learning only refers to correcting behaviour without altering the nature of the activities, then double-loop learning tests assumptions and changes the governing values (Argyris and Schön 1978). The third level, deuterio-learning involves learning how to learn and is directed at the learning process itself (Cummings and Worley 1997).

Different types of changes require different levels of learning. Ackerman (1984) distinguishes between developmental, transitional and transformational changes varying in scope. Developmental change improves what already exists through the improvement of skills, methods, or conditions and requires single-loop

learning. Transformational change on the other hand calls for a paradigm shift in thinking about products or services and requires higher levels of learning – double-loop learning and deuterio-learning.

Definitions of organizational learning also refer to different levels of learning. Huber (1991) defines organizational learning as processing information to increase the range of potential behaviours. Probst and Büchel (1997) on the other hand define organizational learning as the change to an organization's knowledge and value base, which leads to an improved capacity for action. This definition clearly indicates double-loop learning and even deuterio-learning. In addition, this definition also raises the question of the agents in the organizational learning process.

Individual learning and organizational learning. Although theorists agree that the outcomes of individual learning are in turn the prerequisites for organizational learning, organizational learning has been considered both quantitatively and qualitatively distinct from the sum of the learning process of individuals and unique to an institution (Cummings and Worley 1997, Probst and Büchel 1997). Argyris (1999:157) states this relationship as follows: 'organizations learn through individuals acting as agents for them. The individual's learning activities, in turn, are facilitated or inhibited by an ecological system of factors that may be called an organizational learning system'.

Tsang (1997) presents a comparative review of prescriptive and descriptive perspectives on organizational learning. Learning is seen as a 'live' metaphor as it conducts the notion from the familiar domain of individual learning to the unfamiliar domain of the organization. Most definitions imply change in either cognitive, actual or in potential behaviour. The problem, Tsang argues, is with recognition of actual behavioural change and questions whether learning always leads to better performance.

In order to adapt the individuals' learning cycle for an organization, Kolb (1979), the author of an individual's learning cycle suggests the development of teams that incorporate the specific skills required in each phase. As most individuals learn in different ways, learning also differs between organizations. These differences occur as a result of differences in organizational history, culture, size, and age (DiBella and Nevis 1998). Since organizations, like individuals, tend to favour previously successful behaviour, even when a change in conditions calls for different behaviour (Maier et al. 2001), there are barriers for learning.

Learning is also restricted by competitive feelings and attitudes. In most organizations, the level of competition is unhealthy and inimical to both individual and corporate learning. Experimentation and risk-taking which are essential to high-order learning are avoided for fear of falling behind the others (Harrison 1995). But organizational culture should allow the making of mistakes during the learning process, because only through the learning process can the learner understand associations and principles (Strike and Posner 1985). Since previous experiences of success are embedded in organizational culture, it could also prevent learning (Salaman and Butler 1999).

To illustrate how people can prevent the learning processes Argyris and Schön (1978) use Model I and Model II learning. Model I learning is limited to single-loop learning and is counterproductive for double-loop learning. It emphasises attempts to protect oneself and others from experiencing the embarrassment of threat. For this purpose individuals try to control the situation and suppress these feelings. Defensive routines are developed by crafting messages that contain inconsistencies and by making this inconsistency undiscussable. If people become skilful users of defensive routines, they often give others advice that reinforces defensive routines, so that it becomes a part of the organizational culture. To overcome these barriers to learning Argyris and Schön (1978) suggest Model II learning, which applies double-loop learning by reducing defensiveness and increasing openness to information and feedback and collaboration. The need for valid information is especially emphasized, because if changes in the environment are noticed after a considerable delay, it is often too late to respond to them, leaving the organization in an exceptionally vulnerable position (Bergquist 1993). Postmodernists have also suggested that commitment to learning should be written into mission statements – inquiry and reflective action based on a continuing search for new meaning and experiences within the organizational context and discussing and teaching what was learned from the inquiry and reflection – Bergquist (1993).

Organizational culture and learning

There is a mutual relationship between culture and learning. On the one hand learning depends on beliefs and norms, which have been considered as a core of organizational culture (OC), providing the context for meaning (Mahler 1997) or the collective programming of the mind (Hofstede 1984). On the other hand, culture has been seen as the shared common learning output (Schein 1992).

The cultural perspective on organizational learning helps to bridge the gap between individual and collective learning (Huber 1991). Cultural change is intimately tied to individual change: without individuals willing to engage in new behaviours, without an alteration of the fundamental goals and values of individuals, change remains superficial and short-term in duration (Cameron and Quinn 1999).

In connection with learning the authors view organizational culture from a functional perspective as an adaptation mechanism which helps an organization to adapt and survive in a changing environment. Cameron and Quinn (1999) stated that to sustain success firms have less to do with market forces than with company values. Schein (1992) sees organizational culture as a deep-rooted phenomenon, which cannot be changed easily – a pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and integral integration. To cope with the external environment, a culture should be task oriented and in order to achieve internal integration,

relationship orientation should be developed. In a stable environment it is safe to be completely task oriented, but in a turbulent environment with high interdependence, relationships need to be valued in order to achieve the level of trust and communication that will make joint problem solving and solution implementation possible (Schein 1992: 371).

A similar orientation of organizational culture by content is described by Harrison (1995) – task culture emphasizes the superiority of the goals of an organization over the member's personal goals – relationship or person orientation is based on warm and harmonic interpersonal relationships. Cameron and Quinn's (1999) adhocracy is similar to task orientation and clan culture in that it is about managing interpersonal relationships. They emphasize the importance of an externally focused adhocracy with major goals to foster adaptability, flexibility and creativity in turbulent conditions. The basic assumptions of an internally focused clan culture are that the environment can best be managed through teamwork and employee development.

It could be concluded that these two orientations – task orientation and relationship orientation are the vital aspects of organizational culture having impact on organizational learning. Thus we hypothesize, that *task orientation and relationship orientation of organizational culture both predict organizational learning* (Hypothesis 1).

Developing organizational learning requires the ability to work together as a team (Senge 1997). Learning does not take place solely in the minds of individuals but rather stems from the participation of individuals in social activities (Gherardi and Nicolini 2001). For shared learning to occur there must be a history of shared experience, which in turn implies some stability of membership in the group (Schein 1992:10).

Within social groups that persist long enough to form cultures, members also develop a sense of common identity. Cultural groups become reference groups for their members. People look to other members for emotional support and confirmation of the meanings they ascribe to events. People's dependence on each other for emotional support and for making sense of their worlds also increases their commitment to their cultural groups (Trice and Beyer 1993) and helps to create the psychological safety needed for overcoming the barriers to learning (Schein 1999). It is also easier to feel safe among people you have already known for a long time. Therefore, we argue on behalf of longer tenure in the context of organizational learning in a rapidly changing environment. We hypothesize, that *relationship orientation of organizational culture is a better predictor of collective learning for employees with longer tenure at the same organization than for people with shorter tenure* (Hypothesis 2).

Organizational culture is not a monolithic phenomenon. Subcultures often exist within organizations. Schein (1996) differentiates between three different types of cultures in one organization – executive culture, engineer culture and operator culture. Executives and engineers are focused more on task and speciality than on people. Their reference groups are outside of organizations. As managers in

hospitals are educated as doctors or nurses, the authors assume that they belong to the 'engineer' subculture and their reference groups are the other members of doctors' and nurses' unions.

Nurmi and Üksväre (1994:54) compared organizational cultures in Estonia and Finland based on Trompenaas model and found that organizational culture in Estonian organizations was Eiffel tower type – a hierarchical, task oriented, role culture. In his overview of organizational culture in Estonia, Üksväre also concludes that despite the changes in business organizations, public organizations have remained basically unchanged and the management culture in municipal organizations has not changed as much as in private organizations (Üksväre 2001:117). So managers in hospitals may still be more task oriented than relationship oriented. Thus, it was hypothesised that *the organizational learning of managers is better predicted by task orientation of organizational culture than by relationship orientation of organizational culture* (hypothesis 3).

To summarise the theoretical framework for this study, we have focused upon the way task orientation and relationship orientation in organizational culture influence individual and collaborative levels of activity in organizational learning in different settings. The exploration of these issues will give us a better understanding of how human resources in organizations may react in the organizational learning process.

The empirical study

The sample. In order to discover how employee attitudes and organizational culture might be influencing organizational learning in different sociodemographic groups, the authors looked for organizations that employed people of different ages and with different work experience. As private organizations prefer to employ people without work experience in soviet organizations, we proposed that this phenomenon would be better investigated in the public sector. In 2002, six hospitals in Tallinn were in the process of change: these hospitals were merged according to a project designed by Swedish consultants. This made these hospitals a suitable target for research.

As the total number of employees in the six hospitals was 2018, the authors decided to select 25% of the employees in a random manner. The aim was to arrive at a sample structure similar to the structure of employees in these hospitals according to age, because the authors assumed that both tenure and position might be connected with age. The response rate was 64% making a total of 321 respondents.

According to their personal data 91% of the respondents were female, which is quite normal in Estonia. The average age of the employees was more than 45 years and tenure more than 10 years. The sample was divided into two groups according to age – those below and above 45. The older group consisting of 169 respondents had a greater proportion of work experience from soviet organizations than from

organizations of the more recent free-market economy. The younger group consisting of 148 respondents had gained most of their experience in free-market conditions. According to tenure respondents were divided into two groups according to a five-year line, because five years is long enough for establishing stable relationships. Of the respondents, 117 had worked in the same organization for five years or less, and 198 for longer than five years.

The respondents were also compared according to professional data. According to position 104 respondents held managerial positions: top managers of hospitals, heads of department, head-doctors and others. The remaining 194 respondents did not have subordinates. These were physicians, nurses, administrators, laboratory assistants and others. In the present article this group are called specialists. According to their educational data 106 respondents had a university degree and 168 had vocational education. Only 41 had no special education in the field of medicine.

To characterize the sample, it should be mentioned here that doctors form a relatively homogeneous group, because they were all trained in the same faculty at the University of Tartu, which is the only institution that prepares doctors in Estonia. Their training required 6 years of study and a year of internship. These studies and the long traditions within the faculty of medicine at Tartu create considerable similarities among doctors.

All respondents filled in a questionnaire about organizational learning (N = 321) while half of the respondents in every hospital (N = 160) also answered the questions about organizational culture.

Methodology. *Questionnaire for Measuring Organizational Learning (QOL).* QOL was developed for Estonian companies by Alas and Sharifi (2002) on the basis of a measure developed by Lähteenmäki, Mattila, and Toivonen (1999). Their measure is based on model, which connects processes of learning and change. To evaluate learning abilities in organizations, Alas and Sharifi (2002) grouped indicators of organizational learning by using a cluster analysis in two clusters. The first cluster could be called the cluster of individual learning and the second, collective learning. Both scales consist of eight statements and ranged from 1 to 10 points (Appendix 1).

Individual learning means that individuals learn to be active and develop an open-minded and positive attitude toward risk-taking in order to start to unlearn old knowledge. Two conditions have to be present before people can decide about active participation in decision-making. On the one hand, employees should be aware of and committed to the business objectives and the process of change. And on the other hand, they should also be encouraged to take initiative and be active in relation to their own work (Alas and Sharifi 2002).

Collective learning means that staff collectively learns to increase openness in communication. Interconnected collaborative abilities (open communication and willingness to develop) and the ability to use teamwork enable managers to create fluent work processes. Here the ability to learn using a trial and error method by making mistakes and learning from these mistakes plays an important role.

Managerial support for personal development and training is also significant (Alas and Sharifi 2002).

Questionnaire for Measuring Organizational Culture (QOC). The QOC (Vadi et al. 2002) was used to measure two orientations of organizational culture: task orientation and relationship orientation. In the process of developing this questionnaire the idea that organizational culture is shaped primarily by two major factors, the organizational task and relationship orientation, was followed (Harrison 1995, Schein 1992). One of the scales reflects the organizational members' understandings and attitudes toward organizational tasks and the other scale covers themes of interpersonal relationships within organizations (Vadi et al. 2002). The questionnaire consists of 43 items, 16 of these form the two scales (Appendix 2). Respondents were asked to indicate their agreement with each item on a 10-point scale ranging from *completely disagree* (1) to *completely agree* (10).

Task orientation of organizational culture reflects the extent to which all members are willing to support the achievement of common goals. A certain degree of freedom, acknowledgment of good work done and the occurrence of constant positive change inspires organizational members. It makes people think more about the needs and objectives of the organization (Vadi et al. 2002).

Relationship orientation of organizational culture indicates belongingness. People assist each other in work-related problems and discuss all the important topics with each other. People know how to communicate with each other and there is a strong feeling of unity in difficult situations (Vadi et al. 2002).

To find statistically-significant differences, the ANOVA test was used. The linear regression analyses were used in order to find statistically relevant connections.

Results. *Manifestation of organizational culture and learning.* Differences in orientations of organizational culture and indicators of organizational learning are shown in Appendix 3. Statistical tests revealed that respondents' estimations differ from each other with regard to evaluations of organizational culture and learning according to age, position and education.

Differences according to age were found by using the T Test in task orientation of organizational culture ($F(1,151) = 4.228$, $p = .041$), individual learning ($F(1,303) = 8.657$, $p = .004$) and collective learning ($F(1,303) = 8.248$, $p = .004$). The older group was more task oriented and rated both individual and collective learning more highly than their younger colleagues.

According to position differences were found in task orientation ($F(1,155) = 5.755$, $p = .018$). Managers were more task oriented than specialists.

Differences according to education were found by using the one-way ANOVA in collective learning ($F(2,297) = 3.550$, $p = .030$). People with a university degree rated collective learning more highly than the rest of the respondents.

Connections between organizational culture and learning. We propose that organizational culture and individual and collective learning are connected in different ways for the various organizational members. In order to predict the individual variability of individual and collective learning for each of the two

orientations of organizational culture we analysed the scores of learning and culture by using Linear Regression analyses. In the analyses, scales of organizational learning are taken as dependent and orientations of organizational culture as independent variables.

We calculated the coefficient Beta (β), which enables one to predict how orientations of organizational culture forecast organizational learning. Although the Linear Regression analysis method reveals that almost 30% of the variability in both individual learning and collective learning can be explained by reference to both orientations of organizational culture, there are differences in the scales.

As the results in Table 1 indicate, the level of individual activity in learning could be better predicted by task orientation of organizational culture and the level of collaboration by relationship orientation of organizational culture. Differences between demographic groups are also indicated. Each row of data refers to the corresponding hypothesis indicated in the first column.

Table 1. Connections between orientations of organizational culture with individual and collective learning in different groups (according to standardized coefficient Beta).

Hypothesis	Dependent variable	IA	IA	CL	CL
	Independent variable	TO	RO	TO	RO
Hypothesis 1	Total n = 149	.36	.23	.21	.39
Hypothesis 2	Tenure 5 years or less n = 56	.46	.19	.33	.22
	Tenure over 5 years n = 85	.30	.35	.09	.56
Hypothesis 3	Manager n = 82	.12	.44	.21	.61
	Specialists n = 52	.54	.13	.29	.26
	University degree n = 49	.52	.28	.20	.46
	Vocational education n = 79	.39	.24	.27	.30
	Younger age group n = 67	.52	.12	.31	.32
	Older age group n = 77	.22	.44	.09	.46

Note. Bold denotes statistically significant connections.

IA – Level of individual activity in learning

CL – Collective learning

TO – Task orientation of organizational culture

RO – Relationship orientation of organizational culture

Individual and collective learning among employees who have worked for a particular hospital for five years or less are not influenced by relationship orientation of organizational culture. At the same time relationship orientation of organizational culture has value for predicting both individual and collective learning in the group of employees with tenure of more than 5 years. Individual learning among these people depends on task orientation as well, but collective learning does not depend on task orientation.

To compare managers and specialists, individual learning of specialists can be predicted by task orientation of organizational culture alone. At the same time collective learning among specialists depends on both orientations of organizational culture: on task orientation and on relationship orientation as well. These results are different for groups of managers: both individual and collective learn-

ing among managers can be predicted by relationship orientation of organizational culture alone.

The role of the orientations of organizational culture in predicting organizational learning differs with regard to educational groups as well. Individual learning among employees with a vocational education can be predicted by task orientation of organizational culture only, but collective learning among employees with a university degree does not significantly depend upon task orientation of organizational culture.

Although individual learning could be predicted in the younger group using task orientation of organizational culture only, collective learning of this same group depends on both orientations. In the older group only relationship orientation could predict both individual and collective learning.

Conclusions and discussion

The process of continuous change in Estonian companies since the end of the 1980s has required that members of organizations learn new skills and attitudes. The results of this survey in six Estonian hospitals reveal that the respondents' thoughts about organizational culture and learning differ from each other with regard to age, position, and educational level. Orientations of organizational culture also predict individual and collective learning among members of organizations in different groups in different ways.

Although Argyris (1990) warns that culture can either block learning and change, or it can stimulate learning, the current study indicates the importance of culture in organizational learning. The *first* hypothesis of this research was supported and the current research reveals that both task orientation and relationship orientation of organizational culture stimulate learning and are good agents for predicting organizational learning during major organizational change (Table 1).

The second hypothesis was supported as well. We found that collective learning and also individual learning among employees who have worked less than five years at a particular hospital were not influenced by relationship orientation of organizational culture (Table 1). This was different among employees with tenure of more than five years. Both their individual and collective learning could be predicted by relationship orientation of organizational culture; and collective learning in this group did not depend on task orientation any more (Table 1). This finding indicates the importance of time in forming relationships necessary for organizational learning in contemporary organizations, and provides managers with a reason to reconsider their attitudes toward tenure. In Estonian organizations managers are still afraid of stagnation even in people's attitudes and expect people with longer tenure to become resistant to change. At the same time in a turbulent environment, organizational learning based on collaboration as a 'core competency', became the main source of competitive advantage (Prahalad and Hamel 1990).

This research indicates the important role of relationship orientation in shaping collaborative abilities in organizations and the time frame involved until these relationships start to exert influence. So it shows tenure in a new light and indicates that a long tenure in a particular organization may become valuable again. But this could not have been evaluated on the same basis as last century, but only on the basis of values emphasizing openness, continuous learning and flexibility.

Although in this survey, managers were more task oriented than specialists, the *third* hypothesis was not supported. On the contrary, organizational learning in the group of managers could be predicted by relationship orientation of organizational culture only (Table 1). As in Schein's (1996) operators' culture which turns more attention to human interactions than executives' and engineers' culture, we must assume that despite their professional background in medicine, the managers who participated in the current survey had learned through personal experience how inevitable communication, trust and teamwork must be for operating in a changing environment in terms of both technological and organizational development. This finding supports Eisler's (1987) comments, that a re-examination of cultural history shows that highly advanced civilizations in many eras have been based on partnership rather than domination.

If we compare managers with specialists, the latter are so focused on their profession, that their individual activeness in learning could be predicted by task orientation of organizational culture only (Table 1). The same is true for the employees with a vocational education. People with a university degree already ranked collaboration higher than less educated respondents and their collaboration could be predicted by relationship orientation of organizational culture only (Table 1). It could be therefore explained that people with a university degree are more likely to be promoted into managerial positions than their less educated colleagues. Schein (1992) defines leadership as the attitude and motivation to examine and manage culture and finds culture management as the most intriguing leadership role. In transforming from specialists to managers they realize that they can obtain results only through other people, which raise their awareness of the importance of relationships. This assumption is also supported by the next finding: despite having the highest results in task orientation, the managers' individual and collective learning can both be predicted by relationship orientation of organizational culture only. At the same time the specialists' individual learning can be predicted by task orientation of organizational culture only.

We also investigated people with different work experience. The older group had worked longer under the soviet regime and was more influenced by the working culture of the Soviet period than the younger group. Although the older group was more task oriented and rated learning higher than their younger colleagues, learning in this group could be predicted by relationship orientation of organizational culture only (Table 1). On the one hand, the high results of the older group in regard to learning may be explained by their motivation to maintain their job in a particular hospital. Since younger people are preferred by employers

in Estonia and it is not easy for people over 45 to get a job, there is a stronger need for learning among older people. On the other hand, the strong influence of relationship orientation could be connected with the soviet heritage. Employees with work experience from the Soviet Union, where personal connections based on succour dominated (Üksvärav, 2001), have been used to getting interpretations of events from colleagues and this influences their understanding of change in organizations. In order to interpret the results in the younger group, whose learning was not influenced by relationship orientation of organizational culture, the survey of values conducted in the second half of the nineties could be valuable. This survey indicated that social values were underestimated by Estonian business students compared with Finnish students (Ennulo and Törnpuu 2001). They found this typical of representatives of post-socialist countries in comparison with representatives from countries without a socialist experience (Ennulo and Törnpuu 2001:342).

Attitudes toward learning may also depend on the character of the changes. As long as changes only concern their profession, for example new technology and the treatment of disease, specialists may be eager to learn. But when changes are organizational, concerning organizational structure and mergers of organizations, this is out of their area of interest and they are not interested in learning in this context. This may be true especially in this case, where employees from the hospitals were not involved in the planning of the amalgamation of the six hospitals and the necessity of this merger was not understood by the people.

Bergquist (1993) has stated that in the postmodern era integrative services on offer are often not sufficient to hold the organization together, greater attention should be given to organizational culture and to creating a strong feeling of solidarity. According to our study we have developed some implications for managers. In order to get ideas from the grass-roots level, managers should encourage direct communication between the highest and lowest levels of organizations, delegate authority to lower levels in organizations and create an atmosphere where people are not afraid to make mistakes. Peoples' well-being should be more emphasized and their good performance rewarded. In such conditions people tend to be proud of their organization and concentrate more on the goals of the organization than on their own needs.

In order to promote the values and goals of the organization through an informal structure, managers can organize out-of-work activities and encourage people to get to know each other's personal lives and activities better after working hours. It gives people a better understanding of how to communicate with each other and a willingness to discuss important matters with each other. They also then tend to help each other in job-related problems.

The results of the current research support the developmental view of organizational learning that there should be more time in order to develop relationships – a necessary basis for organizational learning. At the same time, it is not guaranteed that at some stage every organization turns into a learning organization, it depends on various characteristics. Among these, one of most important is the personnel

policy of the organization. This policy should enable the organization to retain highly skilled specialists for a longer period in the organization, keep their level of creativity and activity high and convince them of the need to cooperate with other members of the organization.

To conclude, organizational culture and organizational learning have different types of connections between the various organizational members. Being aware of these differences can help managers to achieve higher levels of organizational learning.

Address:

Ruth Alas
Estonian Business School
Lauteri 3
10114 Tallinn, Estonia

Tel: +372 6651 346

E-mail: ruth.alas@ebs.ee

Maaja Vadi
University of Tartu
Narva mnt 4
51009 Tartu, Estonia

Tel: +372 7376 312

E-mail: maaja.vadi@mtk.ut.ee

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Appendix 1.

The scales of organizational learning.

Individual learning	Collective learning
The awareness of business objectives	A collaborative ability
Commitment to objectives	The ability to use teamwork
The acceptance of a new operational culture	Fluent work processes
Commitment to the change process	Open communication
Willingness to make initiatives	Willingness to develop oneself
Encouraging activeness at work	Learning from mistakes
An open-minded and positive attitude towards risk-taking	Managerial support for personal development
Active participation in decision making	Emphasis on training

Appendix 2.

The scales of organizational culture.

Task orientation	Relationship orientation
In our organization ...	In our organization ...
... people are proud of their organization	... employees know one another
... people are rewarded for their good work	... accepted communication standards exist
... everyone has a big freedom of activity	... [people] know about each others' personal lives
... people are not afraid of making mistakes	... in case of mistakes one feels embarrassed by the other members of the organization
... positive changes constantly take place	... in tough situations there is a strong feeling of togetherness
... differences between subordinates and superiors are not accentuated	... [people] know about each others' hobbies and out-of-work activities
... people concentrate more on their own needs than on the goals of the organization ^R	... [people] help each other in job-related problems
... people's well-being is important	... all important matters are discussed with each other

^R = Item reversed for scoring. The items are approximate translations from Estonian to English

Appendix 3.

The manifestation of organizational culture and organizational learning for groups having different social-demographic characteristics.

		Organizational learning		Organizational culture	
		Individual learning	Collective learning	Task orientation	Relationship orientation
Total	Mean	5.43	6.53	4.88	6.29
n(OL) = 303, n(OC) = 152	Std. Dev.	1.80	1.79	1.66	1.56
Secondary education	Mean	4.32	6.07	3.80	6.12
(n = 37; 12)	Std. Dev.	1.47	1.65	1.76	1.72
Vocational education	Mean	5.01	6.41	4.69	6.55
(n = 162; 79)	Std. Dev.	1.90	1.69	1.31	1.33
University degree	Mean	5.30	6.56	5.06	6.59
(n = 104; 50)	Std. Dev.	1.99	1.78	1.42	1.43
Younger age group	Mean	5.10	6.19	4.55	6.17
(n = 144; 71)	Std. Dev.	1.77	1.79	1.78	1.54
Older age group	Mean	5.70	6.78	5.11	6.38
(n = 161; 82)	Std. Dev.	1.79	1.76	1.57	1.59
Tenure 5 years and less	Mean	5.19	6.38	4.62	6.06
(n = 112; 61)	Std. Dev.	1.75	1.74	1.59	1.53
Tenure more than 5 years	Mean	5.57	6.62	5.06	6.44
(n = 191; 91)	Std. Dev.	1.69	1.58	1.69	1.58
Manager	Mean	5.29	6.37	5.29	6.37
(n = 1091; 56)	Std. Dev.	1.65	1.65	1.65	1.65
Specialists	Mean	4.50	6.23	4.50	6.23
(n = 188; 85)	Std. Dev.	1.71	1.56	1.71	1.56

Note: a ten-point scale was used.

OL – Scales of Organizational Learning

OC – Scales of Organizational Culture