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Analysis of Directing the Innovation Process and its Relation to Middle Level Manager's Work: the Case of Estonian Enterprises

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In the process of innovation learning in the organisation (individually and as a team) plays an important role. Many entrepreneurs underestimate and dedicate little energy and time to formulating teams where members' skills complement one another; and also do not engage in improving their own managerial abilities (Fitzsimons, 2002). One has to know how to gather and analyse information, make balanced decisions and constantly find new solutions in order to support the success of a business in a demanding and fast-changing world of technology. The mid-level manager can also support innovation and contribute to the innovative culture in the company.

In the analysis of directing innovation process this article derives from the concept of learning organisation. The model and questionnaire were based on the five discipline model (Senge, 1990) and the three-dimension model of organisational development framework – "3-D model" (Mets, 2002). The study covers the years of 2005–2008; the questionnaire was filled out by 573 employees from different companies in Estonia.

The study of different samples delineates different patterns of a learning organisation. Based on factor analysis, it became clear that the patterns of characteristics are substantially different for companies whose learning is based on employees or managers. From the analysis of free-form answers in the questionnaire it came out that if the company lacks a clear vision the employees are unable to connect their development with the enterprise, information does not travel between different levels without hindrances, and learning in organisation is less structured for employees than for managers. One of the conclusions of this study is that the perception of an enterprise as a learning organisation is more simplistic for employees than for managers. Therefore the role of mid-level managers in directing the development of their direct subordinates is more important than it has been realised thus far. Mid-level managers have to learn the skill of communicating the strategy of the company to the employees and conveying the ideas and views from the bottom to the top management. The development of the learning organisation is one precondition for directing the innovation process; for that the author of the article proposes a new model of a motivational cycle.

Keywords: *creativity, innovation, learning organisation, emotional climate, motivation.*

Introduction

Estonian economy has constantly grown with an accelerating pace since 2000. Lately danger signs are appearing because the economic growth built on cheap labour is slowing down (Varblane et al, 2008). As a small country, for Estonia it is especially important to effectively use its resources. Labour productivity and effectiveness is continually an issue in Estonia (Varblane et al, 2007). As the priority for foreseeable development is increased productivity, the purposeful development of a learning organisation is one way of directing the innovation process.

For today's organisations learning, creativity, and innovation are considered the keys to success in competitiveness and perseverance on the market. The keywords of organisational learning and innovation process are important in the activities of today's organisations and tied to different performance functions (e.g. product development, production, management etc.). Team learning gives the entrepreneur a number of advantages to persevere despite of increasing competition and quickly react to environmental changes, while maintaining high capacity to work. The concept of "learning organisation" is also described as considering the source of competition to be knowledge in the 21st century (Tidd et al, 2006). Garvin even arrives at a conclusion that every enterprise should become a learning organisation (Garvin et al, 2008).

If communication brings about good ideas, the sharing of knowledge itself creates innovation. Thus systematic knowledge management helps to increase profitability (Mayo, 2007). Through enterprises people can reach different benefits like increased income, more efficient management, and corporate efficiency (Alder, 1994). Fitzimon's et al (2002) claim that many entrepreneurs do not dedicate enough energy and time to formulating teams where members' skills complement one another and also do not improve their own managerial capacity.

The research question of this article is: how do Estonian enterprises sense "us", what is the unified pattern of thinking, and how the members reflect on their cooperation?

This paper's aim is to give an overview of one part of a survey to analyse the opportunities for leading innovation process based on the concept of learning organisation and bring out the connections in the mid-level manager's as the key person's work, based on the examples of 21 Estonian enterprises.

The paper gives an overview of innovation process, creativity, learning organisation's theoretical bases and its links between organisation's emotional climate, and findings from earlier research, results from the free-form answers of surveyed enterprises, proceedings, discussion, and suggestions resulting in putting forward the motivational cycle model and summary.

Innovation process and theoretical bases for creativity

A very often asked question in both practice and theory probably is: "What is the difference between innovation and creativity?" A few definitions can help to understand the differences between the two.

There is no single answer to former question as even the experts have not reached a consensus. Still the concept of creativity is used to describe a collective ability of organisations to effectively use the dynamics of individuals and groups. Creativity describes potential, innovation results (Syrett & Lammiman, 2002).

Creativity is the process of developing and expressing most likely useful new ideas. The outcome of creativity is innovation, defining the latter as embodiment, combination or synthesis of knowledge in a new and important way raising the value of a product, service or process (Jolly, 2003).

The main difference between creative and innovative people is that innovators are interested in results. Creative people do not need that – they are motivated by an idea. An innovator is interested in the successful implementation of ideas. Some people are both creative and innovative but that is rare (Redway, 2003). Creativity = knowledge × imagination × evaluation. Innovation = creativity × action (Morrison, 1992). Creativity is the process of generating ideas and innovation the process of filtering out, perfecting, and implementing them (Gurteen, 1998).

The terms creativity and innovation are often used in parallel and understood as one and the same. However, some authors differentiate between the two concepts. Creativity is usually seen as internal, intellectual process of creating ideas, and innovation as the practical implementation of these ideas (Mostafa, 2005).

In a nutshell the links between innovation and creativity are:

1. Innovation can't occur without someone somewhere being creative and creating a new connection.
2. Innovation needs market pull i.e. success on the market.
3. Innovations demand great work as it is not only about the existence of ideas.
4. Innovation is hard to achieve on ones own which is not the case for creativity.
5. For innovation timing is very important. (Redway, 2003).

Earlier research was mostly about the characteristics of creative individuals, now connections between individual creativity and an organisational innovation are sought to show linkages between the aspects of individual, group and organisational creativity (Andriopoulos, 2001, Amabile, 1997) (See Figure 1).

From the socio-cultural perspective creativity cannot be viewed only as an idea generation depending on an individual as it is affected by the whole organisational system and complicated social interaction processes and it finds expression in the implementation of the former. Thus, innovation covers the process of creation of ideas, their implementation, customisation, and propagation in organisations (Sawyer, 2006).

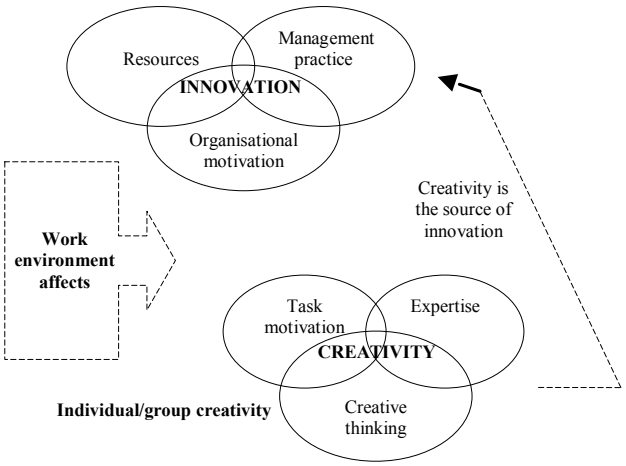

Figure 1. The effect of organisational environment on creativity (Amabile, 1997)

Innovation capacity is more of a co-effect of different units and the result of two-way relationships. Innovation is the presentation of something new (idea, product, method). It is the combination of two processes – generating new ideas and implementing them.

The phases in innovation process are described in various ways. The three-phase approach to innovation process is simple and comprises of:

1. Idea generation: individuals and teams create new ideas and develop existing ones.
2. Idea filtering: ideas are gathered, analysed, sorted and evaluated.
3. Idea development and implementation: ideas are researched, tested, amended, developed and implemented. (Adair & Thomas, 2004)

According to the features of a five-stage approach, the majority of new untested ideas go through the following five phases: 1. Enthusiasm; 2. Competition; 3. Catastrophe; 4. Recovery; 5. Negotiation. The aforementioned stages can be put on the innovation curve (Redway, 2003).

Effective innovation requires fusing new ideas, ability to see things through, a unified commercial instinct, focusing on the consumer, and favourable organisational climate (Adair & Thomas, 2004). The characteristics of an innovative organisation are as follows (Redway, 2003; Adair & Thomas, 2004; Sloane, 2007):

- Management encourages employees to take initiative.
- Organisation's vision transcends plans.
- Achievements are more important than plans.
- Finding best methods is more important than complying with rules.

- Employees are encouraged to assume responsibility for their decisions.
- Relationships in organisation are informal, cross different functions and non-hierarchical.
- Changes are implemented as means for differentiation.
- Personal freedom and autonomy are more important than promotion and rewards.
- Creativity and innovation are rewarded.
- Mistakes are learned, not hidden or reprimanded for.
- Management is personal and informal.
- Lack of strong emphasis on function-based specialisation.
- Employees are granted the freedom of thought.
- Management structure is flat and managers are easily accessible.
- Minimal rules of procedure.
- Employees are encouraged to be creative and flexible, and lead towards self-development.
- Manager implements methods which stimulate creativity.

Organisations that wish to foster innovation must have at first management's support and dedication to innovation. Top management has to recognise creative and innovative actions in a way that all members of the organisation see and feel the affirmative attitude and useful change. Organisational structure has to be flexible (flat by structure) and have less bureaucracy than in traditional organisations. Innovative organisation is tolerant of mistakes and as long as failure is not caused by incompetence, neglect or carelessness managers shouldn't impose sanctions. Organisations like that are characterised by open and constructive communication which works both vertically and horizontally. Managers are to guarantee adequate and prompt information flow between departments and subunits (Adair, 1998). Organisation culture that supports open and transparent communication influences creativity and innovation in a positive manner. Here the communication between departments and units when giving important information is also significant (Martins & Terblanche, 2003).

In addition, employees expect *recognition, motivation and encouragement to take on risks*. Adair and Thomas (2004) claim that innovation is always connected to risk-taking and the role of management is to support taking reasonable amount of risks while being knowledgeable about potential failure. That in turn presumes good cooperation relationships in the whole organisation.

Emotional climate and innovation

Innovation fostering behaviour refers to the attitude towards mistakes and failure. Tolerance of mistakes and public dialogue in learning from them supports creativity. Organisations where new idea generation is encouraged and where ideas are evaluated impartially, creativity and innovation is supported. Fertile ground for innovation is additionally created by continuous learning from one another and clients, and constant development of skills and competences. Risk-taking is supported, but the approved degree of risk has to be determined beforehand. Even competitiveness is considered to accommodate innovation; in this case managers have an important role in initiating discussion, managing conflict and distributing information. Conflicts have to be managed constructively and the skill should be taught to employees as well. Innovative leader accommodates asking questions, which has an inspiring effect (Martins & Terblanche, 2003; Sloane, 2007).

Organisation climate is an atmosphere that the employees perceive daily and which is shaped through organisation's practices and procedures. An organisation can have several climates and climate can change abruptly and fast. Organisational climate reflects the situation, employees and management of the organisation (Brown & Brooks, 2002; Kangis & Williams, 2000).

One of the elements of the organisational climate is an emotional climate which is the aggregate of shared emotions which in its turn is important in collective behaviour. The main element of emotional climate is expressed and shared emotions. Emotional climate is shared within a group and sets the group apart from others. Emotional climate is a group phenomenon, although every member of the group contributes differently to the shaping of the climate (Brown & Brooks, 2002; Tran, 1998).

Analysing the effect of emotional climate on learning organisation, Tran (1998), states that it affects such organisational dynamics as idea generation and creativity, openness to change, adaptation to change and learning process (see Table 1).

Thus, the organisational climate affects both individual and organisational effectiveness. Organisation's members share certain emotionality which is based on three factors – shared values, shared motivation (goals and needs), and shared beliefs and attitudes. Employees' emotionality is also influenced by organisation's structure and social environment. Events that occur with certain emotional background bring about emotional episodes (short periods of time) or moods (longer in duration) (Tran, 1998). Thus, emotional climate has a changing nature and may be expressed differently in different groups.

If the organisation's management is negatively inclined towards learning, then one cannot expect positive disposition for learning and sharing knowledge from employees as emotions are infectious. With years researchers of organisational behaviour have discovered that factors such as positive reinforcement, positive influence, positive attitude and even humour have a considerable influence on working. Fred Luthans (2002) has advised to call the new approach *positive organisational behaviour*. In positive organisational behaviour the positive efficiency is seen as a state that can be developed and steered.

Learning organisation and innovation

Learning is a part of the basic process of innovation on all the levels – individual, organisational, and societal. Innovation capacity of enterprises is not so much the sum of individual abilities but the summation of different units' co-effect and mutual relations (Edvinsson, 2003).

Authors use different terms to characterise learning environment in their models. C. Argyris (1998) uses the concept 'ecological system of factors' that he has called 'organisational learning system'. Learning process will occur only on the condition that 'the learning system is' […] 'adequate enough to enable the organisation to implement existing policies and meet stated objectives' (ibid). That means that organisational learning in its completeness takes place in the organisation possessing the features of learning organisation (LO). The concept of LO with its features are systemised by Senge's model of five components or disciplines (1990): systems thinking, personal mastery, mental models, team learning, and building shared vision. Senge identifies a discipline as a series of principles and practices which are integrated into an organisation.

Members' support to organisation's mission and the understanding how it is tied to their everyday work and activities, is important to learning organisations (Goh, 2001). Vision is organisation's hopes, goals, and direction for the future. If the vision is shared, the people are aware of what needs to be learned (Senge, 1990).

A learning organisation promotes and acknowledges the testing of new knowledge and individuals' initiative **to use new problem-solving methods** (Goh, 2001). During experimentation and testing new produce and services are created and developed, and new technologies implemented, this results in the organisation becoming stronger and more competitive. Experimentation also means taking risks. Employees have to sense that the gains from experimentation surpass the costs, and managers must not suppress employees' creativity (Garvin, 1993).

Continuous feedback which is essential in steering the innovation process is in the centre of a learning organisation. All employees of an enterprise have to be included in receiving feedback that encompasses both ideas and activities (Wilhelm, 2006). The flow of information and knowledge can be guaranteed mechanically, electronically and via communication. Information can be acquired via comparative analysis, conferences, research, internet and employees' proposals. Team learning is considered an important feature of a learning organisation by Marsick, Neil, Watkins (2002), Moilanen (2005), and Senge (2003). Teams enable innovative problem solving and creation of synergy. New innovative ideas can be developed using collective skills and knowledge. The environment that supports teamwork facilitates openness which is needed for learning to occur (Goh, 2001; Senge, 2006).

Organisational learning (OL) mostly stems from the internal and external environment of the enterprise, business processes, resources, knowledge etc. and functions as a cognitive mapping. A cognitive map by definition is "mental constructs which we use to understand and know our environment" (Spicer, 1998).

Consequently the characteristics of OL are those of a process as well as those of an infrastructure, and of mental origin; and these different characteristics form the three different dimensions of OL and organisational development. Therefore it may be stated that new knowledge creation and learning in and by an organisation and its members is realised by the concurrence of:

- individual and joint learning in different ways, sometimes partly through training organisation members,
- mental systems, including joint language, shared values, shared patterns, mental models, cognitive maps, etc., formed or created by and among organisation members, and
- the main process, usually related to the business process in the interaction of the company and the client, and their environment in a wider meaning, which together describe and provide a three dimension framework for organisational learning (Mets, 2002) that can be called the organisational development framework or '**3D**' framework (Torokoff, 2008). Senge's five discipline concept was chosen as the source model by the author because the features of a learning organisation in that model are universal and not dependant on the type or size of an organisation (Torokoff, 2008).

Questionnaires are most commonly used to identify the features of LO. With factor analysis answers in questionnaires give different, sometimes even unexpected combinations of factors, while some factors which were expected in the theory are not formed at all (for example, see: Silins et al, 2002; Torokoff & Mets, 2008). This indicates that the analysis results in different patterns (Torokoff, 2008), which can cover different framework models of LO and OL and these more or less correspond to the initial model. Based on the factor analysis of enterprises studied in 2005-2008 by the author, it appears that there exist two different patterns of OL: managers' OL and employees' OL; and employees and managers recognise different aspects of LO (Torokoff, 2008; Torokoff, 2009). Different learning patterns make it imperative to analyse the employees' pattern of behaviour to find the so called 'bottleneck' to further develop the organisation and lead enterprise's innovation processes more efficiently.

Table 1

Factors influencing the steering of innovation process

Features of learning organisation	Elements of emotional climate	Elements of innovation process
Building a shared vision	Creativity and idea-generation, shared motivation (goals and needs)	Negotiations
Personal mastery	Flexibility and adaptability	Generation of new ideas and development of existing ones
Mental models	Shared values (beliefs and attitudes), willingness to change	Enthusiasm
Team and individual learning	Learning process	Knowledge sharing and innovation creation
Systems thinking	Decision making, adaption to change	Organisation of ideas, analysis, filtering and evaluation

Source: Compiled by Torokoff, based on Senge (1990), Mets (2002), Tran (1998), Redway (2003), Adair and Thomas (2004)

Thus the factors influencing innovation process steering have a lot of linkages (see Table 1) to features of LO and have organisation's emotional climate in the focal point.

Survey

Studies were conducted from December 2005 to December 2008 with the help of Tartu University students who used the research data for Master's, Bachelor's or diploma theses.[1]

21 Estonian enterprises took part in the survey, three of them medium-sized (electronics, home textiles, and car servicing), 8 small businesses (processing industry, electrode, agriculture, hotel enterprises) and ten were micro enterprises (metal, iron-work, wood building, textile industry, small ship building).

902 questionnaires were distributed, responses came from 573 respondents. The percentage of respondents was 64.

The respondents are divided into three groups according to position:

Workers/specialists – 462 (80%)

Middle level managers – 82 (15%)

Top managers and board members – 29 (5%)

Women – 322 (57.8%)

Men – 251 (42.2%)

The average age of respondents was 38 years; the youngest was 17 years old, and the oldest 65 years old; 74% of respondents were younger than 42 years of age.

The method used was questionnaire. In this study, the part with statements about innovation process (16) from learning organisation features' questionnaire was taken as the bases for the analysis on innovation process steering. One could rate the statements on a 10-point scale, where 1 marked that the respondent completely disagreed, and 10 that the respondent highly valued the statement. An opportunity for free-form answers was at the end of the questionnaire (compiled by the author in 2005 and amended in 2007). From free-form answers the three factors mentioned first are chosen; grouping the answers formed five categories. Below the free-form answers are added in *italics* and the respondent is marked with a letter and a number, keeping in mind the agreed confidentiality. In the study of the results the combination of a qualitative and quantitative analysis has been implemented.

Results and dicussions

In the analysis the author chose the features of organisations' emotional climate as the general basis for grouping and aligned the former with feature elements of a learning organisation (see Table 1).

In Table 2 the statements about innovation have been put into groups of learning organisation features conditionally because the statements are not independent (Torokoff, 2008). In Table 2 the abbreviations *TM* – stands for the top management's answer results, *MM* – mid-level management's answer results, and *W/S* – workers'/specialists' answer results.

Table 2

Summary results of answers to key questions on innovation

Statements characterising innovation process in the context of learning organisation's features	Medium and small sized enterprises (SME-s, n = 470)			Micro-enterprises (n = 103)	
	TM	MM	W/S	TM	W/S
I ENVISIONING					
1. We have discussed and come to a common vision on the organisation's future in 5 years.	7.0	7.5	3.9	7.8	6.1
2. Our staff make proposals for the introduction of changes to ensure that our common objective is achieved.	8.2	7.6	4.1	7.6	6.8
3. The company manager is interested in employees' ideas	8.5	8.3	4.8	8.1	7.3
II PERSONAL MASTERY					
4. The management consistently introduces the planned changes.	7.8	7.2	6.6	8.9	8.1
5. All employees share a common understanding of work quality.	7.7	7.2	6.4	7.9	6.4
6. Our staff take initiative when fulfilling the organisation's objectives.	8.1	7.4	6.9	8.8	8.9
III VALUES					
7. Our staff are innovative.	8.5	6.5	6.4	9.1	8.5
8. Employees' initiative and dedication are considered in pay levels.	8.1	6.3	4.4	9.0	8.4
9. I can discuss introducing initiatives with my fellow workers and implement them when appropriate.	8.2	7.1	4.7	9.0	8.6
10. Managers acknowledge our success in public.	8.0	8.3	5.6	8.8	8.0
IV LEARNING					
11. I share the new experience gained from improvements.	8.0	7.8	5.3	8.6	8.2
12. Our staff are not criticised for negative consequences arising from taking reasonable new initiatives.	7.8	7.2	5.9	8.2	7.7
13. The management have a positive attitude towards employees' initiative.	8.1	7.6	6.3	9.1	8.9
V SYSTEMS THINKING					
14. Any work-related problems are promptly discussed.	7.7	6.8	5.4	7.9	8.1
15. Managers disseminate positive experiences.	7.2	6.9	6.5	8.6	9.0
16. The management employs novel ideas in management.	7.9	7.1	6.9	8.0	7.1

Source: Torokoff, 2009

For the steering of innovation process it is important to draw attention to how different groups of employees approach questions. The aim of the current study was to map the part regarding innovation process and determine what is considered positive, especially pleasant in the enterprise one works, and how great is the common element between different employees and management personnel. In the analysis direct free-form answers to questions "What would You change in your enterprise and why?" have been added.

As it has become clear from the summary table, there is a clear distinction between the answers of people belonging to the management pyramid (top management and mid-managers) and workers/specialists, but the difference is smaller in micro-enterprises, where there is no mid-manager.

[1] My gratitude to the students who carried out the survey in the enterprises – Lia Rohula, Merle Muru, Bärbel Kohv and Margit Allmere.

In SME-s top managers and mid-managers see the enterprise in much better light. Cooperation and flow of information between management is more even. If the workers/specialists do not know or everyone has not been explained the vision and the consequent goals, they work with low motivation and without much enthusiasm. Good cooperation between top and mid-management is the precondition for creating a shared vision and clarification of goals on all levels.

For example, some more extreme free-form answers from workers/specialists to the question "What is Your enterprise's vision?"

W-78 *"Balanced score-card."*

W-102 *"It's not a slave's business to have visions."*

W-59 *"Expand the production to India, close down the local enterprise."*

S-291 *"Making big profit, cutting costs (including wages)."*

A typical specialist's answer about goal and need is W-43 *"Worker only has to do more work, in order to pay him less. The only important thing for the owner is increasing profit; otherwise they'll move production to India!"*

This brings out the obvious bottlenecks in creating a vision by the managers. The future vision created by a group of managers may often originate from the traditional position of power (Nolas, 2006).

Workers sense that mostly they are not given the opportunity to take part in setting the goals. Also if the people closest the work process – workers/specialists – make proposals to mid-managers and nothing changes, a lot of worthy ideas will not be implemented.

Specialist's answer A-50 *"Conversations with the immediate manager occur very rarely. Promises and reality don't concur."*

In one medium size enterprise the following significant conflict pares and groups emerged:

- German entrepreneurship culture and Estonian entrepreneurship culture,
- Estonian enterprise and the owner,
- workers and "office",
- different production departments.

From this, the aspect of organisation's emotional climate emerges very vividly, and also the great disparity if the most important issue: where the company is heading, is not discussed with workers/specialists. In addition to the aforementioned, aspects like education, age, sex, community membership etc. accrue.

Different groups have formed their own viewpoint, which should be known.

Thus, the mid-managers communicate with workers minimally or not at all when it comes to vision and explaining goals. This is a question of mentality and attitudes. Management has the most information and they sense the development of the enterprise as a whole, but that is not felt by workers/specialists.

Noteworthy are the smaller difference in the scores for personal mastery, and workers'/specialists' opinion that people take initiative to put the enterprise's goals into practice. From there it can be deduced that workers have initiative and are ready to express their thoughts and ideas. The author feels that people's talents should be used to the maximum and everyone's natural entrepreneurship should be more applied to fulfil the goals of the company. Yet there is a significant discrepancy in answers: the recognition granted to managers differs from that given to the workers/specialists.

Manager's free-form answer: S-351: *"Receiving recognition is a great motivator in manager's work. Unfortunately, I myself am very demanding and do not stand out for giving too much praise to my subordinates…"*

The immaterial compensation has a lot of weight in steering innovation. The questionnaire surprisingly revealed that according to the answers of mid-managers, initiative and dedication are moderately taken into account in compensation (see Table 2, III–8).

The conclusion that the recognition of workers/ specialists is very modest can be drawn based on the free-form answers.

Example, W-97 production-worker *"Operational exchange of information occurs with shift boss, talks take place very rarely. Workers are recognised behind their backs."*

It may be concluded from the above that managers could motivate pressing forward and development of personal mastery. The people motivated by self-actualisation do not need as much external recognition systems but substance based support for achieving one's goals. Motivated people more zealously, wish to learn and be recognised as individuals.

Therefore, communication and negotiations between different levels help to minimise different interpretations.

The weightiest statement that characterises innovation process in the section of personal mastery is the understanding of quality of work. Especially in manufacturing enterprises quality is constantly checked and the company's profitability depends on it. Alas, in medium sized enterprises and also in small businesses the tension in workers'/specialists' understandings is greater which is characterised by the following example of a worker's free-form answer:

W-30 *"Manager doesn't see the volume and difficulty of my work."*

A-48 *"More attention to workers' training because well-trained employee finds a solution to every case and won't be at a loss with clients' questions."*

The questions of employees' development and training, even more the opportunities to apply knowledge and share experiences, are significant from the point of view of steering innovation process. The typical argument from workers' free-form answers is *"Cheap labour, training-money is spent more on managements' own education…"*

Unfortunately the people closest to the production process do not discuss among themselves the experiences gained from implementing innovation (see Table 2), thus the workers/specialists lack a significant opportunity to reason together and reach common understanding. This may infer that people are suppressing their differences.

If people believe that they always have to agree with everything, then the organisation's integral intelligence

cannot be greater than the sum of individuals' intelligence (Gary, 2005).

The general score in values' section was pulled down by the low score in openness to experiments which are tightly connected to initiative and exploration of new possibilities to improve the production process. Low scores in the eyes of workers/specialists are backed by the statement that enterprises disapprove the risks associated with reasonable initiatives. Study results conclude that managers are more oriented towards control and in fear of risks inhibit workers/specialists from taking part in development process. This characteristic shows that managers' behaviour is of crucial importance for facilitating learning and innovation in enterprises. In order to promote innovation process managers must be open to criticism, encourage individual initiative and motivate acquisition and implementation of new knowledge, and entrepreneurship.

The understandings of different groups are more shared in answers to statements about the implementation of changes planned by management, the management disseminating positive experiences, the management implementing novel ideas in management, and all employees sharing an understanding about work quality.

A great dissimilarity appeared in the answers of **micro-enterprises** where all answers were much more similarly rated by management and workers/specialists. Thus, the less personnel, the greater is the social control and tighter the communication between one another. Cooperation is more productive in such manufacturing enterprises where management takes into account the opinions and ideas of the people really doing the work. Being competitive and even survival depends a lot on the quality of work and good interpersonal cooperation relations. Even in free-form answers the enterprises' good emotional climate and positivity were predominant, for example:

L-541 *"Our tiny company is brisk; we constantly win competitions in Europe!"*

M-509 *"Our smallness is our power and wisdom. We have excellent employees, bad ones wouldn't last here!"*

Based on the answers' analyses it can be deduced that the cooperation within management is much better than overall cooperation; there are noticeable hierarchical barriers.

Conclusions from this study are that the weakest aspects are: not knowing the vision, the diffusion of new ideas is modest, and information is not moving from bottom up to management. These features inhibit the innovation process and the development of organisation's emotional climate.

Data analysis showed that generally the differences between the answers of management and workers/specialists are great in enterprises. Based on the data analysis, the key role is held by mid-managers and in the development of their management capacity.

General summery of free-form answers to ***"What would You change in your enterprise and why?"***

The results analysis indicates that increased communication is most needed; good relations between workers/specialists are of value. Workers'/specialists' wish for trainings and learning, on the one hand it can come from the need to acquire other specialities that in case of unemployment to reorient faster, but on the other hand, many specialists note that they continue their studies and need material support from the enterprise for the fees.

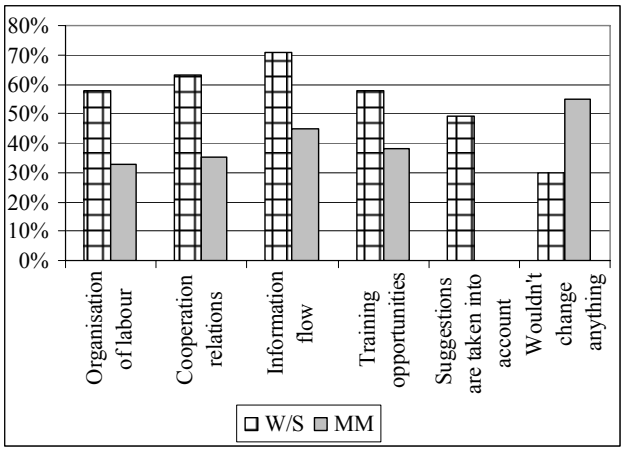

Figure 2. What would respondents change in their enterprises

Free-form answer results reveal that workers/ specialists are more active and their expectations and needs are more clearly expressed; that is an excellent precondition for mid-managers to develop cooperation on all levels, and workers/specialists are very open to leading the innovation process.

1. Organisation's emotional climate is expressed in answers to questions **"What is especially pleasant in your enterprise?"**

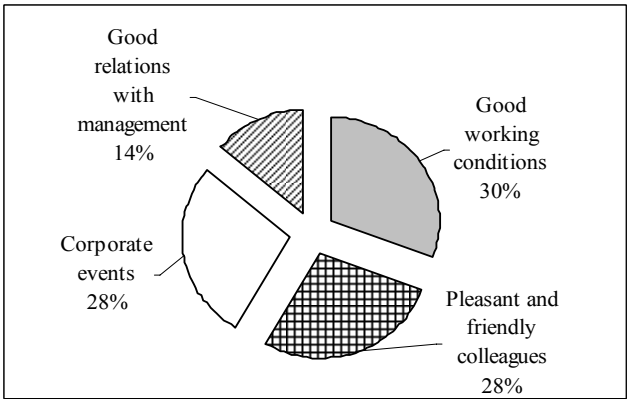

Figure 3. Especially pleasant in enterprise

All respondents' groups mostly put forward good working conditions (e.g. new building, warm and clean work space, good cafeteria, comfortable resting rooms, etc.), thus the physical environment. Next were human relations; organisation's emotional climate was the most influenced by corporate events outside the regular work environment (summer days), joint celebrations of birthdays, etc. Third big cluster that emerged was pleasant and friendly colleagues, incl. flexible schedule, and friendly attitude to employees; under good relations, mostly the high-quality relationship with the direct manager was stressed. For example, S-234 *"It's really nice that the direct manager is calm and cracks jokes!"*

The scope of the positive shared understandings between different groups allows to allege that the conditions for the fast flow of information have been met, but the usage of these opportunities is hindered which may be connected to the workers'/specialists' blurred vision and low motivation.

Propositions for creating motivation

Based on the 21 enterprises that took part in the study, creativity and innovation developed more on the level of management, and workers'/specialists' potential remained unused in SME-s. Top management has created very good working conditions and environment. In developing cooperation and directing an innovation process, mid-managers have the greatest opportunities to balance the freedoms and responsibilities of workers/specialists keeping in mind their needs and feelings, recognising them for creative work and encouraging them to speak their mind, giving feedback and supporting the development of skills.

Mid-manager's as a key person's stake and task should create such an environment where innovation can prosper.

Just as important is the high level of internal motivation. Therefore, managers have an important role in motivating employees. Bearing in mind these suggestions not only the individual motivation and creativity will increase, but as a result, also organisational innovation.

The source for motivation can also be the perception of a problem. This source of creativity is tightly connected to people's needs and feelings: strong will to solve a problem can substantially increase a person's creativity. At first, feeling the gap in one's knowledge, disharmony, or problem that needs a solution is important in order to do something creatively. Afterwards solutions are sought and hypotheses made. The greatest obstacle to developing creative potential can be the **lack of willpower**.

The interdependency of the manager's own attitude, values, and ability to generate creative tension is very strong (Senge, 1996). Based on Reece's model upgraded by the author, motivational cycle consists of the following stages: the primary is **need**. Need is a condition when a person develops the necessity for something or someone. The feeling of destitution creates a tension that the person wants to relieve. Manager or management can also purposely create creative tension. Tension drives a person to action; he will look for opportunities for relief. An action plan will result from weighing different options and the person will try to solve his problems in practice. In the course of action, the sensed need will be satisfied. If the action is successful the tension will ease and the person is ready to face new challenges.

Based on this motivational cycle the development of individual creative thinking and stimulation of innovation is possible, keeping in mind:

1. Accurately dosing the amount of creative tension;
2. Finding application to the new creative solutions in the enterprise;
3. Most important in the motivational cycle are **will**, the **application of** the learnt **knowledge**, and the **opportunity to share experiences** in the enterprise.

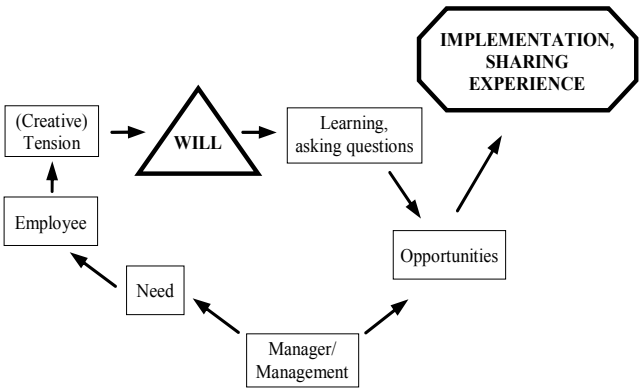

Figure 4. Factors generating motivation, compiled by Torokoff, 2009 (following the example of Reece, 1987)

In forming and guiding a creative and innovative employee the main motivators are everyone's **own will**, and self-confidence; important are systematic and creative thinking, and organisation's positive emotional climate.

Conclusions

In the analyses of directing the innovation process, this paper dwells from the concept of a learning organisation. A study analysed the behavioural patterns of employees from 21 enterprises. Based on the author's earlier research (2008), the patterns of learning organisation differ for managers and workers. The current analysis of free-form answers and statements about innovation questions allows concluding, that if in SME-s the vision has not been explained to the workers, they cannot employ their abilities to the fullest and tie their dedication to the development of the company. Motivation has a special role. Mid-managers have to learn to share their knowledge with workers/specialists and take the ideas from downstairs to the top management and *vice versa*. Positive emotional climate is important in steering the innovation process. Mid-managers have the opportunity to generate creative tension and observe that the workers/specialists have the chance to apply their learnt knowledge and experiences to the maximum in creating and directing motivation. Based on free-form answers, hierarchical barriers hinder the development of innovation process.

Appendix 1. Results of mapping the learning organization in patterns

Production companies sample (n = 326) (See Article 3)	Workers' sample (n = 187) (See Article 3)	**Initial model: Three-dimensional organisational learning framework (OLF – 3D)**	Schools (n = 198) (See Articles 1, 2)	Education sample (n = 669) (See Article 3)	Managers' sample (n = 137) (See Article 3)	Companies sample (n = 487), strict criteria (See Article 3)	Companies sample (n = 487) (See Article 3)	**Initial model: Senge's learning organisation (LO) model (S)**
Internal business environment of an organisation's development (17 items)	Internal environment, Goals & Development (23 items)	**Individual and joint learning (17 items)**	Individual and team/joint learning (6 items)	Building shared vision & Learning (14 items)	Internal environment & Learning (10 items)	Building shared vision & Team learning (15 items)	Personal mastery (4 items)	**Personal mastery (9 items)**
							Learning environment (4 items)	**Team learning (12 items)**
External business environment of an organisation's development (4 items)	Main processes (4 items)	**Main process (16 items)**	Main process (6 items)	Main process (5 items)	Main process (4 items)	Main process (5 items)	Organisation development & Building shared vision (14 items)	**Building shared vision (10 items)**
X	X	**Mental systems (19 items)**	Values (8 items)	Shared values (4 items)	Shared values (6 items)	Shared values (4 items)	Shared values (4 items)	**Mental models (11 items)**
							System thinking & Mental models (5 items)	**Systems thinking (10 items)**

Note: *******The shaded fields show that features which emerged were different from initial models, albeit very close to them.*
Source: Torokoff, 2009

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Made Torokoff

Inovacijų proceso valdymo analizė ir jo priklausomybė nuo vidurinės grandies vadovų darbo: Estijos įmonių pavyzdys

Santrauka

Naujovių mokymosi organizavimas įmonėje (individualiai ar komandoje) vaidina labai svarbų vaidmenį. Gaila, kad daugelis verslininkų yra linkę nuvertinti darbuotojų mokymosi naudą ir skirti mažiau pastangų ir laiko, formuojant komandas, kuriose narių turimi įgūdžiai papildytų vienas kitą; o taip pat neįsipareigoja tobulinti ir savo pačių vadybinių gebėjimų (Fitzsimons, 2002). Reikia žinoti, kaip rinkti ir analizuoti informaciją, priimti pagrįstus sprendimus ir nuolat ieškoti naujų sprendimų, siekiant palaikyti verslo sėkmę reikliame ir sparčiai kintančiame technologijų pasaulyje. Vidurinės grandies vadovas taip pat gali palaikyti naujoves ir prisidėti prie naujovių kūrimo kultūros organizacijoje.

Straipsnyje nagrinėjama besimokančios organizacijos koncepcija valdant inovacijų procesą. Tyrimų klausimynas yra paremtas modeliais, paimtais iš dviejų šaltinių: Senge's penkiomis disciplinomis (1990) ir Mets'o (2002) trijų dimensijų sistema organizacinei plėtrai (3D), kuriais buvo analizuojami teiginiai (16) apie inovacijų procesą ir laisvos formos atsakymai. Tyrimas apima trejų metų (2005–2008) laikotarpį. Klausimyną užpildė 573 darbuotojai iš įvairių Estijos įmonių.

Skirtingų pavyzdžių tyrimas apibrėžia skirtingus besimokančios organizacijos modelius. Remiantis pasirinktų kriterijų analize, tapo aišku, kad besimokančių organizacijų charakteristikos rodikliai gerokai skiriasi dėl įmonių, kurių mokymasis yra pagrįstas tik darbuotojais ar vadovais. Išanalizavus laisvos formos klausimyno atsakymus, paaiškėjo, kad jei įmonė neturi aiškios vizijos, darbuotojai negali susieti savo turimų ar vystomų gebėjimų su įmonės gerove – informacija neperduodama be kliūčių tarp skirtingų įmonės lygių ir darbuotojų mokymasis organizacijoje tampa mažiau struktūrizuotas nei vadovų. Viena šio tyrimo išvadų yra ta, kad besimokančios organizacijos ar įmonės suvokimas yra labiau supaprastintas darbuotojams, nei vadovams. Todėl vidurinės grandies vadovų vaidmuo organizuojant jų tiesioginių pavaldinių gebėjimų tobulinimo procesus yra svarbesnis, nei buvo manyta iki šiol. Vidurinės grandies vadovai turi išmokti perteikti įmonės strategiją darbuotojams ir perduoti idėjas bei nuomones įmonėje „iš apačios į

viršų“. Mokymosi organizacijoje plėtra yra viena iš būtinų sąlygų, norint sėkmingai vadovauti inovacijų procesui. To siekdamas straipsnio autorius siūlo naują motyvacinio ciklo modelį.

Atliekant tyrimą buvo analizuojami 21 įmonės darbuotojų elgsenos modeliai. Šios įmonės buvo padalytos į dvi grupes: mažas ir vidutines įmones (MVĮ; 470 respondentų) ir mikroįmones (103 respondentai). Analizių rezultatai buvo tiriami tiek kokybiniu, tiek ir kiekybiniu aspektu. Remiantis autoriaus ankstesniais tyrimais (2008), mokymosi organizavimo modeliai tarp vadovų ir darbininkų skiriasi, tačiau dabartinė laisvos formos atsakymų ir teiginių inovacijų klausimais analizė leidžia daryti tokias išvadas:

- Bendradarbiavimas tarp vadovų ir darbininkų specialistų yra veiksmingesnis mikroįmonėse.
- Aukščiausios ir vidurinės grandies vadovų darbą geriau įvertino mažų ir vidutinių įmonių darbuotojai. Bendradarbiavimas ir informacijos srautai buvo labiau intensyvesni tarp vadovų nei tarp vadovų ir darbininkų specialistų.
- Jei mažų ir vidutinių įmonių darbuotojams nebuvo tinkamai išaiškinta įmonės vizija, pastarieji negali išnaudoti visų savo galimybių ir įrodyti savo atsidavimo įmonei ir jos plėtrai.
- Vidurinės grandies vadovai turi išmokti pasidalyti savo žiniomis su darbininkais specialistais ir mokėti perduoti idėjas iš „apačios“ aukščiausiems vadovams ir atvirkščiai. Jei vidurinės grandies vadovas nepakankamai bendrauja su darbuotojais, tarp aukščiausių vadovų ir darbininkų atsiranda praraja. Tuomet aukščiausi vadovai nepakankamai žino apie darbininkų problemas, kas vėliau sukelia kliūčių valdant inovacijų procesą, ir įmonės efektyvumas sumažėja.
- Remiantis laisvos formos atsakymais, hierarchijos sukeltos kliūtys trukdo inovacijų proceso raidai.
- Motyvacija įmonėje turi ypatingą vaidmenį. Teigiama emocinė aplinka yra svarbi valdant inovacijų procesą. Vidurinės grandies vadovai turi galimybę generuoti kūrybinę galią ir stebėti, kad darbininkai specialistai galėtų maksimaliai pritaikyti turimas žinias ir patirtį kuriant ir valdant motyvaciją.
- Dėl teigiamo emocinio klimato organizacijoje įmonė turi geras pradines sąlygas greitai pasidalyti informacija, tačiau paprastai tai nėra atliekama pakankamai.
- Mokymosi organizavimo plėtra yra viena iš būtinų sąlygų valdant inovacijų procesą; straipsnio autorius siūlo naują motyvacinio ciklo modelį, kurio „centrinis taškas“ yra vadovų vaidmuo darant įtaką darbininkų motyvacijai ir generuojant kūrybiškumą.

Metodai, nagrinėjantys emocinį klimatą ir grupuojantys pagrindinius įmonės asmenis, analizuojami būsimuose tyrimuose, kad efektyviau plėtotų mokymosi organizavimą ir paskatintų inovacijų procesą.

Raktažodžiai: *kūrybiškumas, naujovė, besimokanti organizacija, emocinis klimatas, motyvacija.*

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