THESIS ON ECONOMICS H33

Measurement of Organizational Learning of Business Schools

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TUT PRESS

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The Dissertation was accepted for the defence of the degree of Doctor of Philosophy in Economics on 03 April 2013

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Defence of the thesis: 23 May 2013

Declaration:
Hereby I declare that this doctoral thesis, my original investigation and achievement, submitted for the doctoral degree at Tallinn University of Technology has not been submitted for any academic degree.

/Karen Voolaid/

ISSN 1406-4782
ISBN 978-9949-23-461-5 (publication)
ISBN 978-9949-23-462-2 (PDF)

MAJANDUS H33

Ärikoolide organisatsioonilise õppivuse mõõtmine

KAREN VOOLAID

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CONTENTS

INTRODUCTION

The increasing competition in the market has forced the organizations to find new strategies for improvement of their performance to gain a competitive advantage in the market. Organizations are promoting the learning environment for this purpose that would help the organizations adapt to the changing environment. An organization`s ability to learn and innovate is nowadays an important factor influencing organizational performance and survival (Roche 2002; Dunphy and Griffths 1998; Deng and Tsacle 2003; Khandekar and Sharma 2006; Rebelo and Gomes 2008; Argote, McEvily and Reagan 2003).

Learning plays an essential role in nearly all the fields, but it is particularly important in education. Universities are important places built on the concept of learning at all levels incorporating knowledge, growth and creativity (Lewis, Benjamin, Jud and Marcella 2008). Economic and business education at universities is directly related to both knowledge based economy and development trends of a knowledge-based society across the world.

While moving towards a knowledge-based economy it is extremely important that business schools (hereinafter BS) have competencies that enable them to respond more effectively to changes in the environment, allowing them to survive under the sharp competition in the education market. Additionally, the economic education provided by universities should correspond to graduates' competitiveness in the labour market, satisfy employers' demands and add potential to the graduates for life-long learning. All this shows the immensity and volume of the expectations and responsibility the BSs are facing, which a BS would be able to satisfy only by continuously developing and improving its organization.

A business school is a university-level institution that confers degrees in business administration. A modern business school should be a flexible and dynamic organization, which is able to successfully operate in a constantly changing environment. In order to fulfil all these conditions the school should conform to the criteria of a learning organization. *The learning organization* is defined as a form of organization, and the learning organization literature has an action orientation that is geared toward using specific diagnostic tools which can help to identify, promote and evaluate the quality of learning processes (Easterby-Smith et al. 1999). *Organizational learning* means learning related activity and the process by which organizations eventually reach the ideal of a learning organization (Finger and Brand 1999). *Organizational learning rate* (hereinafter also learning rate, LR) is the quantitatively expressed organizational learning capacity. The phenomenon known as the learning organization has during the past three decades been discussed widely in the literature (e.g.: Argyris 1982; Senge 1990; Pedler, Boydell, and Burgoyne 1991; Nonaka 1991; Watkins and Marsick 1993; Garvin 1993, Moilanen 2001; Örtenblad 2002; Sydänmaanlakka 2002).

Today there are more than 12,000 BSs known across the globe, and the number is increasing every year. This is due to increasing demand from the

global student population, people at work who wish to advance their careers and employers of graduates in business and management. BSs today are facing many challenges. Despite the positive impact of BSs on society, the financial crisis and the eroding of corporate reputations have given rise to strong criticism of BSs and their role in those events. For these reasons, BSs have to change if they want to keep having positive impact on people, firms and societies (Canals 2010). New challenges for BSs are integration, leadership development, and a humanistic view of the firm, life-long learning and organizational structure (Sattelberger 2011).

The more forward-looking BSs are already beginning to implement changes to their curricula, their marketing strategies, their alliances and partnerships. They have realized that in the future the business education market will become increasingly competitive. More providers, new methods, creative strategies, global opportunities will provide a varied choice to students across the world (Cornuel 2007). The BSs need to adopt strategies that allow them to distinguish themselves from their competitors and prove the value. The implementation of organizational changes in BSs requires from the BS members obtaining of new skills, changing of attitudes and manners. All this happens in the process of organizational learning. BSs, as well as people should learn to be able to change as fast as the surrounding environment requires.

In order to look for better possibilities to survive under the growing competition a BS needs to be a learning organization that would help to increase its competitive advantage. According to Lorange (1997), organizational learning, in fact, can be expected to be a key driver for any leading BS which wants to advance and to respond to the challenges of its customers. Several authors have suggested that in the increasingly sharpening international competition universities and BSs should also be learning organizations (Lorange 1997; Dill 1999; Kristensen 1999; Martin 1999; Patterson 1999; Mulford 2000; Willcoxson 2001; Boyce 2003). The BSs as learning organizations and their measurement possibilities have been studied insufficiently so far. Research on the organizational learning at Estonian universities is scarce and no research has been carried out about BSs specifically. Neither has the BS learning rate been researched or compared. And the relationships between BS learning rate and the factors that influence the operating environment of BSs have not been investigated either.

The aim of this doctoral thesis is to contribute to the development of the concept of business schools as learning organizations and to create a measurement tool for investigating BSs as learning organizations worldwide. This includes measurement and comparison of the BS learning rate worldwide using the new instrument, and identification of the BS learning rate dependence on various internal and external characteristics. The thesis is based on five independent research papers connected by a common theme, which is **the organizational learning of BSs**.

The research papers focus on **three aspects** of organizational learning. The first aspect relates to the **organizational learning rate of business schools and its comparison with** the average learning rate of business organizations and **Estonian universities using Watkins and Marsick's measurement instrument**. The second aspect is devoted **to how to measure the organizational learning rate of BSs as specific organizations** and **development of the new special BS learning rate measurement instrument.**

The third aspect is about **measuring the learning rate of BSs worldwide** and **dependence on various characteristics of the BSs** using the new special BSs learning rate measurement instrument elaborated by the author.

The main methodological basis for the study design was the Dimensions of the Learning Organization Questionnaire (DLOQ) elaborated by Watkins and Marsick, which was used for quantitative research on Estonian (public and private) universities for assessing to what extent the Watkins and Marsick's questionnaire conforms to the specificity of a Business School as learning organization. The learning rate of business schools and departments of a public university as well as the importance of single statements in the questionnaire of the dimensions of the learning organization between universities and departments were assessed and compared. Based on the results of this study and considering the specific features of business schools as well as theoretical principles of learning organizations, the author has modified the Watkins and Marsick's questionnaire, and created a learning business school model. Saving the hierarchical setup of the Watkins and Marsick's questionnaire, a number of new specific statements for BS were included and a Business School Learning Organization Questionnaire (hereinafter also BSLOQ) was formulated. The BSLOQ was tested on BSs worldwide based on the databases of EFMD and EDUNIVERSAL. The data of the empirical surveys were analysed using the statistical methods (e.g. ANOVA, MANOVA, Fisher LSD test, Levene's test, regression analysis). A detailed description of methodology in each stage of the research process is provided in research papers (Appendices 1−5).

The first aspect of the thesis is to examine the **organizational learning rate of BSs and universities in Estonia.** This topic is covered in the first and second research paper (see Appendices 1–2). The purpose is *to* analyse the organizational learning rate of BSs and universities in Estonia using Watkins and Marsick's measurement instrument – **Dimensions of the Learning Organization Questionnaire (DLOQ)**.

The conclusions are drawn on the basis of surveys carried out among the employees at Tallinn School of Economics and Business Administration (TSEBA), Estonian Business School (EBS) and the Faculties of Civil Engineering and Mechanical Engineering of Tallinn University of Technology (BFMF). The theoretical basis for the empirical study was Watkins & Marsick's organization development principles. The DLOQ ascertains whether and to what extent these universities are learning organizations.

This first research paper measures and compares private and public universities in Estonia at the example of EBS and TSEBA, based on the theory

of the learning organization (Appendix 1). The paper seeks to examine the organizational learning rate of BSs in Estonia using Watkins and Marsick's Dimensions of the Learning Organization Questionnaire. In order to identify which corresponds better to the criteria of the learning organization − a private or public BS – these schools are also compared to each other.

The aim of the second research paper is to learn whether and to what extent the participation rate in the education market, expressed in the ratio of students taught on the basis of state-commissioned education to students who pay themselves for the studies, influences the learning rate of an higher education organization, measured on the basis of Watkins and Marsick's learning organization questionnaire (Appendix 2). The author hypothesises that the need to compete for students in the higher education market has a positive impact on the learning rate of a university as organization. As far as the author knows, the relationship between the market competition rate and the learning rate for universities has not been investigated before.

The second aspect of the thesis is **how to measure the organizational learning rate of business schools as specific organizations and development of the new special BS learning rate measurement instrument.** This aspect has been covered in the third and fourth paper (Appendices 3−4).

The third research paper provides a theoretical basis for the development of a new special BS learning rate measurement instrument where the author raises a question whether any of the learning organization theories might be appropriate for BSs to conduct empirical research (Appendix 3). The author has made an attempt to expand the approach of Watkins and Marsick since this is the most frequently used questionnaire, and to study how it could be adjusted to BSs. In the empirical part of the third research paper, the author evaluates TSEBA as learning organization and investigates which of the learning organization`s potentials TSEBA has.

The fourth research paper presents a new instrument for measuring the organizational learning rate of BSs as learning organizations (see Appendix 4). The development of the new instrument was induced by the fact that BSs are specific organizations which possess the characteristics of both public universities and business organizations, and the learning organization questionnaire developed by Watkins and Marsick, which so far has been widely used for measuring the organizational learning, has been mainly designed for measuring the organizational learning of the business organizations and in many aspects does not take the peculiarities of BSs into account. Therefore, based on the specific features of the learning organization in BSs, distinctive features of BSs as learning organizations that reflect their specificity have been formulated. On the basis of these, the author has drafted a new questionnaire that takes into account the specificity of BSs (BSLOQ). The new characteristics which take into consideration the peculiarities of BSs (e.g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between BS and business sector, teaching integrated courses, a mechanism for sharing

interdisciplinary knowledge, involvement in the process of creating a common vision, creation of external partnerships and interaction on both BS and business, BS leaders' capacity and willingness to model collaborative action) were formulated as a result of the research on universities and BSs as organizations; the mission, management and organizational structure of a BS were specifically reckoned with.

The composition, structure and length of Dimensions of the Learning Organization Questionnaire developed by Watkins and Marsick have been used as a basis for developing a questionnaire expedient for BSs. About 50% of the DLOQ characteristics which are the most adequate for BSs have not been changed; the other ones have been replaced by the characteristics that reflect the peculiarities of a BS. The DLOQ characteristics which have been kept unchanged in the questionnaire were selected on the basis of an empirical study where the employees of TSEBA had evaluated the relevance of the DLOQ characteristics for measuring the organizational learning rate of a BS as learning organization. On the basis of the findings, a learning organization questionnaire appropriate for BSs (BSLOQ) that would enable to measure and compare the learning rates of different BSs as organizations, was constructed.

The third aspect of the thesis is devoted to **measuring the organizational learning rate of business schools worldwide** and **dependence on various characteristics of the business schools**. It is based on international survey results carried out by the author among 105 business schools in 44 countries worldwide (see Appendix 5).

The fifth research paper examines the organizational learning rate of BSs worldwide, using the new special BS learning rate measurement instrument (BSLOQ) for that, and dependence on various characteristics of the BSs. The paper analyses the dependence of the overall learning rate of BSs, as well as the dependence of its individual components (levels and dimensions) on the geographical-cultural region of the school location, ownership form and the international accreditations the school has.

The contribution of this doctoral thesis in theoretical and practical terms lies in the following.

1. The assessment of the organizational learning rate of BSs and universities in Estonia using Watkins and Marsick's DLOQ. The author made it possible for the first time to measure the learning rate of Estonian universities and BSs and make comparisons (Appendix 1).
2. The assessment of the impact of the need to compete for students in the Estonian higher education market on the learning rate of a university as learning organization. As far as the author knows, the relationship between the market competition rate and the learning rate for universities has not been investigated before (Appendix 2). The author of the thesis for the first time studied the issue of the learning rate dependence on ownership form in Estonia (Appendix 1).

3. Development of a special learning rate measurement instrument for the BSs (Business School Learning Organization Questionnaire, BSLOQ) based on theoretical principles and empirical results, which enables to measure and compare the learning rates of different BSs as organizations worldwide. A special BS learning rate measurement instrument was missing before. New characteristics were formulated for the BS questionnaire on the basis of research on universities and BSs as learning organizations, which reflect the specificity of BSs, e.g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections; active dialogue between BS and business sector; teaching integrated courses; a mechanism for sharing interdisciplinary knowledge; involvement in the process of creating a common vision; creation of external partnerships and interaction on both BS and business; BS leaders' capacity and willingness to model collaborative action (Appendices 3−4).
4. Measurement of organizational learning of BS worldwide. The author conducted a survey of 105 BSs in 44 countries worldwide using BSLOQ, which for the first time enabled an international comparison of BSs as learning organizations (Appendix 5).
5. The research on learning rate dependences, which was carried out with respect to the geographical-cultural region of the BS location, ownership form and the international accreditations the school had. By the knowledge of author, no academic research papers before have been devoted to analysing the learning rate dependences from different factors (Appendix 5).

The **following papers** have been **published** as a result of the research. All the papers were co-authored.

1. Voolaid, K. and Ehrlich, Ü. (2011). Conformity of Business Schools to the Criteria of a Learning Organization: The Case of Estonia. The Economy and Economics after Crisis (481–498). Berlin: Berliner Wissenschaftsverlag.

2. Voolaid, K. and Ehrlich, Ü. (2010). Universities' Organizational Learning Rate Dependence on the Level of Participation in the Higher Education Market: The Case Study of Estonia. Eric Tsui (ed.). Proceedings of the 7th International Conference on Intellectual Capital, Knowledge Management & Organizational Learning (480–488). The Hong Kong Polytechnic University, Hong Kong, China: Academic Publishing Limited.

3. Voolaid, K. and Venesaar, U. (2011). A Validation Study of the Dimensions of the Learning Organization Questionnaire in the Business School Context. G. Prause, U. Venesaar (eds.). University Business Cooperation Tallinn 2011 (64–83). Berlin: Berliner Wissenschafts-Verlag.

4. Voolaid, K. and Ehrlich, Ü. (2011). Organizational Learning Rate Measurement Instruments for Business Schools. Vincent Ribiere and Lugkana Worasinchai (eds.). Proceedings of the 8th International Conference on Intellectual Capital, Knowledge Management & Organizational Learning (593–601). Bangkok, Thailand: Academic Publishing Limited Reading, UK.

5. Voolaid, K. and Ehrlich, Ü. (2012). How Business Schools as Learning Organizations Meet New Challenges: a Worldwide Study. F. Chaparro (ed.). Proceedings of the 9th International Conference on Intellectual Capital, Knowledge Management & Organizational Learning (286–294). Bogota, Colombia: Academic Publishing International.

The author's contribution

Paper 1. The author of the thesis organised data collection and carried out a survey of Estonian universities (TSEBA and EBS) with the aim to examine the organizational learning rate of BSs and universities in Estonia and took an active part in the analysis of the survey results.

Paper 2. The author of the thesis carried out a survey in two faculties of TUT and analysed the survey results with the aim to find out the universities' organizational learning rate dependence on the level of participation in the higher education market.

Papers 3 and **4.** Based on the theoretical literature about BSs and universities, their problems and survey results carried out at TSEBA, the author of the thesis developed a new learning rate measurement instrument for BSs worldwide (BSLOQ).

Paper 5. Based on the information of EFMD and Eduniversal, the author of this thesis composed a database of 719 BSs worldwide and gathered information about international accreditations and ownership forms of the BSs. Using the BSLOQ the author carried out a survey of BSs worldwide and also took part in the analysis of the survey results.

Overview of the approval of research results

1. The first study results about the organizational learning rate of BSs in Estonia were presented by the author at the Congress of Political Economists (COPE) conference in Honolulu in July 2010.

2. The research results on the learning rate dependence on the level of participation in the higher education market in Estonia were presented by the author at the International Conference on Intellectual Capital, Knowledge Management and Organizational Learning (ICICKM) in Hong Kong in November 2010.
3. The theoretical framework for developing a new BS learning rate measurement instrument was presented in the University- Business Cooperation proceedings in 2011.
4. The new BS learning rate measurement instrument was presented by the author at the International Conference on Intellectual Capital, Knowledge Management and Organizational Learning (ICICKM) in Bangkok in November 2011.
5. The BS worldwide study results on LR dependence on accreditations, BS location and ownership form were presented by the author at the International Conference on Intellectual Capital, Knowledge Management and Organizational Learning (ICICKM) in Bogota in October 2012.

Abbreviations

AACSB – The Association to Advance Collegiate Schools of Business
BFMF – Faculties of Civil Engineering and Mechanical Engineering at Tallinn University of Technology
BS – Business School
BSLOQ – Business School Learning Organization Questionnaire
COPE – Congress of Political Economists
DLOQ – Dimensions of the Learning Organization Questionnaire
EBS – Estonian Business School
EDUNIVERSAL – Business school and university ranking worldwide
EFMD – European Foundation of Management Development
EQUIS – European Quality Improvement System
ICICKM – International Conference on Intellectual Capital, Knowledge Management and Organizational Learning
LO – Learning Organization
LR – Learning Rate
OL – Organizational Learning
TSEBA – Tallinn School of Economics and Business Administration
TUT – Tallinn University of Technology

Acknowledgements

I would like to express my gratitude to my first supervisor Professor Urve Venesaar for her support. She actually brought me to the topic of organizational learning and she introduced me to the leading researchers in Estonia and abroad in this field. She had always time to discuss my research and never gave up teaching me.

Many thanks to my second supervisor and co-author, Professor Üllas Ehrlich, who always had original ideas in this research field and encouraged me to implement them.

I would like to express my gratitude to Professor Monika Petraite, external opponent for the thesis. Thank you for your remarks and ideas.

I am also very grateful to Professor Ruth Alas (Vice Rector for Research, Estonian Business School), local opponent for the thesis. Thank you for your remarks, comments and questions.

And my gratitude to fellow PhD students for their comments and valuable insights in the doctoral seminars.

I am also grateful to all other people who have supported me during my research: Sirje Soop, for her help with all kinds of practical matters including the layout of the thesis, and Marika Kirsspuu for proof-reading the manuscript.

Publication of this thesis is granted by the Doctoral School of Economics and Innovation established under the auspices of the European Social Fund. I am thankful to the European Social Fund and DoRa programme for the financial support to attend conferences in order to present the research results. Many thanks also to the Doctoral School in Economics and Innovation at the University of Tartu and Tallinn University of Technology, the Department of Business Administration and Dean`s Office of Tallinn School of Economics and Business Administration, Tallinn University of Technology for supporting me in my studies.

I am grateful to my family, friends and colleagues for understanding and supporting my academic ambitions in all the years.

1. THEORY AND LITERATURE OVERVIEW

1.1. The Concept of Organizational Learning in Organizational Theory

Organizations are social entities that are goal directed, designed as deliberately structured and coordinated activity systems, and are linked to the external environment (Daft 2001). In the light of substantial changes in the business environment the main concern for managers as well as for scholars is the potential offered by new organizational forms (Child 2009). The main characteristics of the current business environment are globalization, new technologies, knowledge-based economy, hyper-competition, social accountability and the corresponding new organizational forms are using widely the principles of the learning organization (Child 2009).

The organizational learning concept is regarded as an opposite approach to bureaucratic in the organizational theory. Organizational learning is one of the most popular concepts of *post bureaucracy* (Heckscher and Donnelon 1994) that is often connected with innovation, performance, knowledge acquisition, information distribution, information interpretation, and organizational memory (Huber 1991; Wolfe 1994; Sta. Maria and Watkins 2003; Rahmandad 2008). Organizational learning is methodologically based on "Organizational Learning" by C. Argyris and D. Schön (1978), which is followed by many authors (Garvin 1993; Easterby-Smith 2009; Barrados and Mayne 2003; Daft and Huber 1987; Fry and Griswold 2003; Huber 1991; Levit and March 1988; Fiol and Lyles 1985; etc.).

Researchers of organizations have paid a lot of attention to how to make the organizations' operation more effective, what kind of changes should be made in the organization and the role of people in this process. In the 1950s, the foundation was laid to a special branch of science that was called organizational development. Organizational development seeks to increase the organization's ability of achieving the desired objectives using for that the methods developed within the behavioural sciences. This is a systematic approach where efforts are aimed at the organization as a whole, studying it together with the surrounding environment (Daft 2001). Organizational development methods are needed first of all when extensive changes are under way in the organization. Change can be defined broadly as a planned or unplanned response to the pressure by some forces. This pressure can come either from inside or outside of the organization. The external environment changes with some impact are changes in legislation, policies, change of government, state budget cuts, etc. Internal factors might be changes in employees' objectives, nature of work, organization's structure, organizational culture, and organization's objectives.

The implementation of organizational changes presumes that members of the organization obtain new skills, change their attitudes and manners. All this happens in the process of organizational learning. In order to keep the knowledge acquired by employees in the organization also after people leave,

the concept of learning organization has been developed. So as the organizations could change rapidly, as the environment demands from them, the organizations should also learn. The concept of the learning organization has been developed since the second half of the 20th century, but it became popular thanks to "The Fifth Discipline" by US Professor Peter Senge, which appeared first in print in 1990.

The concept of learning organization is based on the systems theory, which is characterized by the ability of an organization to process feedback effectively in order to close the gap between the current state and the desired state (Almaney 1974; Peery Jr. 1975; Vancouver 1996; Tracy 1993). "Learning in organizations relates to how the organization deliberately changes and adapts over time in terms of structures, functions, values, attitudes and behaviour." (Barrados and Mayne 2003).

1.2. The Concept of Learning Organization

Academics and managers have studied the phenomenon of organizational learning for a number of years (e.g., Argyris 1982; Senge 1990; Pedler, Boydell, and Burgoyne 1991; Nonaka 1991; Watkins and Marsick 1993; Garvin 1993, Moilanen 2001; Örtenblad 2002; Sydänmaanlakka 2002). In the world of rapid changes, the capability of organizations to adjust to the environment and the speed how a business is able to learn is becoming a source of competitive advantage (Ticha and Bolcek 2004).

The concept of learning organization has been in use for several decades. The term "learning organization" was first used in the seventies (Argyris 1976), but the definition has been in constant change (Torokoff 2008). The question "what is a learning organization" represents a challenge for researchers, but "general consensus in the learning organization literature is that learning at the organizational level is a prerequisite for successful organizational change and performance" (Sta. Maria and Watkins 2003, p. 494; Wenbin and Hongyi 2009). "The ability to learn is considered a key factor in the organization's success, and the learning organization as such is by no means an end result; the end result is rather an intelligent organization or company" (Edvinsson 2002).

The terms "organizational learning" and "learning organization" have been used as alternatives and seen as the same concept or even synonyms (Örtenblad 2001). *The learning organization* is defined as a form of organization, and the learning organizations literature has an action orientation that is geared toward using specific diagnostic tools which can help to identify, promote and evaluate the quality of learning processes (Easterby-Smith et al. 1999). *Organizational learning* means learning related activity and the process by which organizations eventually reach the ideal of a learning organization (Finger and Brand 1999).

The definitions identify that a learning organization values various learning opportunities that support continuous learning by individuals and groups. Learning by an individual is a precondition of the organizational learning

(Argyris and Schön 1996; Senge 1990; Watkins and Marsick 1993). Both personal and organizational aims can be achieved through learning and hence it may be said that organizational learning is regarded as a strategic activity. At the same time, the presence of learning individuals does not mean that the organization is learning (Moilanen 2001; Senge 1990).

Individual learning is targeted at sharing information, new ideas and experiences. Sharing of knowledge with all members of the organization will create preconditions for development of knowledgeable and competent employees (Sydänmaanlakka 2002).

Nonaka (1991) speaks about the learning organization as a living organism, of organizations as open systems which communicate with their own environment. He defines knowledge-creating organizations as those whose sole business is continuous innovation, and argues that in an environment in which "the only certainty is uncertainty", knowledge is the one sure source of lasting competitive advantage.

Örtenblad (2002, 2010) developed a typology of the idea of learning organization. He suggests that there are four understandings of the learning organization concept. The first is the *old organizational learning perspective*, which focuses on the storage of knowledge in the organizational mind. Learning is viewed as applications of knowledge at different levels. The second type is the *learning at work perspective,* which sees a learning organization as an organization where individuals learn at the workplace. The third is the *learning climate perspective*, which sees the learning organization as one that facilitates the learning of its employees. The fourth is the *learning structure perspective*, which regards the learning organization as a flexible entity. Örtenblad is not convinced that this is something that would fit all organizations. Besides, it would probably be impossible for any specific organization to realize all aspects of the integrated approach of the learning organization. A better suggestion is perhaps to see the learning organization as an ideal worth to strive for, but it is unachievable (Örtenblad 2001).

In fact, Nevis, DiBella and Gould (1995) conclude from their studies on organizations that all organizations are learning systems. But according to them learning conforms to culture, style varies between learning systems and generic processes facilitate learning (Nevis et al. 1995, p. 75). Dibella and Nevis (1998) argued that it is "a matter of perspective". They clustered the orientations of selected authors into three perspectives: 1) The normative perspective – organizational learning takes place under a unique set of conditions, relating to a specific type of organization with specific characteristics (The Learning Organization: A Matter of Becoming); 2) The developmental perspective – the learning organization represents a late stage of organizational development; 3) The capability perspective – learning is innate to all organizations (The Learning Organization: A Matter of Being). They subsequently compare features such as time orientation, source, learning style, relationship between learning and culture, and management's focal point in order to indicate the differences between the three perspectives (DiBella and Nevis 1998, pp. 7–18). DiBella

(2001) also developed the so-called Organizational Learning Inventory tool, used to profile a team's or organization's learning capability.

Most of the definitions of the learning organization do not provide any guidelines for the creation or development of a learning organization. Most of the definitions identify the principles of the learning organization rather than describe something in real life.

Researchers have identified the following levels of systematic learning: zero, single loop, double loop and triple loop learning (e.g. Argyris 1976; Georges, Romme and Witteloostuijn 1999). Learning takes place at the zero level when the organization is unable to correct its action to match the change. "Single loop learning takes place where a match has been established or mismatch has been removed by a change in activities. Double loop learning takes place when mismatches have been rectified by initial research and a change in alternatives (ways) of activity". It would be wrong to define learning too narrowly as "solving a problem." This is a reflection how people "think – that is a cognitive rule" (Argyris 1991). Triple loop learning, concerning "structures and strategies of learning", is an "overall learning infrastructure" along with "competences and skills to use this infrastructure". All types of learning and "particularly triple loop learning are concerned with structural images": mental maps, encouraging structures, and so on (Georges et al. 1999).

1.3. Characteristics of the Learning Organization

To identify more precisely the process as well as approaches of various organizations to organizational learning, it is necessary to determine the criteria – characteristics of the learning organization. Characteristics of the learning organization have been examined from various aspects and a number of approaches to defining learning organization have emerged (Senge 1990; Pedler, Boydell, and Burgoyne 1991; Garvin 1993; Watkins and Marsick 1993; Marquardt and Reynolds 1994; Pearn 1995). It is not surprising that each of the writers has his own understanding of the learning organization.

Classic and popular today is Peter M. Senge's approach to the learning organization. Senge (1990) is representing the systems thinking approach. He defines the learning organization as an organization that possesses not only an adaptive capacity but also ability to create alternative futures. Senge identifies five disciplines considered as essential for a learning organization: systems thinking – ability to make decisions that create desired results while seeing the whole picture; personal mastery – continually develop one`s personal abilities; mental models – deeply held internal images how the world works; building shared vision – ability to unearth shared "picture of the future" that fosters genuine commitment and enrolment rather than compliance; team learning – emphasis on the learning activities of the group rather than on the development of team process (Senge 1990). Senge's principles can be used as valuable guidelines in working towards the learning organization status.

From the learning perspective the definition by M. Pedler, T. Boydell and J. Burgoyne (1991) expresses the important aspects of the learning organization: learning and continuous transformation of all its members. The authors expand the definition by stating that the learning company is a vision of what might be possible. It is not brought about simply by training individuals; it can only happen as a result of learning at the whole organization level (Pedler et al. 1991, p.1). Hence, it can be said that learning is discussed as a strategic activity to achieve the organization's objectives. A learning organization is a whole. Characteristics of the learning organization are revealed in providing learning opportunities, interaction with the external environment, learning support structure, learning climate and strategy of the organization (Pedler et al. 1991). Both Moilanen (2001) and Pedler et al. (1991) understand learning as an essential strategy aspect. An important conclusion can be drawn from this – learning is an intentional strategic process for the achievement of the organization's objectives. During the development into a learning organization it is important to see learning as part of both everyday activity and strategic processes of the organization. To facilitate learning it is important to provide learning support structures, create learning opportunities and enable self-development for all members of the organization. This learning perspective provides comprehensive aspects of learning at all organizational levels. The traditional elements of management are incorporated to support learning.

From strategic perspective Garvin (1993) defines a learning organization as "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights". He describes learning organizations as skilled at five main activities: systematic problem solving, experimentation with new approaches, learning from own experiences and past history, learning from the experiences and best practices of others, transferring knowledge quickly and efficiently throughout the organization. The strategic perspective of the learning organization posits that certain managerial practices are prerequisites for becoming a learning organization.

On the basis of the three-dimensional model of organization development framework developed by Tõnis Mets (2002), organizational learning has the characteristics of process, infrastructure as well as mental origin, which all make up three different dimensions of the organizational learning, including organizational development. It may be stated therefore that a new knowledge is created in interaction of the business process, learning (sometimes also training) and mental systems developing the framework of organizational learning and development (Mets 2002).

Watkins and Marsick (1993,1996) provide an integrative model of a learning organization. They regard the learning organization as an organization where individuals learn at the workplace, where organization has an ability to remember, where through organizational climate they promote and facilitate individuals to learn and where organization is a flexible entity. Their learning organization model is based on two organizational constituents: people and structure as interactive components of organizational change and development.

The model underlines three key components: 1) systems-level, continuous learning, 2) this learning then generates and manages knowledge outcomes, and 3) these outcomes lead to improvement in the organization's performance and value (both financial assets and nonfinancial intellectual capital). Learning helps people to create and manage knowledge that builds a system's intellectual capital (Yang, Watkins, and Marsick 2004, pp. 33–34). From integrative perspective the learning organization is viewed as one that has the capacity to integrate people and structures in order to move toward continuous learning and change. Watkins and Marsick`s (1993,1996) framework of learning organization served as the theoretical foundation for the current study.

Having analysed various definitions of learning organizations (Moilanen 2001; Pedler et al. 1991; Senge 1990; Watkins and Marsick 1993; Garvin 1993; Nonaka 1991; Örtenblad 2002) it may be stated that all authors identity similar aspects of the learning organizations: continuously learning individuals; learning expressed in transformation being a natural part of the organization; learning is a strategic and knowledgeably conducted process; organization has structures and systems that promote learning and knowledge sharing; organization has a learning capacity, knowledge as a competitive advantage.

1.4. Learning Organization Measurement Tools

There is a variety of tools available for measuring and evaluating the learning organizations. A number of measurement instruments have been developed for assessing an organization`s current status in relation to the learning organization concept (Moilanen 2001). In the literature review seven such measurement instruments were identified: the Complete Learning Organization Benchmark (Mayo and Lank 1994), the Learning Company Questionnaire (Pedler et al. 1991), the Learning Environment Survey (Tannenbaum 1997), the Learning Audit (Pearn 1995), the Recognizing Your Organization (Sarala and Sarala 1996), the Learning Organization Capability Assessment (Redding and Catalanello 1997), and the Dimensions of the Learning Organization Questionnaire, DLOQ (Watkins and Marsick 1996).

The Complete Learning Organization Benchmark, which was introduced by Mayo and Lank (1994), consists of 187 questions divided into nine dimensions. The emphasis of the questionnaire is on organizational factors, individual and team-based learning, and management and leadership.

The Learning Company Questionnaire is a diagnostic tool developed by Pedler et al. (1988, 1991), which initially comprised nine dimensions and later was developed into 11 dimensions (ibid.). The emphasis of this questionnaire is on the role of the individual in the context of the whole organization.

The Learning Environment Survey was developed and tested scientifically by Tannenbaum (1997). The focus of this questionnaire is on the learning environment with attention to existing processes, including opportunities for learning, tolerance for mistakes, accountability and high performance

expectations, openness to new ideas, in addition to policies and practices supportive of training and learning. This instrument can be used by managers to promote and encourage learning within their organization (Moilanen 2001).

The Learning Audit (Pearn 1995) consists of five parts and examines the role of the organization as a whole, the individual's specific role and that of the human resource in leading and encouraging learning.

The Recognizing Your Organization, introduced by Sarala and Sarala (1996) to identify whether an organization qualifies as a learning organization, studies the following organizational dimensions: values, structure and processes, leading and making decisions, organizing the work, training and development.

The Learning Organization Capability Assessment (Redding and Catalanello 1997) is similar to the tool of Sarala and Sarala (1996), defining three archetypes of organizations, traditional, continuously improving, and learning organizations. The questionnaire can be used to measure the basic practices and orientations of an organization (Moilanen 2001).

1.4.1. The Learning Organization Model and DLOQ by Watkins and Marsick

The most empirically tested diagnostic tool to be viewed is the Dimensions of the Learning Organization Questionnaire (DLOQ), which was introduced and further developed by Watkins and Marsick (1996) to analyse the learning organizations; the authors are of the opinion that learning organizations can be developed purposefully.

K. E. Watkins and V. J. Marsick are the only theoreticians (Yang et al. 2004, p. 35) who analyse an organization at three levels: individual, team and organizational. They identified seven distinct but interrelated dimensions of a learning organization at the three levels. Each dimension has its own criteria (Yang et al. 2004). Watkins and Marsick identify seven dimensions of the learning organization, which are 1) provide continuous learning opportunities, 2) foster inquiry and dialogue, 3) promote collaboration and team learning, 4) create systems to capture and transform learning, 5) foster movement toward a collective vision, 6) connect the organization to its external environment, and 7) provide strategic leadership for learning. The contents of Watkins and Marsick's 7 dimensions have been described in greater detail in the first research paper (Appendix 1).

The DLOQ was developed to gauge in user-friendly terms the characteristics of a learning organization (Redding 1997). According to Watkins and Marsick (1996), an assessment establishes a benchmark against which an organization can repeatedly track progress, which can stimulate innovation and change. The instrument is intended to gauge the perceptions of employees regarding these seven constructs at a particular point in time i.e. to take the pulse of an organization at a particular moment in time. The pulse can be taken periodically to track progress in implementing initiatives against baseline data.

The DLOQ can be used to examine areas of strength as well as weaknesses and to initiate a process of group analysis and visioning as firms strive to sculpt and mould their own versions of the learning organization (Jamali, Sidani and Zouein 2009).

The DLOQ is a structured questionnaire that fits well with P. Senge's theory of the learning organization and has been internationally tested. An advantage of this questionnaire is the adequate degree of generalization of the dimensions of the learning organization, enabling based on the survey results to phrase some values that serve as a basis of the organization's activity.

The third reason for using this questionnaire is that the authors give the respondents an immediate comparative feedback from the first to 43rd question on their website. So the respondents can see a comparison of their scores to the mean scores for the organization. Responses from different target groups can be compared to Watkins and Marsick's international survey scores average (Watkins and Marsick 1996). International average is the average result of all organizations which have completed the DLOQ (Watkins and Marsick 1996). While doing so it should be considered that these are made on the basis of private sector organizations, but the method is highly credible (Yang et al. 2004). It is important to underline that these international scores used for comparison do not represent an ideal to pursue but an average of a very big sample of very different organizations and enterprises.

The DLOQ has also been revised many times and scientifically validated to be reliable (Marsick and Watkins 2003; Yang 2005). Many researchers of the learning organization have later specifically used Watkins and Marsick's questionnaire in their research (Jamali, Sidani and Zouein 2009; Basim, Sesen and Korkmazurek 2007; Hernandez and Watkins 2003). Jamali, Sidani and Zouein (2009) are adopting the Model of the Learning Organization by Watkins and Marsick (1998) and their DLOQ to gauge progress towards learning organizations in the banking and IT sectors of Lebanon. Akhtar, Arif, Rubi and Naveed (2011) take seven dimensions of organizational learning proposed by Watkins and Marsick and investigate their impact on non-financial dimensions of organizational performance of higher education institutes in Pakistan. Basim, Sesen and Korkmazurek (2007) translated the seven dimensions of DLOQ into Turkish, adapted it to another cultural environment and tested the validity and the reliability of the Turkish version of the questionnaire. The results showed that the Turkish version of the DLOQ was a valid instrument to measure the learning processes in organizations in Turkey. Using Watkins and Marsick's questionnaire, completely new measurement instruments of the learning organization have been devised. For example, Bess, Perkins and Mccown (2011) shortened and adapted the DLOQ into a new 16-item Organizational Learning Capacity Scale (OLCS) geared more towards non-profit organizations. The authors argue that transformational organizational change processes in this context require initial organizational readiness in the form of organizational learning capacity (OLC). Tseng (2011) therefore developed a 21 item version from Watkins and Marsick's Dimensions of the Learning Organization

Questionnaire with the aim to measure the impact of learning organization practices on organizational commitment for small and medium-sized enterprises (SMEs) in Taiwan.

So far the DLOQ by Watkins and Marsick has mainly been used for business organizations and not for universities and BSs. The current study is an attempt to fill this gap and use the DLOQ to evaluate BSs as learning organizations.

1.5. Characteristics of the Learning Organization for the Universities

Since BSs as learning organizations have not been studied before, the author of the thesis researched various literature about universities as learning organizations. BSs possess characteristics of both universities and business organizations.

Universities in Europe have been challenged in many ways in recent decades, since their environment has become more complex and they are forced to compete in an international market as universities are expected to cooperate with one another, i.e. with their competitors (Clark 1987; Dill & Sporn 1995; Enders 2001; Kristensen 1999; Sporn 1999). Going toward the knowledge-based economy it is extremely important that universities and BSs have competencies that enable them to respond more effectively to changes in the environment, so as to survive in the education market also under sharp competition. To be able to cope with the competitive situation, universities need to borrow strategies and models from business life and develop and apply innovative and entrepreneurial approaches in universities (Birnbaum 1988; Clark 1998; Enders 2001; Gumport 2000; Huisman 1998). On the same basis as above, there have been suggestions that universities should become learning organizations (Boyce 2003; Dill 1999; Kristensen 1999; Mulford 2000).

There are different studies about universities as learning organizations, but they are mostly only theoretical discussions; no empirical research has been done so far. There are a number of authors discussing university as a learning organization (Lorange 1997; Willcoxson 2001; Martin 1999; Patterson 1999). Most of them describe either some models or various characteristics of the learning organization at universities: university culture, structure, learning partner model, the role of leaders and teamwork. As mentioned above, empirical research in this sphere is scarce. Only Strandli Portfelt (2006) makes an exception here. In order to learn the organizational culture of a university she used analysis of documents and interviews and based on that conducted a questionnaire.

Willcoxson (2002) examines such university structures and systems as personnel management and knowledge management, organizational culture, the role of managers and team in the development of a learning organization. The status of the learning organization depends on the organization's structure, culture and management. The key of structural changes is in the hands of managers. It is primarily a leader`s responsibility to ensure that the structures

and systems in place maximise the opportunity for organizational learning through encouraging the expression and adoption of diverse ideas, and to ensure that their own actions provide both models and opportunities for contribution and learning (Willcoxson 2001). He also concludes that the university's structure will enable development of the university into a learning organization, but a prerequisite for that is to be open, have more cooperation and teamwork.

Also White and Weathersby (2005) discusses the institutional obstacles to create a learning organization in higher education. The culture of institution of higher education is full of examples of competitive ratings and rankings, acceptances and rejections and authoritarian and hierarchical structures. Where we write, do research, or teach, we generally fly solo in our work (White and Weathersby 2005). According to White and Weathersby, adaption and innovation are difficult for institutions of higher education and they are slow to change. Most universities operate as bureaucracies where social learning is as an ideal rather than actual practice. Faculty consider themselves knowledge creators for their professions but are not usually willing or empowered to learn or create knowledge on behalf of their institutions. A surprising number of values of academic life are antithetical to the values and ethos of a learning organization community (White and Weathersby 2005).

Only Lorange (1997) has studied BSs as learning organizations and proposes that a BS can become a learning organization by allowing for four complementary types of learning: individual discipline-based faculty learning; discipline based teams of faculty learning together; teams of faculty learning around specific academic programmes; full-fledged faculty team learning with the BS`s customer organization (Lorange 1997). The aggregate learning partner model developed by him pictures development of partnership relations between BSs and companies as learning organizations. According to Peter Lorange, organizational learning should be a strategic development component of the BS. He points out that organizational learning can be expected to be a key driver for any leading BS which wants to advance and to respond to the customers.

As have Lorange (1997), Rifkin and Fulop (1997) and Franklin *et al*. (1998) before her, Martin (1999) touches on some of the characteristics and the tension they generate when discussing how universities might deal with issues of shared vision, collaboration and independence and accountability and reward. As mentioned above, many authors use just Senge's concept of learning organization and develop that further. Martin (1999) has also used in his work Senge's disciplines of the learning organization and raises the question of universities' desire to become learning organizations.

Patterson (1999) discusses the idea of learning organization and applies it to universities, suggesting that as they adapt to the changing environment they are becoming learning universities. As organizations, do they apply new knowledge to improve their performance, do they change new ways of operating? Patterson (1999) concludes that the emerging comprehensive universities developed from strategic alliances are organizations that both learn and foster learning.

Strandli Portfelt (2006) raised two research questions. The first concerned the way the organizational structure of a university fulfils theoretical model criteria of the learning organization. The second was to find how the characteristics of an organization interact with one another and whether they support or hinder organizational learning. As knowing the culture and structure of the university are qualities of a learning organization the author raised the question how and in which way to learn to know the culture and structure of the university. In order to learn the organizational culture of the university the author used analysis of documents and interviews. She created an integrated theoretical model of a learning organization and divided university into six subsystems, and to identify university's organizational characteristics both data and factor analysis, and system theory analysis were applied. The main conclusion was that the internal structure of the university does not match with the theoretical model criteria of a learning organization (Strandli Portfelt 2006). Strandli Portfelt concludes that there is a need for increased empirically based research on learning organizations in general and on universities as learning organizations in particular.

Having analysed various models and characteristics of the learning organization at the universities (Lorange 1997; Martin 1999; Patterson 1999; Willcoxson 2001; White and Weathersby 2005; Strandli Portfelt 2006) it may be stated that all authors focus on the organizational structure and culture, as well as management process, and learning is regarded as a part of strategy.

1.6. Model of the Learning Business School and BSLOQ

Many authors (e.g. Baldridge 1983; Birnbaum 1988; Clark 1987) point out that universities differ from other organizations in many ways, e.g. universities are non-profit organizations, their missions tend to be more diffuse and vague; they have to meet demands of a complex mix of stakeholders – internal and external; they rely on traditions, tend to individualism, and have problems of adaptability. As mentioned before there have been various discussions about universities as learning organizations (Lorange 1997; Strandli Portfelt 2006; White and Weathersby 2005; Willcoxson 2001).

But BSs are specific organizations which possess characteristics of both public universities and business organizations. In addition to common characteristics with universities, BSs also have many specific features that could be included among the characteristics which are used for measuring the learning rate of BSs as learning organizations.

BSs need to provide powerful learning environments. Educating and developing people to cope with the unknown will probably build on learning processes that co-focus on academic/scientific methods and practice/applied connections (Sattelberg 2011). Continuous education and learning is obviously a big challenge. But it is also a great opportunity for BSs. Many graduates are eager to keep learning, develop new capabilities and think about a second or a

third professional life. In addition, companies and society need BSs to keep contributing to the development of managers` knowledge and capabilities (Canals 2010). In a BS context, the dialogue between BS and business should be in place. Also the risk of doing irrelevant research in the classroom of BS is smaller when faculty members have to work in the classroom with senior executives. Working with experienced managers stretches the capabilities and expertise of faculty and makes them more aware of real corporate problems (Ibid.).

Neither the dialogue nor teamwork are the strongest in university, since teaching is individual and collaboration with other teachers and disciplines not always necessary. In the development into learning organization, however, cooperation and teamwork are both extremely important. Universities need to find ways to increase cooperation between teachers, both by teaching subjects jointly and by co-writing research papers. Interdisciplinarity should be supported in every way. Globalizing education also implies internationalizing the faculty of BSs for the benefit of the global learning of both faculty and students. Student bodies are also becoming more international and this trend will have to be encouraged through different tools in the future. Some BSs have now made great strides in this regard: the establishment of cross-cultural programme teams, exchange programmes with other BSs around the world, student treks to other countries and internships in locations outside the student`s own region are only some of the initiatives under way (Cornuel 2007).

New challenges for BSs are integration, leadership development, a humanistic view of the firm, life-long learning and organizational structure (Sattelberg 2011). Teaching integrated courses and helping people to think in an integrated way is a transformational experience the BSs should aim at.

Many university/business school staff are used to work in research teams or on committees, but if teamwork is to be used successfully to develop a learning organization, training for effective teamwork should be supported by the conscious development of teamwork strategies in each new teamwork context. Rewards and performance management strategies should also be tied to effective teamwork. Team building activities, focusing on enhancing interpersonal communication, conflict resolution and problem-solving skills should involve people from the highest to the lowest levels of staffing if an institution-wide learning potential is to be created (Willcoxson 2001).

A learning BS is an innovative organization where the focus is on continuously upgrading and improving the teaching and learning processes, on creating and distributing new knowledge (Willcoxson 2001). It would not therefore be a huge step to establish innovative 'microcosm groups' empowered to, for example, 1) establish a mechanism for the sharing of interdisciplinary knowledge leading to the publication of interdisciplinary research; 2) establish a mechanism for the sharing of interdisciplinary knowledge in teaching leading to the development of a full interdisciplinary course; 3) develop and implement links with industry, other education providers, and academic/industry exchange programmes, or 4) develop and implement the prototype of a university

leadership and management system that maximizes staff involvement and the responsible use of autonomy (Ibid.).

Common vision as an objective of organization's activity is important for the development of the organization into a learning organization. Business school leaders are increasingly more aware of the need to involve members of the organization in the process of creating a common vision. All employees can participate in formulating the objectives of the BS and they have a common understanding of the BS mission and vision. Some BSs do not have a clear sense of mission of the role they want to play in society (Canals 2010). It is clear that all of them want to help educate people and develop new knowledge. The question is what balance between those activities BSs want to have. There is no single answer but it is nevertheless important to understand why a BS exists and what it wants to do. Each school has its own view but it is good to make them explicit and connect them with its strategy, faculty development, programme design and research initiatives.

Education organizations need to build internal and external partnerships to better accomplish overall goals (Baldridge 1983). Internal partnerships might include cooperation among senior leaders, faculty, and staff. Partnerships with faculty and staff might entail workforce development, cross-training, or new organizational structures, such as high-performance work teams. Internal partnerships also might involve creating network relationships among your work units to improve flexibility, responsiveness, and knowledge sharing. External partnerships might be with other schools, suppliers, businesses, business associations, and community and social service organizations − all stakeholders and potential contributors. Strategic partnerships or alliances are increasingly important kinds of external partnership (Ibid.).

BSs themselves need to develop a higher capability to scan the environment and be able to act on early signals (Sattelberger 2011). Lorange points out that there is a huge responsibility on both BSs and business to interact with each other. And he agrees that innovation can effectively come only from business and that business schools are always trying to catch up (Lorange 2007). Growing competition and changing markets have forced BSs to re-evaluate their strategies often borrowing techniques from the business world. But can they do it and still remain academic institutions? (DeAlmeida 2010). As BSs came to experience classic business issues, practices that are common to the corporate world began to be incorporated into their daily routines. The practice of looking to the corporate market to recruit BS leaders is becoming prevalent – many institutions are already led by executives or by professors whose careers began at companies (DeAlmeida 2010). In a learning business school important decisions are made with consideration of the opinions of key partners, including representatives of companies and alumni who are also members in decision-making and advisory bodies of the business school.

BSs are influential institutions. As such, their governance matters. Unfortunately, academic institutions in general have a poor track record in this area. There are several levels of governance in BSs to look at. The first is the

relationship between the parent university and the BS, a link that can mostly lead to situations of lack of autonomy, both strategic and financial. The second is the accountability and powers of the dean and senior faculty. There is no single best model here but it is certainly an issue not always well defined in BSs. The third is the role of faculty in designing programmes, shaping research initiatives, promoting their peers to tenured positions and shaping the strategy of the school. Good governance requires a stronger faculty commitment to the long-term development of their schools. Good governance needs to give faculty an appropriate role in BSs, one that neither blocks change nor makes faculty members alienated from the management of the school (Canals 2010). Dealing with organizational development challenges inside the institution, handling the expectations from the external world while allocating scarce resources and enabling the validity of BS activities requires true leadership (Sattelberger 2011). According to Sattelberger, the role of deans in their institutions will become more important and more complex. More diversity is a plus at all levels in BSs: in the board, in management, faculty and staff, and in the student body; diversity also in a geographical, religious and gender sense.

The keys to structural change to increase organizational learning are business school leaders' capacity and willingness to model collaborative action and inquiry, to involve all staff in the initial setting of directions, to promulgate and maintain enthusiasm for a broadly shared vision that nevertheless provides for local variation, and to cede to staff, across all levels of appointment, authority and responsibility for development and implementation of ideas. An effective leader is therefore less necessarily a charismatic visionary than a collaborating designer (of organizational values, policies, strategies and learning), a steward (who leads by explicitly and visibly serving the interests of the organizational and wider community) and a teacher (who helps others discover their assumptions about the world and develop their full potential) (Senge 1996; Tichy and Cohen 1998). Good leadership, while essential at the top, needs also to be seeded throughout the organization. Thus, leadership training and team building activities, focusing on enhancing interpersonal communication, conflict resolution and problem-solving skills (Cummings and Worley 1997) should involve people from the highest to the lowest levels of staffing if an institution-wide learning potential is to be created.

Based on the research on BSs as learning organizations, the author developed the specific BS features which reflect the specificity of BSs as learning organizations, e.g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between business schools and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, development of external partnerships and interaction of both business school and business, BS leaders' capacity and willingness to model collaborative action. For working out the BSs' learning rate measurement instrument the author of this paper combined the theoretical principles used by Watkins and Marsick and

those of the learning organization, as well as the specific features of the BSs and on the basis of these devised a new measurement instrument that takes into consideration the specific features of BSs – Business School Learning Organization Questionnaire (BSLOQ) (Appendices 3 and 4).

2. ORGANIZATIONAL LEARNING RATE OF BUSINESS SCHOOLS AND COMPARISON WITH AVERAGE LEARNING RATE OF BUSINESS ORGANIZATIONS AND ESTONIAN UNIVERSITIES

The first aspect of the thesis is devoted to the organizational learning rate of business schools in Estonia. The research questions of the first two research papers were to study the concepts and criteria of BSs as learning organizations in Estonia, to find out if the BS is a learning organization and to compare the BS learning rate to the international average learning rate of business organizations by Watkins and Marsick (1996). A DLOQ (by Watkins and Marsick) was carried out at the Tallinn School of Economics and Business Administration (TSEBA), Estonian Business School (EBS) and the Faculties of Civil Engineering and Mechanical Engineering at Tallinn University of Technology (BFMF) in order to evaluate TSEBA, EBS and BFMF as the learning organizations based on the opinions expressed by the managerial, teaching, research, and administrative staff. The aim was also to identify whether and to what extent the competition or lack of competition in the market affects the organization`s learning capacity.

2.1. Organizational Learning Rate of Business Schools in Estonia

In order to look for better possibilities to survive under the growing competition in education market it is relevant to find out if being a learning organization helps to increase the competitive advantage of the university. The overall background for all universities/business schools will deteriorate in the short term: the number of secondary school leavers will decrease several fold and the number of those who come to universities will be decreasing, which in turn signifies a sharpening of competition between universities, endeavours to increase provision of continuing education and the number of foreign students. Several authors have suggested that in the increasingly sharpening international competition universities should also be learning organizations (Dill 1999; Kristensen 1999; Mulford 2000). The characteristics of the learning organization have been examined from various aspects and a number of approaches to defining the learning organization have emerged (Senge 1990; Pedler, Boydell, and Burgoyne 1991; Garvin 1993; Watkins and Marsick 1993). Having analysed various definitions of the learning organization (Moilanen 2001; Pedler et al. 1991; Senge 1990; Watkins and Marsick 1993, Garvin 1993, Nonaka 1991; Örtenblad 2002) it may be stated that all authors identify similar aspects of the learning organization: continuously learning individuals; learning expressed in transformation being a natural part of the organization; learning is a strategic and knowledgeably conducted process; organization has structures and systems that promote learning and knowledge sharing; organization has a learning capacity;

knowledge as a competitive advantage. Studies of universities as learning organizations also focus on the organizational structure and culture, as well as management process, and learning is regarded as a part of strategy.

The first research paper seeks to analyse the organizational learning rate of BSs at the example of one private school (EBS) and one business school of a public university (TSEBA) in Estonia and also to compare it to the international average learning rate of business organizations developed by Watkins and Marsick (1996).

Considering the great interest in higher economic and business education we are facing the situation in Estonia where demand for these specialties exceeds vastly the respective number of student places filled on the basis of state-commissioned education and most of the people interested in obtaining higher business education have to pay themselves for the studies. This has led to a situation where TSEBA as a BS at public university should compete in the higher education market with private universities which provide higher economic and business education only on fee-charging basis, such as EBS, while other, engineering faculties at TUT teach students almost only on the basis of state-commissioned education principle for fixed pay.

Competing in the higher economic and business education market with private schools which offer similar services different demands will be put on TSEBA as a school of public university compared to other schools that are financed mainly on the basis of state-commissioned education regarding the organizational development and learning capacity. Otherwise successful competition with the private sector would not be possible.

In order to identify which of the two – EBS as a private or TSEBA as a school of public university – satisfies better the criteria of the learning organization, they were compared based on the theory of the learning organization.

To find the values for TSEBA and EBS as learning organizations a DLOQ (developed by Watkins and Marsick) survey was carried out among the managerial staff, faculty and administrative personnel of TSEBA and EBS. The DLOQ asked employees' opinions about learning at the organization on three levels: individual level, team level and organizational level. The questionnaire consists of 43 single questions which are divided into seven dimensions. The employees were asked to respond in a six-point scale where one signified "almost never" and six "almost always". The comparison of the responses given by different target groups shows how similarly or differently university employees, teaching, research and managerial staff perceive the learning and development at the university. Responses from different target groups are compared to Watkins and Marsick's international survey scores (Watkins and Marsick 1996). International average is the average result of all organizations which have completed the DLOQ (Ibid.). The author used in this research Watkins and Marsick's DLOQ also to position the BSs' learning rates in relation to other organizations. Many researchers of learning organizations have used later in their research just Watkins and Marsick's questionnaire (Jamali,

Sidani and Zouein 2009; Basim, Sesen and Korkmazurek 2007; Hernandez and Watkins 2003; Akhtar, Arif, Rubi and Naveed 2011).

The most important result of the survey is that according to the aggregate opinion of all employees of the two universities, EBS is slightly better in the sum of all dimensions (3.89 against TSEBA's 3.81). The lowest score across the seven dimensions in both schools was in the 4th dimension, "create systems to capture and transform learning", which also confirms White's and Örtenblad's view that university is a structurally rigid and inflexible organization, which is the biggest obstacle to its development into a learning organization (White and Weathersby 2005; Örtenblad 2010). The low scored 5th dimension „foster movement towards a collective vision" by TSEBA shows that members of the school of public university often lack a common understanding of the university objectives and mission, which confirms the conclusion by Senge (1990) and Starkey (1996). The fact that TSEBA received 3.74 in the sixth dimension (connect the organization to its external environment) confirms Clark`s conclusion that in general universities have difficulties to integrate internal processes and therefore also find it difficult to adapt to the environment (Clark 1987).

The results of the survey indicated that the learning rates for TSEBA and EBS were superior to the international average of business organizations (Watkins and Marsick 1996) in all dimensions of the learning organization and in all groups of employees, which allows concluding that university, irrespective of its ownership form, is rather a learning organization. The research results also confirm the opinion of Lorange, Willcoxon, Patterson and Martin (Lorange 1997; Willcoxon 2001; Patterson 1999; Martin 1999) that university is a learning organization.

2.2. Universities' Organizational Learning Rate Dependence on the Participation in the Higher Education Market

There are several different financial schemes for obtaining higher education in Estonia. In the case of state-commissioned education the state pays to the university for teaching the specialists and studying is free for the students. For example, many technical and engineering specialities are covered either solely or nearly solely by state-commissioned education. The share of student places filled on the basis of state-commissioned education at TSEBA as a faculty of public university is only approximately 10% of the total amount of students; 90% of the students pay themselves for their studies. Private schools like EBS, as a rule, are not providing state-commissioned education and all students need to pay themselves for the studies. In engineering faculties (BFMF) the share of state commissioned students is approximately 70%.

The aim of the second research paper was to find out whether and to what extent the participation rate in the education market, expressed in the ratio of students taught on the basis of state-commissioned education to students who

pay themselves for the studies, affects the learning rate of a higher education organization. Watkins and Marsick's learning organization questionnaire was used for the measuring. The research paper hypothesises that the need to compete for students in the higher education market has a positive impact on the learning rate of a university as learning organization. As far as the author knows, the relationship between the market participation rate and the learning rate for universities has not been investigated before.

In order to identify whether and to what extent competition or lack of competition in the market affects the organizations' learning capacity the author compared four higher education institutions using Watkins and Marsick's organization development principles as the theoretical basis of the empirical study. To solve the research task the author interviewed employees of four higher education institutions. The institutions were selected so as the market participation rates were different. The market participation rate in the private university, Estonian Business School (EBS) is 100%, in Tallinn School of Economics and Business Administration at Tallinn University of Technology (TSEBA) 90%, in the Faculty of Civil Engineering at Tallinn University of Technology (BF) 30%, and in the Faculty of Mechanical Engineering at Tallinn University of Technology (MF) 30%. Different faculties of the same university (TUT) were used in the research in order for other conditions of these institutions aside from the market participation rate to be as similar as possible. Considering the similar market participation rates BF and MF were analysed together, hereinafter BFMF.

In order to measure the learning rate of TSEBA, EBS and BFMF, the author used Watkins and Marsick's dimensions of the learning organization questionnaire (DLOQ). The sample for interviewing employees was formed on the basis of random sampling for all three staff groups (managerial staff, teaching-research staff, administrative staff) and for all institutions separately.

The one-way analysis of variances (ANOVA), multivariate analysis of variances (MANOVA) and several follow-up tests such as Fisher LSD test were used to test the existence of statistically significant differences between the institutions and between staff groups. The appropriate condition for using such methods of analysis was controlled with Levene's test. The analysis was carried out on the significance level of 0.05.

The research results show that the participation rate in the market has a sizable impact on the organization's learning rate. In the sum of all seven dimensions and all staff groups, we can claim that the rate of participation in the market of a higher education institution and the organizational learning rate of the same institution are positively correlated. The highest learning rate on the basis of Watkins and Marsick's questionnaire, 3.89, was in EBS where 100% of the students pay themselves for the studies. The next comes TSEBA with the score of 3.81 points, where 90% of the students pay themselves for the studies. With the least points according to Watkins and Marsick's questionnaire, 3.46, are the BF and MF of TUT where 30% of the students pay themselves for the

studies and 70% of the student places are filled on the basis of state-commissioned education.

This analysis allows drawing a conclusion that the organization's estimated learning rate does not depend directly on the organization's ownership since the private school, EBS, and the public university faculty TSEBA are much more similar by the learning rate than TSEBA and BFMF which are affiliated with the same public university. However, the learning rate of a school as learning organization is highly dependent on the share of students who pay themselves for the studies from the total number of students taught at the school. The higher the share of students who pay themselves for the studies, the more the school which is teaching them needs (has had) to compete in the market with other schools in the same sphere for recruits. This in turn, according to the opinion of teachers-researchers and administrative personnel, has a positive effect on increasing the organization's conformity to the criteria of the learning organization. According to the results, the higher schools which rival with other schools for students in the higher education market are more learning organizations than the higher education institutions providing mainly state-commissioned education (fixed funding for fixed work).

In conclusion it may be said that Watkins and Marsick's measurement instrument, DLOQ, which was used in the first and second research paper, was suitable for comparing the learning rate of universities/business schools to that of other business organizations, as well as the departments of other higher schools which have a different market participation rate; however, it is not specific enough for studying the organizational learning at BSs and comparing the BSs' learning rates. The literature review and also everyday practical management revealed that BSs have many specific characteristics which Watkins and Marsick's questionnaire does not measure.

3. DEVELOPMENT OF THE NEW BUSINESS SCHOOL LEARNING RATE MEASUREMENT INSTRUMENT

The second aspect of the thesis focuses on how to measure the organizational learning of business schools as specific organizations and development of the new special BS learning rate measurement instrument (BSLOQ).

Many authors (e.g. Baldridge 1983; Birnbaum 1988; Clark 1987) argue that universities differ from other organizations in many ways, e.g. universities are non-profit organizations, their missions tend to be more diffuse and vague; they have to meet demands of a complex mix of stakeholders – internal and external; they rely on traditions, tend to individualism, and have problems of adaptability. BSs are specific organizations which possess characteristics of both public universities and business organizations. In addition to common characteristics with universities, BSs also have many specific features that could be used for measuring the learning rate of BSs as learning organizations: they need to make profit to the stakeholders and they have to compete in the market; they also need to develop a higher capability to scan the environment and be able to act on early signals (Sattelberger 2011).

Lorange points out that there is a huge responsibility on both BSs and business to interact with each other. And he agrees that innovation can, effectively, only come from business and that business schools are always trying to catch up (Lorange 2007). Growing competition and changing markets have forced BSs to re-evaluate their strategies, often borrowing techniques from the business world (DeAlmeida 2010). As BSs came to experience classic business issues, practices that are common to the corporate world began to be incorporated into their daily routines. The practice of looking to the corporate market to recruit BS leaders is becoming prevalent – many institutions are already led by executives or by professors whose careers began at companies (Ibid.). In a learning BS, important decisions are made with consideration of the opinions of key partners, including representatives of companies and alumni who are also members in decision-making and advisory bodies of the BS.

Unfortunately BSs have not been much studied as learning organizations.

The research questions of the third and fourth paper relate to whether the Watkins and Marsick's questionnaire is adequate for assessing BSs as learning organizations and for objectively and comprehensively measuring their learning rate. So far the Watkins and Marsick's DLOQ has been developed primarily for measuring the learning rate of business organizations, and it does not take into consideration the specific features of a BS and therefore may not describe BSs as learning organizations adequately enough. The author of the thesis has therefore, based on the specific features of the learning organization for BSs described in the theory part, formulated important features of BSs as learning organizations that reflect the specificity of the BSs. On the basis of these, the author has drafted a new questionnaire (BSLOQ) that takes into account the specific

features of BSs. The BSLOQ is based on the dimensions, structure and volume of Watkins and Marsick's questionnaire, and is using the characteristics in Watkins and Marsick's questionnaire that reflect the most the specificity of the BSs.

The author went through studies that discuss universities and BSs as learning organizations, taking specifically into consideration the mission, structure of management and organization of the BSs, and worked out new characteristics that would take into account the specific character of BSs. All the seven dimensions of Watkins and Marsick's DLOQ were analysed separately and discussed regarding their importance in the BS context and the new BS specific characteristics were created based on that.

The first dimension "*Provide continuous learning opportunities"* identifies that a learning organization values various learning opportunities that support continuous learning by individuals and groups. Learning by an individual is a precondition of the organizational learning (Argyris and Schön 1996; Pedler, Boydell and Burgoyne 1991; Senge 1990; Watkins and Marsick 1993). It is extremely important that the BS offers its employees diverse learning opportunities: participation in training courses, conferences, visiting BSs abroad, continuing education, life-long learning and that university employees are systematically trained and developed, and that opportunities are created for the employees' professional development and career. In order to create a learning organization it is important that BSs provide powerful learning environments and learning processes that co-focus on academic/scientific methods and practice/applied connections and continuing education and learning (Sattelberger 2011).

In order to *foster inquiry and dialogue* it is important to improve the skills of having a dialogue, debating, active listening, giving feedback and chairing teams and meetings, to use decision-making methods that take into consideration everybody's opinion (Watkins and Marsick 1996). In the second dimension cooperation and teamwork are both extremely important in the development into learning organization. In a BS context, the dialogue between BS and business should be in place and working with experienced managers stretches the capabilities and expertise of faculty and makes them more aware of real corporate problems (Canals 2010).

Promote collaboration and team learning as the third dimension is another key part of an intelligent organization. The learning organization values collaboration and team learning and should to a greater extent reward and encourage joint contributions as a team and group, and take more into consideration the teams' recommendations (Watkins and Marsick 1993). If teamwork is to be used successfully to develop learning organization, training for effective teamwork should be supported by the conscious development of teamwork strategies in each new teamwork context. Teaching integrated courses and helping people think in an integrated way is a transformational experience BSs should aim at.

In the fourth dimension *"Create systems to capture and transform learning"* many opportunities should be created for bilateral communication and disseminating of information, using knowledge management instruments and endeavouring towards the establishment of knowledge networks; systematically gather information that is important for the organization (Ibid.). "It is very important for a learning BS to be an innovative organization where focus is on continuously upgrading and improving teaching and learning processes, on creating and distributing new knowledge. It would be important for a learning educational organization to, 1) establish a mechanism for the sharing of interdisciplinary knowledge leading to the publication of interdisciplinary research; 2) establish a mechanism for the sharing of interdisciplinary knowledge in teaching leading to the development of a full interdisciplinary course; 3) develop and implement links with industry, other education providers, and academic/industry exchange programmes, or 4) develop and implement the prototype of a university leadership and management system that maximises staff involvement and the responsible use of autonomy" (Willcoxson 2001).

People should be encouraged to take responsibility for the goals and decisions concerning their work, to stimulate people design their work based on the organization's goals in a way that would be satisfactory for them, to contribute to building and implementing a vision and strategy decentrally (Watkins and Marsick 1993). In the fifth dimension "*Foster movement toward a collective vision"* it is important that all employees can participate in formulating the objectives of the BS and they have a common understanding of BS's mission and vision. Common vision as an objective of an organization's activity is important for the development of an organization into a learning organization. BS leaders are increasingly more aware of the need to involve members of the organization in the process of creating a common vision. A learning BS is constantly analysing, evaluating and giving meaning to its activity, objectives and mission.

An organization needs to encourage people more to search for answers all over the organization and encourage global thinking based on local community and clients' needs (Ibid.). In the sixth dimension "*Connect the organization to its external environment"* it is important for education organizations to build internal and external partnerships to better accomplish overall goals. External partnerships might be with other schools, suppliers, businesses, business associations, and community and social service organizations − all stakeholders and potential contributors. Strategic partnerships or alliances are increasingly important kinds of external partnership (Baldridge 1983). In a learning BS important decisions are made by taking into consideration the key partners' opinions, including representatives of companies and alumni who are also members in decision-making and advisory bodies of the BS.

The seventh dimension "*Provide strategic leadership for learning"* shows the extent to which leaders think strategically about how to use learning to create change and to move the organization in new directions or new markets (Yang, Watkins and Marsick 2004). The keys to make changes in the structure

that is designed to increase the organizational learning are BS leaders' capacity and willingness to model collaborative action and inquiry, to involve all staff in the initial setting of directions, to promulgate and maintain enthusiasm for a broadly shared vision that nevertheless provides for local variation, and to cede to staff, across all levels of appointment, authority and responsibility for development and implementation of ideas (Sattelberger 2011).

Based on those important aspects and characteristics of a learning BS, the author gives 19 new specific characteristics for measuring BS learning rate. New characteristics enable for measuring the learning rate to take into account the specific characteristics of BSs as learning organizations, such as creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between BS and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, creation of external partnerships and interaction on both business school and business, BS leaders' capacity and willingness to model collaborative action.

To devise the specific measures for BSs the author has, using empirical data, modified the questionnaire developed by Watkins and Marsick, and included characteristics and components that take into account the peculiarities of a BS. As a result a new special BS learning rate measurement instrument, BSLOQ, was developed.

The questionnaire for business schools (BSLOQ) was composed based on the composition, structure and length of Watkins and Marsick's DLOQ. Approximately 50% of the DLOQ characteristics which are the most adequate for BSs were not been changed, the rest ones were replaced by the characteristics which reflect the peculiarities of BSs. The DLOQ characteristics which have been preserved unchanged in the questionnaire were selected on the basis of an empirical study where the employees of TSEBA had evaluated the relevance of the DLOQ characteristics for measuring the organizational learning rate of a BS as learning organization.

In order to evaluate the relevance of the DLOQ characteristics for measuring the organizational learning rate of a BS as learning organization the author asked the employees of TSEBA to assess the importance of all learning organization characteristics in Watkins and Marsick's questionnaire for a BS as organization. The employees of TSEBA were asked to assess the characteristics in a six point scale (1 − utterly unimportant, 6 − extremely important). The respondents represented all levels of the organization − managerial, administrative and teaching staff.

In general, the responses allow concluding that the suitability of the characteristics for assessing the BS as a learning organization scored points between 5.63 („In my organization, people treat each other with respect") and 4.43 („My organization measures the results of the time and resources spent on training").

The highest score, 5.04 points from 6, was given to the individual level, followed with almost equal scores by the team or group level (4.84) and organizational level (4.83).

The highest scoring dimension was „*Foster inquiry and dialogue"* at the individual level with 5.13 points, followed by the organizational level dimension „*Provide strategic leadership for learning"* with 5.12 points and again the individual level dimension *"Provide continuous learning opportunities"* with 4.95 points. The least points, 4.70 and 4.71 respectively, were given to the organizational level dimensions „*Create systems to capture and transform learning"* and *"Connect the organization to its external environment"*.

The higher score of the individual level can be explained by two facts. First, the individual level characteristics are more universal and less organization specific than the organizational level characteristics, and therefore also appropriate for characterizing the BS learning. Secondly, considering the higher than average educational level and nature of work of the BS staff, their ego is statistically hypertrophic compared to an average organization's average employee, which is expressed in attaching importance to everything that emphasizes the individuality. At the same time, the survey results show that at this level there were also characteristics the importance of which was assessed relatively low. For example, "In my organization, people are rewarded for learning" received 4.47 points and the characteristics "In my organization, people identify skills they need for future work tasks" and "In my organization, people spend time building trust with each other" received 4.80 points, which are much lower than the level average (5.04).

Lower scores than the average of the organizational level dimensions (with the exception of "*Provide strategic leadership for learning",* 5.12) show clearly that this level characteristics do not sufficiently take into account the specificity of BSs as a learning organization and these need to be partly replaced by those that characterise BS as a learning organization better.

Considering that Watkins and Marsick's questionnaire has been used for a long time to measure learning organizations, and it has quite justified itself, the author finds it expedient to maintain the division of the overall structure of the questionnaire into levels, dimensions and characteristics, and include some specific and important dimensions for BSs. Considering the need to add characteristics it would be neither appropriate nor expedient to make the questionnaire longer by retaining all the characteristics contained in Watkins and Marsick's questionnaire and mechanically adding specific characteristics of BSs.

The author replaced characteristics on the basis of the survey results conducted at TSEBA, at the same time not significantly changing the structure and hierarchic setup of Watkins and Marsick's questionnaire, since the objective was not to develop a completely new questionnaire but to adjust Watkins and Marsick's questionnaire to make it more suitable for measuring BSs as learning organizations. A criterion for the replacement was the median score of characteristics − 4.91. The characteristics which received this amount or more points were not replaced and their formulation was not changed significantly.

The subsequent criterion was that not more than 50% of the questions were replaced in any of the dimensions of Watkins and Marsick's questionnaire.

Those characteristics which received a higher score (compared to average) as important characteristics for the BS were not replaced, but those characteristics which received a lower score as not so important for the BS were replaced with the new BS specific characteristics developed by the author.

As a result, the new special BS learning rate measurement instrument – BSLOQ – was developed. The BSLOQ consists of three levels, which in turn are divided into 7 dimensions and 45 characteristics addressing all learning aspects of BS as organization.

4. THE ORGANIZATIONAL LEARNING RATE OF BUSINESS SCHOOLS WORLDWIDE MEASURED BY THE NEW INSTRUMENT

4.1. Worldwide Business School Learning Rate

Globalization presents new challenges to BSs: all of them are rivals in the global market. In order to look for better possibilities to survive in the growing competition a BS needs to be a learning organization, which would help to increase its competitive advantage. According to Lorange (1997), organizational learning, in fact, can be expected to be a key driver for any leading BS which wants to advance and to respond to the challenges of its customers. The financial crisis and the eroding of corporate reputations have given rise to strong criticism of BSs and their role in those events. For these reasons, BSs have to change if they want to keep having positive impact on people, firms and societies (Canals 2010). They have realized that in the future the business education market will become increasingly competitive. More providers, new methods, creative strategies, global opportunities will provide a varied choice to students across the world (Cornuel 2007). The BSs need to adopt strategies that allow them to distinguish themselves from their competitors and prove the value. The implementation of organizational changes in BSs requires from the BS members obtaining of new skills, changing of attitudes and manners. All this happens in the process of organizational learning. BSs, as well as people, should learn to be able to change as fast as the surrounding environment requires. The BSs as learning organizations and their measurement possibilities have been studied insufficiently so far.

The fifth research paper examines the organizational learning rate of BSs worldwide using the new special BS learning rate measurement instrument, BSLOQ, for that, and dependence on various characteristics of the BSs. The paper analyses the dependence of the general learning rate of BSs, as well as the dependence of its individual components (levels and dimensions) on the geographical-cultural region of the school location, ownership form and the international accreditations the school has. With the new BS learning rate measurement instrument (BSLOQ) the author measured the learning rate of 105 BSs in 44 countries worldwide.

Going through the theory of universities and BSs as learning organizations, the author identified the following important aspects and bottlenecks in the dimensions of the learning organization questionnaire developed by Watkins and Marsick (DLOQ): 1) Teamwork and collaboration in general is poor in universities (Willcoxson 2001) (3rd dimension – Collaboration and teamwork); 2) The university structure is too rigid, which is an obstacle for a university to grow into a learning organization; hard work should be done to change this rigidity (White and Weathersby 2005) (4th dimension – Create systems to capture and transform learning); 3) Not all employees have a common

understanding of the university's mission and work objectives; this needs to be improved (Senge 1990; Starkey 1996; Canals 2010) (5th dimension – Foster movement toward a collective vision); 4) It is extremely important for a university to feel itself as part of the community (Baldridge 1983; Lorange 2007, Sattelberger 2011) (6th dimension – Connect the organization to its external environment); 5) Just leaders and leadership are where the learning organization starts from; leaders of the university should set an example and support the process of the learning organization (White and Weathersby 2005; Drugovich et al. 2004; Sattelberger 2011) (7th dimension – Provide strategic leadership for learning). While conducting the BSs worldwide research it was interesting to verify whether the bottlenecks identified in the theory could be found also in practice.

The international BS survey results indicated that the organizational learning ability of BSs worldwide was 4.62, while the average rates of individual characteristics varied very little – from 3.99 to 5.09. The 7th dimension "Provide strategic leadership for learning" received the highest score (4.82) among the BSs worldwide. The high score in this dimension confirms also the aforementioned authors' (Baldridge 1983; Moilanen 2001; Willcoxcon 2002; White and Weathersby 2005; Drugovich et al. 2004; Sattelberger 2011) standpoint that most important for the development of a learning organization is the role of leadership and leaders. As Willcoxon points out it is primarily a leader`s responsibility to ensure that the structures and systems in place maximise the opportunity for organizational learning. The scores in BSs are high also in the 5th dimension "Foster movement toward a collective vision" (4.76) and in the 2nd dimension "Foster inquiry and dialogue" (4.70). The score of the 5th dimension „Foster movement toward a collective vision," 4.76, was high in BSs in comparison to many authors' (Senge 1990; Starkey 1996; Canals 2010) predictions, who believed that universities have problems with this.

Definitely more learning opportunities should be created in BSs (1st dimension) and the relationships with the external environment and corporate world need to be improved (6th dimension). But the biggest improvement is required in the 4th dimension, "Create systems to capture and transform learning" and in the 3rd dimension, "Promote collaboration and team learning". The 4th dimension, "Create systems to capture and transform learning" was scored the lowest by BSs worldwide. Many researchers, e.g. Sydänmaanlakka (2002) and Garvin (1993) define one of the most important features of the learning organization, the ability to transfer knowledge quickly and efficiently throughout the organization and share the knowledge with all its members. But BSs received the lowest score here (3.33), which could be explained by the fact that sharing knowledge is the most difficult task in the BS, mostly because of the individual and autonomous character of academic work (White and Weathersby 2005). Radical individualism is supported by academics' strong identification with their disciplines. In order to improve this situation in the BSs, processes should be established for identifying and communicating best practices. Also many opportunities should be created for bilateral communication and

disseminating of information, using knowledge management instruments and endeavouring towards the establishment of knowledge networks; systematically gather information that is important for the organization (Watkins and Marsick 1996).

The score for the 3rd dimension coincides with many authors' statement (Willcoxon 2001) that teamwork is problematic at universities and BSs. At the same time, teamwork is one of the prerequisites for development of the university into a learning organization expressed by openness, cooperation and teamwork (Willcoxson 2001). In order to improve the teamwork in BSs, they should focus simultaneously on the group tasks and team work quality, teach teams to model their thinking collectively based on the most suitable objectives of the organization; appreciate team and group contributions and reckon with their opinion (Watkins and Marsick 1996).

4.2. Learning Rate Dependence on Geographical-cultural Region of the School, Ownership and International Accreditations

The principal objective of the research, in addition to measuring the BS learning rates worldwide, was to identify the factors that influence the learning rate. The first hypothesis was to find out whether the learning rate of BSs depends on the geographical-cultural region of the school location.

To determine the learning rate's dependence on geographical-cultural location, the BSs were distributed into regions according to Eduniversal (Eduniversal 2010) classification. The average learning rate was found to be the highest (4.9) in East-European BSs, followed by Far East Asia, Latin and North America, equally with 4.7 points, with Western Europe (4.6) slightly lagging behind. The lowest learning rate level was in Central Asia (4.0). East-European BSs have the highest average learning rate also at all levels (individual 4.9, team or group 4.8 and organizational 4.9) and in dimensions 2, 3, 4 and 6. Only in dimensions 1 and 7, the highest average learning rate is in Latin America and in dimension 5 – in North America.

The higher average learning rate of East-European BSs is somewhat surprising, but Eastern Europe has experienced a transition from one political-economic formation to the other over the past couple of decades, i.e. socialism was replaced by capitalism. This has involved very big changes also in the higher education organization in Eastern Europe. Due to the fast changes in all society also BSs have had to learn and change fast, which explains their higher organizational learning rate compared to other regions. In regions with more stable development, such as, for example, Western Europe, BS have had no need for so fast and radical changes, which, as the research demonstrated, has exerted impact also on their organizational learning rate. The biggest difference in the learning rate level in comparison with West-European and North-American BSs is in the Team or Group level (0.4 and 0.5 respectively), which consists of one dimension: „Promote collaboration and team learning". Obviously just this

dimension is extremely important for an organization in a very rapidly changing environment. The hypothesis is confirmed also by the fact that this dimension has higher average than in Western European and North American BSs also in Far East Asia and Latin America, which are also rapidly advancing regions. North America has the leading position in dimension 5, "Foster movement towards a collective vision", which got the highest average rating among the dimensions – 5.2. Obviously it is this organizational learning component that satisfies the needs of the North-American environment. Latin America received higher average than others (4.9) in dimension 1, „Provide continuous learning opportunities" and in dimension 7, „Provide strategic leadership for learning". However, the small number of schools in the survey would not allow drawing any significant conclusions about Latin America. The same is true about BSs in Oceania and Central Asia where the learning rates are somewhat lower than in other regions.

The second hypothesis is that privately owned enterprises are more effective in terms of economic performance than state-owned and publicly owned enterprises. This hypothesis was tested on the BSs learning rate, where the state-owned and private BSs were addressed together. To find out the connections the author built a regression equation where in addition to ownership form they included such an important indicator for BSs as whether they have or not any international accreditations.

The results demonstrate that the learning rate dependence on ownership form is statistically significant (prob.0.0787). The average learning rate of privately owned BSs as organizations (4.8) is higher than that of state-owned and public BSs (4.5). Private schools have a higher arithmetic mean of the learning rate also in all dimensions and levels. The level that depends the most on ownership form is the first (individual) with the average rates 4.9 and 4.5, respectively (prob.0.0208). Dependence of both of the individual level dimensions (1st „Provide continuous learning opportunities", prob.0.0122 and 2nd „Foster inquiry and dialogue", prob. 0.0626) on ownership form is also noteworthy. The significance of the team or group level dependence is smaller (prob.0.0927). The difference in the organizational level is statistically insignificant (prob.0.1541).

The better learning ability of privately owned BSs may have several reasons: the author believes the most important are the greater dependence of private schools on external environment and the small or non-existent state financing, inducing privately owned BSs to react to changes in the environment faster and more flexibly, which in turn has positive impact on the learning rate. Private schools often are also profit earning organizations with owners interested in higher learning ability for the sake of profit and therefore invest in this.

Statistically significant correlation was not found between the international accreditations and the learning rate (prob.0.1371). Although the BSs which have an accreditation have a higher arithmetic mean of the learning rate at all levels and dimensions, the regression results show that the impact of accreditations on the whole is statistically insignificant (prob.0.1371). However, there is a correlation between the possession of accreditations and the individual level of

learning, and both dimensions of that level are also in correlation. The results allow drawing a conclusion that the organizational learning rate at the individual level is important for getting and keeping accreditations. It is difficult to draw conclusions about the correlation looseness between the learning rate and possession of accreditations. A possible explanation is that a BS applying for an accreditation is more motivated to be learning than a BS which already has got the accreditation.

Information on the BS learning rate would help, in the opinion of the author, to analyse and improve BSs as learning organizations and as a result increase their global competitiveness. Hence the BSs themselves should be interested in investigating their organizational learning and where necessary, also perfect the measuring instrument.

5. CONCLUSIONS

The thesis is based on five independent research papers connected by a common theme, which is **the organizational learning of business schools**. The research papers focus on **three aspects** of organizational learning. The first aspect relates to the **organizational learning rate of BSs and its comparison** with the average learning rate of business organizations, with a special focus on **Estonian universities using Watkins and Marsick's measurement instrument.** The second aspect is devoted **to how to measure the organizational learning rate of BSs as specific organizations** and **development of the new special BS learning rate measurement instrument (BSLOQ).** The third aspect is related with **measuring of the learning rate of BSs worldwide** and its **dependence on various characteristics of the BSs** using the new special BSs learning rate measurement instrument elaborated by the author (BSLOQ).

The first step was to study BSs as learning organizations at the example of Estonian BSs, initially based on the most frequently used Watkins and Marsick's questionnaire.

The survey results described in the first research paper suggest that the learning rates for TSEBA and EBS were superior to the international average of business organizations (Watkins and Marsick 1996) in all dimensions of the learning organization and in all groups of employees, which allows concluding that university is rather a learning organization. The survey also indicates that according to the aggregate opinion of all employees of the two universities, EBS is slightly better in the sum of all dimensions.

The research results in the second research paper show that the market participation rate has a sizable impact on the organization's learning rate. In the sum of all seven dimensions and all staff groups, we can claim that the rate of participation in the market of a higher education institution and the organizational learning rate of the same institution are positively correlated. This analysis allows drawing a conclusion that the organization's estimated learning rate does not depend directly on the organization's ownership, since the private school EBS and public university affiliated TSEBA are much more similar by the learning rate than TSEBA and BFMF, which are affiliated with the same public university.

In the third and fourth paper, in order to ascertain whether the Watkins and Marsick's questionnaire is adequate for assessing BSs as learning organizations and for objectively and comprehensively measuring their learning rates, the author asked the employees of TSEBA to assess the importance of all learning organization characteristics in Watkins and Marsick's questionnaire for a BS as an organization. The survey conducted by the author indicated that the importance of characteristics in Watkins and Marsick's questionnaire at the relatively high average importance for characterizing the university as a learning organization varies considerably.

Higher scores of the individual level can be explained by that the individual level characteristics are more universal and less organization specific than the

organizational level characteristics, and therefore also appropriate for characterizing the BS learning. Lower scores than the average of the organizational level dimensions show clearly that this level characteristics do not sufficiently take into account the specificity of the BS as a learning organization and need to be partly replaced by those that characterize the BS as an organization better.

To devise specific measures for BSs the author has, using empirical data, modified the questionnaire developed by Watkins and Marsick, and included characteristics and components that reflect the specificity of BS. The author finds it expedient to maintain the division of the new questionnaire into levels, dimensions and characteristics based on DLOQ by Watkins and Marsick, and include some specific and important dimensions for the BS. The author formulates 19 new specific characteristics for measuring BSs´ learning rate which enable to take into account the specific characteristics of BSs as organizations, such as creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between the BS and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, creation of external partnerships and interaction of both BS and business, BS leaders' capacity and willingness to model collaborative action. As a result, the author created an instrument which consists of three levels, which in turn are divided into 7 dimensions and 45 characteristics addressing all learning aspects of BS as organization.

The new questionnaire was tested on various BSs worldwide. With the new BS learning rate measurement instrument the author measured the learning rate of 105 BSs in 44 countries worldwide. The 7th dimension, “Provide strategic leadership for learning” received the highest score among the BSs worldwide. The scores for BSs are high also in the 5th dimension, “Foster movement toward a collective vision” and in the 2nd dimension, “Foster inquiry and dialogue”. Definitely more learning opportunities should be created in BSs (1st dimension) and relationships with the external environment and corporate world need to be improved (6th dimension). But the biggest improvement is required in the 4th dimension, “Create systems to capture and transform learning” and in the 3rd dimension, “Promote collaboration and team learning”.

In addition to measuring the learning rates of BSs worldwide the author identified the factors that influence the learning rate. The learning rate of BSs was found to depend on the geographical-cultural region of the school location. The average learning rate was the highest in East-European BSs, followed by Far East Asia, Latin and North America, with Western Europe slightly lagging behind. The lowest learning rate level is in Central Asia.

Due to the fast changes in all society also BSs in Eastern Europe have had to learn and change fast, which explains their higher organizational learning rate compared to other regions. The biggest difference in the learning rate level in comparison with West-European and North American BSs is in the Team or

Group level, which consists of one dimension: „Promote collaboration and team learning“. Obviously just this dimension is extremely important for an organization in a very rapidly changing environment.

The research results demonstrate also that the learning rate dependence on ownership form is statistically significant. The average learning rate of privately owned BSs as learning organizations is higher than that of state-owned and public BSs. Private schools have a higher arithmetic mean of the learning rate also in all dimensions and levels. The author believes that privately owned BSs are more learning because they depend more on external environment and they have small or non-existent state financing and they react to changes in the environment faster and more flexibly, which in turn has a positive impact on the learning ability. Statistically significant correlation was not found between international accreditations and the learning rate.

The author of the current thesis has contributed to the theoretical, methodological as well as practical aspects as follows:

Theoretical and Methodological Contribution of the Thesis

The theoretical and methodological contribution of the thesis is development of a special learning rate measurement instrument for the BSs (BSLOQ) based on theoretical principles and empirical results, which enables to measure and compare the learning rates of numerous BSs as learning organizations worldwide.

New characteristics were formulated for the business school learning organization questionnaire (BSLOQ) on the basis of the research on universities and BSs as learning organizations, which reflect the specificity of BSs, e.g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections; active dialogue between BS and business sector; teaching integrated courses; a mechanism for sharing interdisciplinary knowledge; involvement in the process of creating a common vision; creation of external partnerships and interaction on both BS and business; BS leaders' capacity and willingness to model collaborative action.

As a result, a new special BS learning rate measurement instrument was developed (BSLOQ).

Practical Contribution of the Thesis

Information on the BS learning rate would help, in the opinion of the author, to analyse and improve BSs as learning organizations and as a result increase their global competitiveness. Hence the BSs themselves should be interested in investigating their organizational learning.

The new measurement instrument, BS learning rate measurement instrument (BSLOQ), can be used to compare the BSs' ability to learn. The BSs can use the new questionnaire as a management instrument to develop the organization and improve learning. BSs can themselves set out to measure their learning rates,

compare their results to others as well as analyse the dynamics of their own results.

Future Research

The abundant empirical material of the doctoral thesis enables in further research to study the relationships between the characteristics and dimensions of business schools and continue identifying which characteristics are determined by the organization's external environment and which characteristics by the organization itself. Qualitative interviews should be conducted with different level university leaders in order to go deeper into the reasons for learning at different types of higher schools.

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The thesis is based on the following publications:

Voolaid, K. and Ehrlich, Ü. (2011). Conformity of business schools to the criteria of a learning organization: the case of Estonia. The Economy and Economics after Crisis (481–498). Berlin: Berliner Wissenschaftsverlag.

Voolaid, K. and Ehrlich, Ü. (2010). Universities' Organizational Learning Rate Dependence on the Level of Participation in the Higher Education Market: The Case Study of Estonia. Eric Tsui (Ed.). Proceedings of the 7th International Conference on Intellectual Capital, Knowledge Management & Organizational Learning (480–488). The Hong Kong Polytechnic University, Hong Kong, China: Academic Publishing Limited.

Voolaid, K. and Venesaar, U. (2011). A Validation Study of the Dimensions of the Learning Organization Questionnaire in the Business School Context. G. Prause, U. Venesaar (Ed.). University Business Cooperation Tallinn 2011 (64–83). Berlin: Berliner Wissenschafts-Verlag.

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Voolaid, K. and Ehrlich, Ü. (2012). How Business Schools as Learning Organizations Meet New Challenges: a Worldwide Study. F. Chaparro (Ed.). Proceedings of the 9th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning (286–294). Bogota, Colombia: Academic Publishing International.

Appendix 1. "Conformity of Business Schools to the Criteria of a Learning Organization: The Case of Estonia"

Conformity of Business Schools to the Criteria of a Learning Organization: the Case of Estonia

Karen Voolaid and Üllas Ehrlich[1]

Abstract

The paper seeks to study the concepts and criteria of business schools as learning organizations. Using the criteria of a learning organization, the authors compare two major Estonian business schools − Estonian Business School (which is a private school) and Tallinn School of Economics and Business Administration at Tallinn University of Technology (which is a public university).

The conclusions are drawn on the basis of surveys carried out among employees. The theoretical basis of the empirical study is Watkins & Marsick's organization development principles. The questionnaires ascertain whether and to what extent these universities satisfy the criteria of a learning organization. The paper identifies how employees at different levels of business education vision a learning organization. Hence, executives, teaching and research staff and administrative personnel of the universities were studied. The study finds out whether the ownership form of a university (public and private) has a significant impact on the development of the school and conformity to the criteria of a learning organization.

1. Introduction

One of the main forces of the global economy is development of knowledge and technology in the constantly changing environment. Universities are expected to be ready for the incessant process of transformations and all this has changed the essence of universities.

Economic and business education at universities is directly related to both knowledge based economy and development trends of a knowledge-based society across the world. In addition to its traditional function to create knowledge through research and teaching, a university needs to prepare high level professionals who would be able to succeed in the rapidly changing world. Among other functions universities must help students obtain knowledge, skills, attitudes and values, which

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make them responsible citizens in a multicultural environment. For universities this means a new approach to management and policies. While moving towards a knowledge-based economy it is extremely important that universities and business schools have competencies that enable them to respond more effectively to changes in the environment, allowing them to survive under the sharp competition in the education market. Additionally, the economic education provided by universities must correspond to graduates' competitiveness in the labor market, satisfy employers' demands and add potential to the graduates for life-long learning. All this shows the immensity and volume of the expectations and responsibility the business schools are facing, which a business school is able to satisfy only by continuously developing and improving its organization.

A modern business school must be a flexible and dynamic organization, which is able to successfully operate in a constantly changing environment. In order to fulfill all these conditions the school must conform to criteria of a learning organization.

There seems to be no consensus on the definition of a learning organization (Garvin 2000). Often the terms `organizational learning` and `learning organization` have been mixed up, often they have been used as synonyms (Örtenblad 2007).

The learning organization − a form of organization, and the learning organizations literature has an action orientation that is geared toward using specific diagnostic tools which can help to identify, promote and evaluate the quality of learning processes.

Organizational learning – learning related activity and the process by which organizations eventually reach the ideal of a learning organization (Easterby-Smith et al. 1999).

The concept of leaning organization was introduced in the seventies (Argyris 1976) and, while developing constantly, it has turned into a cornerstone of organization theory as well as organizations' development practices.

There are several different financial schemes for obtaining higher education in Estonia. Every year the Ministry of Education and Research shall specify the number of specialists in specialities the society needs and determines the provision of state-commissioned education at institutions providing higher education (mainly public universities). This means that the state pays to the university for teaching the specialists and studying is free for the students. For example, many technical and engineering specialities are covered either solely or nearly solely by state-commissioned education. However, not everybody who wants to obtain higher education can study in a student place filled on the basis of state-commission education. In such case students need to pay themselves for the studies, for what purpose they can take a study loan and often also work in parallel to studying. The number of student places filled on the basis of state-commissioned education is small and the share of student who pay for their studies themselves is high in specialities regarded are commercial. These include, for instance, business administration and management. For example, the share of student places filled on the basis of state-commissioned education in TSEBA as a faculty of a public university is only approximately 10% of total amount of tuition (and total number of

students); 90% of the students pay themselves for their studies. Private universities like EBS, as a rule, are not providing state-commissioned education and all students need to pay themselves for the studies.

Considering the great interest in higher economic and business education we are facing a situation in Estonia where demand for these specialties exceeds vastly the respective number of student places filled on the basis of state-commissioned education and most of the people interested in obtaining higher business education have to pay themselves for the studies. This has led to a situation where the School of Economics and Business Administration at Tallinn University of Technology (TUT) as a public university must compete in the higher education market with private universities that provide higher economic and business education only on fee-charging basis, such as EBS, while other, engineering faculties at TUT teach students almost only on the basis of state-commissioned education principle for fixed pay.

Competing in the higher economic and business education market with private schools that offer similar services puts different demands on TSEBA as a faculty of public university compared to other faculties that are financed mainly on the basis of state-commissioned education regarding the organizational development and learning capacity. Otherwise successful competition with the private sector would not be possible. This article compares private and public universities at the example of EBS and TSEBA, based on the theory of the learning organization. The paper seeks to analyze conformity of business schools as organizations to the criteria of the learning organization. Each of these economic schools is compared to the international average value of the learning organization's dimensions. In order to identify which corresponds better to the criteria of the learning organization − a private or public business school – these schools are also compared to each other.

2. Learning Organization and the Ways to Measure It

There are different theoretical concepts to define and measure the learning organization, which also serve as the basis for different measurement methods of organizational learning.

Classic and popular today is Peter M. Senge's approach to the learning organization.

One of the most frequently quoted approaches to learning organization is definitely given by Peter Senge (1990). This approach is the first to introduce the notion of the learning organization. *Fifth Discipline Fieldbook* focuses on five disciplines considered essential for a learning organization:

- systems thinking – in order to make decisions that create desired results while seeing the whole picture;

- personal mastery – to develop one's personal abilities;
- mental models – that influence human activity because they change what they see and hear;
- building shared vision – to achieve genuine commitment of the staff to the company's objective rather than nodding in sign of compliance and continuing the old way;
- team learning – to focus thinking and energy into a common direction. Via better communication reduce conflicts in the team and company (Senge 1990).

The definition by M. Pedler, T. Boydell & J. Burgoyne (1991) expresses the important aspects of the learning organization: learning and continuous transformation of all its members. The authors expand the definition by stating that the learning company is a vision of what might be possible. It is not brought about simply by training individuals; it can only happen as a result of learning at the whole organization level (Pedler et al. 1991:1). Hence, it can be said that learning is discussed as a strategic activity to achieve the organization's objectives. A learning organization is a whole. Characteristics of a learning organization are revealed in providing learning opportunities, interaction with the external environment, learning support structure, in learning climate and strategy of the organization (Pedler et al. 1991). Both Moilanen (2001) and Pedler et al. (1991) understand learning as an essential strategy aspect. An important conclusion can be drawn from this: learning is an *intentional* strategic process for the achievement of the organization's objectives. During the development into a learning organization it is important to see learning as part of both everyday activity and strategic processes of the organization. To facilitate learning it is important to provide learning support structures, create learning opportunities and enable self-development for all members of the organization.

Garvin (1993), on the other hand**,** describes learning organizations as skilled at five main activities: systematic problem solving, experimentation with new approaches, learning from own experiences and past history, learning from the experiences and best practices of others, transferring knowledge quickly and efficiently throughout the organization.

In 1993, K. E. Watkins and V. J. Marsick created a model of the learning organization. An objective of building the model was to enable analysis of learning organizations. For that they worked through the viewpoints of major theorists of learning organizations. According to Yang et al. (2004:32), Senge's approach is applicable as a consultative aid rather than a research tool. Other general descriptions of learning organizations with occasionally overlapping characteristics are not suitable for research either. Therefore they built a model that is based on two organizational constituents: people and structure as interactive components of organizational change and development. The model underlines three key components:

1) systems-level, continuous learning,
2) this learning then generates and manages knowledge outcomes, and
3) these outcomes lead to improvement in the organization's performance and value (both financial assets and nonfinancial intellectual capital). Learning helps people to create and manage knowledge that builds a system's intellectual capital (Yang, Watkins, Marsick 2004: 33-34).

K. Watkins and V. Marsick (1993) also underline the following options for growing into a learning organization:

- provide continuous learning opportunities;
- foster inquiry and dialogue;
- encourage collaboration and team learning;
- create a system to facilitate division of learning and preserve what has been learnt;
- foster movement toward a collective vision;
- connect the organization to its external environment (Watkins & Marsick 1993: 11).

K. E. Watkins and V. J. Marsick are the only theoreticians (Yang et al. 2004: 35) who analyze an organization at three levels: individual, team and organizational. They regard the learning organization as an organization where individuals learn at the workplace, where organization has an ability to remember, where through organizational climate they promote and facilitate individuals to learn and where organization is a flexible entity. They identified seven distinct but interrelated dimensions of a learning organization at the three levels. Each dimension has its own criteria (Yang et al. 2004:34). Therefore the authors chose just the approach by Watkins and Marsick to be the methodical basis of this research.

The dimensions of the learning organization questionnaire has been developed by Watkins and Marsick to analyze learning organizations. Many later researchers of the learning organization have used in their research just Watkins' and Marsick's questionnaire (Watkins & Marsick 1996) (Appendix 1). It is a structured questionnaire that fits well with P. Senge's theory of the learning organization and has been internationally tested. The authors of the questionnaire also give to the respondents an immediate comparative feedback from the first to 43rd question in the internet. An advantage of this questionnaire is the adequate degree of generalization of the dimensions of the learning organization, enabling based on the survey results to phrase some values that serve as a basis of the organization's activity.

The questionnaire consists of 43 criterias which are divided into 7 dimensions (Yang et al. 2004:34).

1) The first dimension at the individual level is *to create continuous learning opportunities for all members of the organization*, including the following seven

criteria, which are covered also in the questionnaire used in the empirical part of the paper. Of great importance in this dimension is public discussion of mistakes, experimentation and risk taking, systematically identify the skills for future business, mutual support learning, that relevant resources for learning are available, coherence of studies, attitude toward the work tasks as learning opportunities to find appropriate data for solving the tasks and to become aware of the problems and opportunities in the environment, remuneration systems stimulate individuals learning.

2) The second dimension at the individual level is to *promote dialogue and inquiry*. Among criteria of this dimension are open and honest feedback in the process of which the norms and expectations are discussed in the organization in a free and respectful manner, everybody's viewpoints, including conflicting ones, are listened to and analyzed, hierarchy and status are not considered more important than communication and the quality of ideas; aspirations are toward creating trust in the colleagues, a precondition is the wish to understand colleagues and find new challenges and opportunities for the organization.

In order to promote these criteria the focus should be on collegial rather than individual result. It is important to develop skills of conducting a dialogue, discussion, active listening, feedbacking, teamworking and taking the chair in meetings, using the decision-making methods that take into account everybody's opinions (Watkins&Marsick 1996).

3) The team level dimension is to *encourage collaboration and team learning*. This dimension is characterized by the following criteria: teams are free to adjust their objectives and tasks based on the needs, fellow team-mates are regarded as being equal notwithstanding their rank, culture or other differences; the focus is simultaneously on group tasks and group work quality; teams develop their views collectively based on the most suitable objectives for the organization; common team and group contribution is appreciated and supported, and the organization reckons with the teams' opinion. The important key skills at this level are understanding of the group dynamics by all members of the group and its management.

4) The biggest number of dimensions is related to this organizational level. The fourth dimension is *to create systems to seek and divide learning*. Here are six criteria: numerous opportunities for bilateral communication and wide-range dissemination of information; knowledge management instruments are used and aspirations are toward creating knowledge networks; important information for the organization is gathered systematically and the information is easy to apply; gaps between the current and expected results are known; processes to identify and communicate the best practices are in place; sufficient efficiency of the resources spent on the achievement of the objectives is being constantly monitored.

5) The fifth dimension is *empowering people toward a collective vision*. The criteria for movement toward a collective vision are: people are encouraged to take responsibility for their work related objectives and decisions; people are inspired to shape their work based on the organization's objectives in a way that would give

them satisfaction; decentralized contribution to the development and implementation of the vision and strategy; people are given control over the resources needed for conducting their work tasks; taking calculated risks is expected behaviour and in order to avoid conflicts between different parts of the value chain in the organization efforts are made for the sake of coherence of visions of all parts of the organization.

6) The sixth dimension is *connection the organization to its environment*. The criteria are as follows: balance between work and family life; global, local community and client's needs based thinking is encouraged; decisions are taken by weighing their potential effect of the staff's morale; solutions to the problems are searched for throughout the organization.

7) The seventh dimension is to *provide strategic leadership for learning*. This shows the extent to which leaders think strategically about how to use learning to create change and to move the organization in new directions or new markets (Yang, Watkins, Marsick: 34). The criteria of this dimension include: encouraging and supporting the staff to obtain needful skills for the achievement of the objectives; the newest information on competitors, industrial trends and organization's guidelines have been communicated to everybody; everybody has the right to implement the organization' vision; in the first position is staff development by leaders rather than management and discipline; awareness of the need for continuous learning; organization's activities coherent with values.

3. Comparison of TSEBA and EBS as Learning Organizations

In current paper we study comparatively Tallinn School of Economics and Business Administration (TSEBA) and Estonian Business School (EBS).

TSEBA is the largest school at Tallinn University of Technology (TUT). The university founded in 1918 as an engineering college and was granted the university status in 1936. Today TUT is the second largest university in Estonia, with over 13,000 students and 1,800 employees (of which approximately 50% is academic staff). The total number of students at Tallinn School of Economics and Business Administration (TSEBA) is 3300. TSEBA offers study programmes at Bachelor (4), Master's (6) and Doctoral (1) level in Estonian, Russian and English. The mission of TSEBA is to be a national centre of education, research and development in the field of economics and business administration. Its objective is to assure reproduction of academic competence and to be engaged in international educational and scientific collaboration in economics, business and in the areas that relate modern technology with business. TSEBA is a part of the community of European schools of business and economics building upon its unique expertise in the economies of Estonia, Central and Eastern Europe and Baltic area. In TSEBA´s strategy the emphasis is laid on: 1) quality; 2) intellectual and personal development; 3) international orientation; 4) relationship with government, corporate partners and professional organizations.

Estonian Business School (EBS) was founded in 1988 and is the oldest private business school in the Baltic States. The total number of students at EBS is 1551. The total number of study programmes at EBS is 6: Bachelor`s: 3, Master`s: 2, Doctoral: 1. The mission of EBS is to provide enterprising people with academic knowledge and skills for its successful implementation. The aim is to become an internationally recognized business school through the activities of their alumni and faculty. The major challenges for EBS are: 1) diversification of the fee-based budget income sources 2) greater emphasis on international marketing 3) increasing the number of foreign students 4) active search for international corporate partners.

Finding out the values for TSEBA and EBS as learning organizations a questionnaire was carried out among the managerial staff, faculty and administrative personnel of TSEBA and EBS. The questionnaire asked employees' opinion about learning at the organization from three aspects: individual level, team level and organizational level and seven dimensions (see above). The questionnaire consists of 43 single questions, which are divided into seven dimensions. The employees were asked to respond in a six-point scale where one signified "almost never" and six "almost always". Comparative data of an international surveys by K. E. Watkins and V. J. Marsick are available and is used for comparison with TSEBA and EBS.

The results of the questionnaire survey conducted among the employees of TSEBA and EBS are summarized in Table 1. The results are presented comparatively for all seven dimensions of the learning organization and the respondents are grouped based on their standing in the organization's hierarchy. The results are analyzed separately for managerial staff, teaching and research staff, and for administrative staff. Next to the columns that provide comparative data on schools is the absolute difference that is calculated by deducting from the respective TSEBA index value the value of EBS index. Hence, when the difference is negative, then EBS is superior by the respective indicator; if positive, then TSEBA is better.

Comparison of the opinions expressed by the managerial staffs of the two schools (Table 1, Figure 1) demonstrates that EBS has got better results in all dimensions (average difference −0.55). The difference is the biggest in the 6th dimension „connect the organization to the learning environment" (−1.15) and the smallest in the 7th „provide strategic leadership for learning" (−0.24). The difference in this hierarchy level shows that the managerial staff of EBS appreciates their school as a learning organization better than the public university, i.e. for them their organization has a higher rate of learning. At the same time, one could speculate that the managerial staff of TSEBA comprises not only professional managers but scientists who might be more critical in their attitudes toward their organization.

Di-mensions	Managerial staff			Teaching and research staff			Administrative staff			Total		
	TSE BA	EBS	diffe-rence	TSE BA	EBS	diffe-rence	TSE BA	EBS	diffe-rence	TSE BA	EBS	diffe-rence
1	3.55	3.84	-0.29	4.01	3.65	0.36	4.03	3.71	0.31	3.93	3.73	0.2
2	3.95	4.51	-0.56	3.71	4.00	-0.29	4.22	4.13	0.09	3.97	4.2	-0.23
3	3.88	4.38	-0.51	3.71	3.67	0.03	3.81	4.29	-0.48	3.78	4.07	-0.29
4	3.10	3.48	-0.38	3.48	3.24	0.24	3.29	3.42	-0.13	3.33	3.37	-0.04
5	3.57	4.32	-0.75	3.71	3.63	0.08	3.60	3.71	-0.11	3.64	3.9	-0.26
6	3.40	4.55	-1.15	3.82	3.67	0.14	3.82	3.74	0.08	3.74	4.01	-0.27
7	4.26	4.50	-0.24	4.17	3.67	0.50	4.29	3.71	0.58	4.24	4	0.24
Ave-rage	3.67	4.22	-0.55	3.80	3.65	0.15	3.86	3.81	0.05	3.81	3.89	-0.08

Tab. 1: *Average of learning organization dimensions by groups of employees of TSEBA and EBS*
Source: Authors

Compared to the international average (Figure 1), the assessment of the managerial staff of EBS of their organization's learning rate is higher in all dimensions. The assessment of TSEBA respective staff is barely below the international average in the 4th dimension "create systems to capture and transform learning" and approximately equal to the average in the 1st („provide continuous learning opportunities") and 6th („connect the organization to its external environment") dimension.

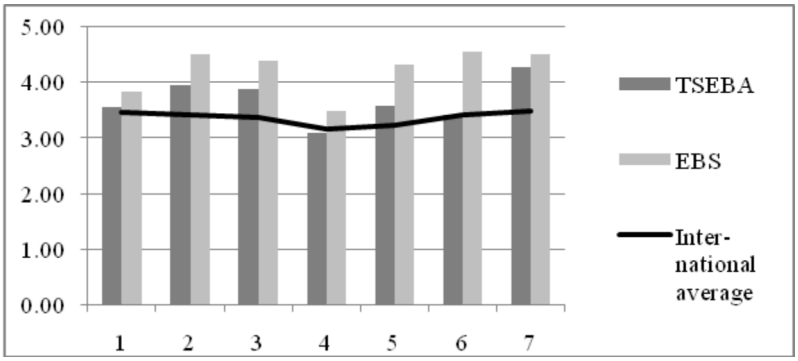

Fig. 1: Average of dimensions by managerial staff and comparison with international average
Source: Authors

Comparing the teaching and research staffs' assessments, the differences between schools are smaller than in the case of managerial staff – average difference is 0.15 (Table 1, Figure 2). It is noteworthy that TSEBA is better in all dimensions with the exception of the 2nd („foster inquiry and dialogue"). The biggest difference (0.50) is in the 7th dimension („provide strategic leadership for learning"). Nearly equal are the 3rd („promote collaboration and team learning") and 5th („foster movement towards a collective vision") dimension.

Compared to the international average (Figure 2), all dimensions in both schools are higher, with the exception of the 4th dimension ("create systems to capture and transform learning") in EBS, which is approximately equal to the international average.

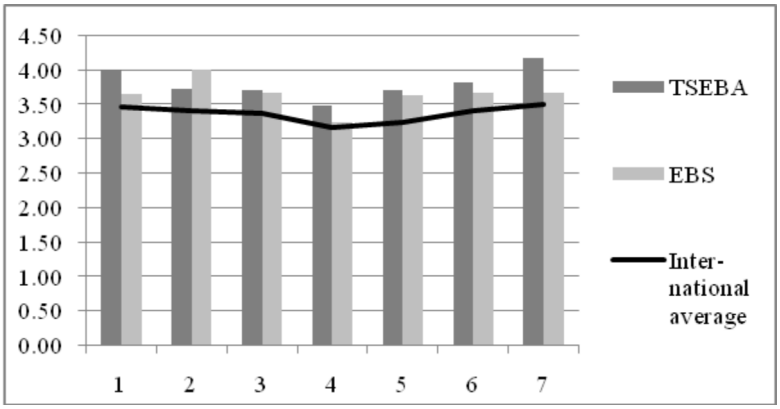

Fig. 2: Average of dimensions by teaching and research staff and comparison with international average
Source: Authors

It is noteworthy that teaching and research staff, unlike the managerial staff, regard TSEBA as a more superior learning organization. This could be explained by the fact that most of the teaching and research staff at TSEBA are full-time employees who feel a strong connection toward their organization. EBS on the other hand has few full-time employees among the teaching and research staff, most of the teaching staff members deliver lectures on an hourly basis and their principal job is elsewhere, which makes their connection to the EBS weaker. Anyway, different assessment of learning at the organization by the managerial staff and teaching and research staff of the private school is noteworthy.

Nearly equal are the attitudes of administrative staffs toward the dimensions of their employer as a learning organization (0.05) (Table 1, Figure 3). TSEBA has superiority in 4 dimensions (1., 2., 6., 7.) and EBS in 3 dimensions (3., 4., 5.). The

biggest differences in favour of TSEBA are in the 1st („provide continuous learning opportunities", 0.31) and 7th dimension („provide strategic leadership for learning", 0.58). EBS is clearly better (−0.48) in the 3rd dimension („promote collaboration and team learning"). This implies insufficient collaboration and team learning opportunities among the administrative staff of the public university (TSEBA).

Administrative staff's assessments are higher than the international average in both schools (Figure 3).The biggest difference from the international average is in TSEBA administrative staff's assessment of the 7th dimension („provide strategic leadership for learning").

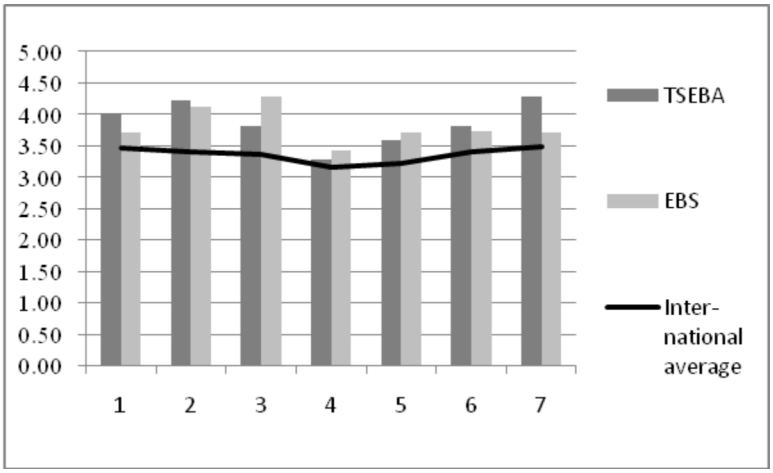

Fig. 3: Average of dimensions by administrative staff and comparison with international average
Source: Authors

In sum of all dimensions (Figure 4) the assessments by all three categories of employees in both schools are higher than the international average. The difference from the international average is the biggest in the EBS managerial staff's assessment of the organizational learning level, other groups of employees in both schools exceed the international average nearly equally. Comparing the TSEBA and EBS staff categories between themselves, the assessment by EBS managerial staff is much higher than the respective assessment by TSEBA staff. In the opinion of two other groups of employees − teaching and research staff, and administrative staff – TSEBA is by a narrow margin a better learning organization.

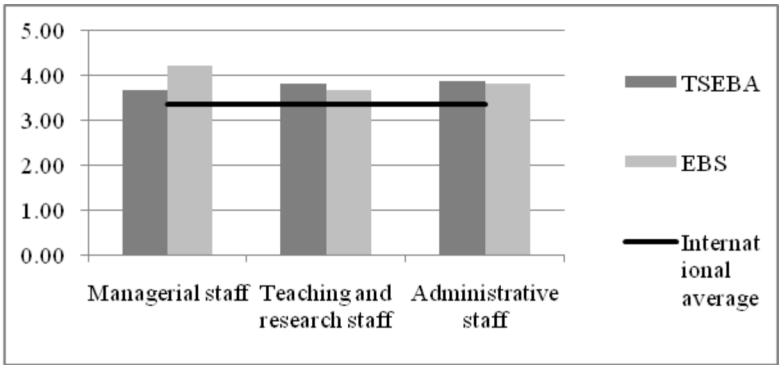

Fig. 4: Average of groups of employees and comparison with international average
Source: Authors

According to the aggregate opinion of all employees of the two universities (Table 2), EBS is slightly better in the sum of all dimensions (3.89 against TSEBA's 3.81). In comparison of individual dimensions between the two schools TSEBA is better in the 1st („provide continuous learning opportunities") and 7th dimension („provide strategic leadership for learning") with 105.5 and 106.7 percent, respectively, of the respective EBS's figure. EBS is better in all other dimensions. The above allows drawing a conclusion that in the sum of opinions of all groups of employees the business school of the public university is superior to the private business school in the learning organization's dimensions 1 and 7, and in the comparison of the other dimensions EBS (private business school) is superior. Of great significance in the aggregate assessment of all groups of employees, as the analysis across groups of employees demonstrated, is definitely the high assessment by EBS's managerial staff for all dimensions.

Dimension	TSEBA	EBS	Inter-national average	TSEBA % from inter-national average	EBS % from inter-national average	TSEBA % from EBS
1	3.93	3.73	3.46	113.7	107.8	105.5
2	3.97	4.20	3.41	116.4	123.3	94.5
3	3.78	4.07	3.37	112.2	120.8	92.9
4	3.33	3.37	3.16	105.2	106.6	98.7
5	3.64	3.90	3.23	112.6	120.8	93.2
6	3.74	4.01	3.41	109.7	117.6	93.3
7	4.24	4.00	3.49	121.5	114.6	106.0
Total	3.81	3.89	3.36	113.4	115.9	97.9

Tab. 2: *Average of dimensions by employees and relative difference compared to international average*
Source: Authors

Comparative analysis of individual dimensions with the respective international average values (Table 2, Figure 5) shows that TSEBA has the biggest difference from international average in the 2nd („foster inquiry and dialogue") and 7th („provide strategic leadership for learning") dimension, with 116.4 and 121.5 percent, respectively; and EBS in the 2nd („foster inquiry and dialogue"), 3rd („promote collaboration and team learning") and 5th („foster movement towards a collective vision") with 123.3, 120.8 and 120.8 percent, respectively. It is noteworthy that among the most superior to the international average in both universities is the 2nd dimension („foster inquiry and dialogue"), which allows regarding the strength of this dimension as typical of the institutions providing higher education. Comparison of the two universities as learning organizations to the international average of the learning organization's dimensions allows concluding that both TSEBA and EBS are superior to the international average in all the dimensions (Table 2). This in turn allows concluding that both public and private universities are more superior learning organizations than international average. At the same time, it is not possible to claim that there were big differences between the two universities in the sum of assessments of all questionnaired employees.

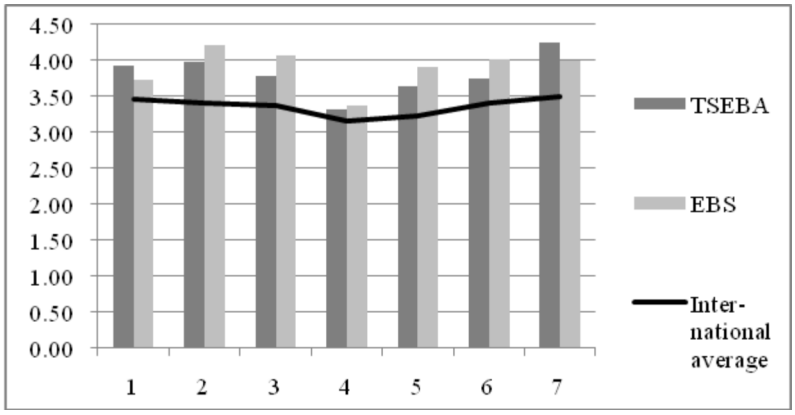

Fig. 5: Average of dimensions by employees and comparison with international average
Source: Authors

In order to estimate the statistical significance of differences between EBS and TSEBA a t-test was carried out.The results of t-test in Table 3 are in the same line with those described above and suggest that almost all differences in attitudes between two schools are too small and not significantly related to the organization type. Among the seven dimensions of the learning organization there are no statistically significant differences in attitudes between the organizations towards the entire workforce as well as teaching/research staff or administrative staff. Opinions

of the managerial staff depend on the organization at the appropriately significant level only for two of the seven dimensions. The managers of EBS value higher their school's ability to connect to external environment (t= -3.626, p<0.05) and empowering people toward a collective vision (t= -1,845, p<0.10), the attitudes toward the other dimensions do not differ from those of TSEBA leaders.

Despite the lack of influence of the organization's type on dimensions of the learning organization we can find some significant differences while looking at all the issues of the learning organization questionnaire separately. In dimension 1 (dimensions see Appendix 1), the opinions of all employees between two schools significantly differ in three questions: EBS staff values higher the 'openly discuss mistakes in order to learn from them' (Q1) (Questions see Appendix 1) (t= -2.351, p<0.05); TSEBA people have more resources, money as well as time for learning (Q4, Q5) (t=2.133 and t=2.473 respectively, p<0.05). In dimension 2, EBS has a higher rank in encouraging to ask "why" (Q10) (t=-2.121, p<0.5); all other attitudes do not depend on the organization. In dimension 3, encouraging collaboration in the sense of goals adaption and group discussion (Q14, Q17) is also higher in EBS (t=-2.232 and t=-2.123, p<0.05). In dimension 4, the only difference is the better attitude of EBS staff in Q23, the creation of systems to measure gaps between current and expected performance. In all questions of dimension 5, both schools disagree and in two last dimensions there are differences in encouraging bringing of the customers' views into the decision-making process and leaders' support for learning opportunities and training (Q34 and Q38 respectively, t=-2,812 and t=237, p<0.05). The EBS performs better in the formed and TSEBA in the latter.

Dimension	Total		Managerial staff	
	t	Sig.	t	Sig.
1	1.042	0.302	-0.789	0.445
2	-0.910	0.366	-1.629	0.129
3	-1.272	0.209	-1.579	0.140
4	-0.083	0.934	-1.338	0.206
5	-0.850	0.399	-1.845	0.090
6	-1.130	0.263	-3.626	0.003
7	0.844	0.402	-0.649	0.529

Tab. 3: *T-test results for the learning organization dimensions*
Source: Authors

Dimension	Teaching and research staff		Administrative staff	
	t	Sig.	t	Sig.
1	1.074	0.294	0.776	0.447
2	-0.586	0.564	0.198	0.845
3	-0.009	0.993	-1.156	0.262
4	0.522	0.607	-0.195	0.848
5	0.222	0.827	-0.228	0.822
6	0.219	0.829	0.152	0.881
7	0.877	0.390	1.162	0.260

Tab. 3 continue: *T-test results for the learning organization dimensions*
Source: Authors

Looking separately at the groups of employees we can pick up the next significant differences at the appropriate level ($p<0.05$) related to the organization types.

The attitude of EBS managers is better in all questions of dimension 6 and from other dimensions in Q27, Q28, Q6, Q10, Q14 and Q15 compared with TSEBA. The other answers do not depend remarkably on the organization's type. There is no influence of organization on the attitude of researchers or administrative staff across dimensions; however, looking at the questions separately the influence is higher on the opinions of researchers in questions Q4, Q5 Q20, Q38 where the differences are significant and all the higher estimates are given by the researchers of TSEBA. Significant differences in the opinions of other staff between schools are only in Q1, Q17, Q32 and Q38, the first two are valued higher by EBS staff and the second and the next two by TSEBA.

4. Conclusions

The survey of two universities providing higher business education − public TSEBA and private EBS − using the Watkins' and Marsick's learning organization analysis method, allows stating that this method is appropriate for identifying the learning rate of a learning organization in comparison with the international average and for comparing the learning rates between the organizations.

The learning rates at TSEBA and EBS, which were surveyed, were superior to the international average in all dimensions of the learning organization and in all groups of employees, which allows concluding that university, irrespective of its ownership form, is rather a learning organization.

Comparison of TSEBA and EBS as learning organizations did not identify any big differences between the two schools, which allows drawing a conclusion that the

learning rate at universities as learning organizations does not depend much on the ownership form.

However, big differences were between opinions expressed by different hierarchical groups of employees. While managerial staff of EBS assessed in all dimensions the learning rate of the organization superior to TSEBA, then teaching and research staff assessed TSEBA to be superior as a learning organization. Hence a conclusion that whether and to what extent an organization is learning in the opinion of its personnel depends on the position of the employee in the hierarchy in this organization. On the basis of this survey it can be said that the managerial staff of a private school values their organization as a learning organization extremely highly, which unfortunately is not in agreement with the teaching and research staff's opinion of the same organization about learning at the organization. Administrative staff's opinions are approximately equal in the two universities. Public university (TSEBA) as a learning organization is rated the highest, compared to other groups of employees, by employees in the group of teaching and research staff, which allows drawing a conclusion that teaching and research conditions in a public university are better than in a private university, which makes the whole organisation more capable of learning in the opinion of this staff group.

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Appendix 1

The Dimensions of the Learning Organization Questionnaire by Watkins and Marsick

Individual Level

I provide continuous learning opportunities
1. In my organization, people openly discuss mistakes in order to learn from them. 2. In my organization, people identify skills they need for future work tasks. 3. In my organization, people help each other learn. 4. In my organization, people can get money and other resources to support their learning. 5. In my organization, people are given time to support learning. 6. In my organization, people view problems in their work as an opportunity to learn. 7. In my organization, people are rewarded for learning.

II foster inquiry and dialogue
8. In my organization, people give open and honest feedback to each other. 9. In my organization, people listen to others' views before speaking. 10. In my organization, people are encouraged to ask "why" regardless of rank. 11. In my organization, whenever people state their view, they also ask what others think. 12. In my organization, people treat each other with respect.13. In my organization, people spend time building trust with each other.

Team or Group Level

III *promote collaboration and team learning*
14. In my organization, teams/groups have the freedom to adapt their goals as needed. 15. In my organization, teams/groups treat members as equals, regardless of rank, culture, or other differences. 16. In my organization, teams/groups focus both on the group's task and on how well the group is working. 17. In my organization, teams/groups revise their thinking as a result of group discussions or information collected. 18. In my organization, teams/groups are rewarded for their achievements as a team/group. 19. In my organization, teams/groups are confident that the organization will act on their recommendations.

Organizational Level

IV *create systems to capture and transform learning*
20. My organization uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings. 21. My organization enables people to get needed information at any time quickly and easily. 22. My organization maintains an up-to-date data base of employee skills.

23. My organization creates systems to measure gaps between current and expected performance. 24. My organization makes its lessons learned available to all employees. 25. My organization measures the results of the time and resources spent on training.

V *foster movement toward a collective vision*
26. My organization recognizes people for taking initiative. 27. My organization gives people choices in their work assignments. 28. My organization invites people to contribute to the organization's vision. 29 My organization gives people control over the resources they need to accomplish their work. 30. My organization supports employees who take calculated risks. 31. My organization builds alignment of visions across different levels and work groups.

VI *connect the organization to its external environment*
32. My organization helps employees balance work and family. 33. My organization encourages people to think from a global perspective. 34. My organization encourages everyone to bring the customers' views into the decision making process. 35. My organization considers the impact of decisions on employee morale. 36. My organization works together with the outside community to meet mutual needs. 37. My organization encourages people to get answers from across the organization when solving problems.

VII *provide strategic leadership for learning*
38. In my organization, leaders generally support requests for learning opportunities and training. 39. In my organization, leaders share up to date information with employees about competitors, industry trends, and organizational directions. 40. In my organization, leaders empower others to help carry out the organization's vision. 41. In my organization, leaders mentor and coach those they lead. 42. In my organization, leaders continually look for opportunities to learn. 43. In my organization, leaders ensure that the organization's actions are consistent with its values.

Appendix 2. “Universities' Organizational Learning Rate Dependence on the Level of Participation in the Higher Education Market: The Case Study of Estonia”

Universities' Organizational Learning Rate Dependence on the Level of Participation in the Higher Education Market: The Case Study of Estonia

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Abstract: A modern university must be a flexible and dynamic organization, which is able to successfully operate in a constantly changing environment. In order to fulfil this condition the establishment must conform to the criteria of the learning organization. Using the criteria of the learning organization, the authors compare four institutions providing higher education in Estonia where percentage of state commissioned students is different: Estonian Business School (EBS), Tallinn School of Economics and Business Administration of Tallinn University of Technology (TSEBA), Faculty of Civil Engineering of Tallinn University of Technology (BF) and Faculty of Mechanical Engineering of Tallinn University of Technology (MF). The institutions were selected so as the market participation rates were different. Market participation rate is denoted by the ratio of students who pay themselves for the studies. In order to identify whether and to what extent competition or lack of competition in the market affects the organizations' learning capacity the authors compare four institutions providing higher education using Watkins & Marsick's organization development principles as the theoretical basis of the empirical study. The results of the study show that the extent to what a university has to compete on market of higher education has a significant impact on organization's learning capacity. The investigated institutions of higher education were analyzed by all seven dimensions of the learning organization and different groups of employees (managerial staff, teaching and research staff, administrative staff). The results of all interviewed groups allow to state that there is a light positive correlation between the extent to what a university has to compete on market of higher education and the organization's learning capacity. The organization's learning capacity of the investigated universities is also higher compared to the international average.

Keywords: learning organization, organizational learning, the dimensions of the learning organization questionnaire (DLOQ), public and private universities, learning rate of organization

1. Introduction

Education at universities is directly related to both knowledge based economy and development trends of a knowledge-based society across the world. For universities this means a new approach to management and policies. While moving towards a knowledge-based economy it is extremely important that universities have competencies that enable them to respond more effectively to changes in the environment, allowing them to survive under the sharp competition in the education market. Additionally, the education provided by universities must correspond to graduates' competitiveness in the labour market, satisfy employers' demands and add potential to the graduates for life-long learning. A modern university must be a flexible and dynamic organization, which is able to successfully operate in a constantly changing environment. In order to fulfil this condition the school must conform to the criteria of the learning organization. The concept of leaning organization was introduced in the 1970s and, while developing constantly, it has turned into a cornerstone of organization theory as well as organizations' development practices.

There seems to be no consensus on the definition of a learning organization (Garvin 1993). Often the terms `organizational learning` and `learning organization` have been mixed up, often they have been used as synonyms (Örtenblad 2007).

The learning organization – a form of organization, and the learning organizations literature has an action orientation that is geared toward using specific diagnostic tools which can help to identify, promote and evaluate the quality of learning processes.

Organizational learning – learning related activity and the process by which organizations eventually reach the ideal of a learning organization (Easterby-Smith et al. 1999).

There are several different financial schemes for obtaining higher education in Estonia. Every year the Ministry of Education and Research shall specify the number of specialists in specialities the society needs and determines the provision of state-commissioned education at institutions providing higher

education (mainly public universities). This means that the state pays to the university for teaching the specialists and studying is free for the students. For example, many technical and engineering specialities are covered either solely or nearly solely by state-commissioned education. For example, the share of student places filled on the basis of state-commissioned education in TSEBA as a faculty of a public university is only approximately 10% of total amount of students ; 90% of the students pay themselves for their studies. Private universities like EBS, as a rule, are not providing state-commissioned education and all students need to pay themselves for the studies..In engineering faculties (BFMF), the share of state commissioned students is approximately 70%.

This article compares Tallinn School of Economics and Business Administration (TSEBA) of Tallinn University of Technology, Faculty of Civil Engineering and Faculty of Mechanical Engineering of Tallinn University of Technology (hereinafter observed together as BFMF) and Estonian Business School (EBS). All mentioned above institutions are compared based on the theory of the learning organization by Watkins and Marsick. Each of these institutions is also compared to the international average value of the learning organization's dimensions.

The aim of the paper is to find out whether and to what extent the participation rate in the education market, expressed in the ratio of students taught on the basis of state-commissioned education to students who pay themselves for the studies, exerts influence on the learning rate of an organization providing higher education measured on the basis of Watkins' and Marsick's organization questionnaire. The authors hypothesise that the need to compete for students in the higher education market has a positive impact on the learning rate of a university as organization. As far as the authors know, the relationship between the market competition rate and the learning rate for universities has not been investigated before.

2. Universities as learning organizations and the ways how to measure it

There are a number of authors discussing university as a learning organization (Lorange 1997, Willcoxson 2001, Martin 1999, Patterson 1999, Portfelt 2006). Most of them describe either some models or various characteristics of the learning organization at universities. As mentioned above, empirical research in this sphere is scarce. Proposals on universities as learning organizations have been theoretical discussions rather than empirical research based so far (except Portfelt). Several authors have suggested that in the increasingly sharpening international competition universities should also be learning organizations (Dill 1999, Kristensen 1999, Mulford 2000). The extremely rapidly changing environment will lead us to the need to learn.

Lorange(1997) has studied business schools as learning organizations and propose that a business school can become a learning organization by allowing for four complementary types of learning: individual discipline-based faculty learning; discipline based teams of faculty learning together; teams of faculty learning around specific academic programmes; full-fledged faculty team learning with the business school's customer organization (Lorange 1997). The aggregate learning partner model developed by him pictures development of partnership relations between business schools and companies as learning organizations. According to Peter Lorange, organizational learning should be a strategic development component of the business school. He points out that organizational learning can be expected to be a key driver for any leading business school which wants to advance and to respond to the customers.

Willcoxson (2001) examines such university structures and systems like personnel management and knowledge management, organizational culture, the role of managers and team in the development of a learning organization. The status of the learning organization depends on the organization's structure, culture and management. The key of structural changes is in the hands of managers. It is primarly a leader's responsibility to ensure that the structures and systems in place maximise the opportunity for organizational learning through encouraging the expression and adoption of diverse ideas, and to ensure that their own actions provide both models and opportunities for contribution and learning (Willcoxson 2001). He also concludes that the university's structure will enable development of the university into a learning organization, but a prerequisite for that is to be open, have more cooperation and teamwork.

Like Lorange (1997), Rifkin and Fulop (1997) and Franklin et al. (1998) before her, Martin (1999) touches on some of the characteristics and the tension they generate when discussing how universities might deal with issues of shared vision, collaboration and independence and

accountability and reward. As mentioned above, many authors use just Senge's concept of learning organization and develop that further. Martin (1999) has also used in his work Senge's disciplines of the learning organization and raises the question of universities' desire to become learning organizations.

Patterson (1999) discusses the idea of learning organization and applies it to universities, suggesting that as they adapt to the changing environment they are becoming learning universities. As organizations, do they apply new knowledge to improve their perfomance, do they change new ways of operating? Patterson (1999) concludes that the emerging comprehensive universities developed from strategic alliances are organizations that both learn and foster learning.

Portfelt (2006) raised two research questions. The first concerned the way the organizational structure of a university fulfils theoretical model criteria of the learning organization. The second was to find how the characteristics of an organization interact with one another and whether they support or hinder organizational learning. As knowing the culture and structure of the university are qualities of a learning organization the author raised the question how and in which way to learn to know the culture and structure of the university.

In order to learn the organizational culture of the university the Portfelt used analysis of documents and interviews. She created an integrated theoretical model of a learning organization and divided university into six subsystems, and to identify university's organizational characteristics both data and factor analysis, and system theory analysis were applied. The main conclusion was that the internal structure of the university does not match with the theoretical model criteria of a learning organization (Portfelt 2006). Portfelt concludes that there is a need for increased empirically based research on learning organization in general and on universities as learning organizations in particular.

There is a variety of tools available for measuring and evaluating learning organizations: the Learning Company Questionnaire (Pedler et al. 1988, 1989), the Learning Environment Survey (Tannenbaum 1997), the Learning Audit (Pearn et al. 1995), the Complete Learning Organization Benchmark (Mayo and Lank 1994), the Recognising Your Organization (Sarala and Sarala 1996), the Learning Organization Capability Assessment (Redding and Catalanello 1997).

The last diagnostic tool (used also in current study) is the Dimensions of the Learning Organization Questionnaire (DLOQ), which was introduced by Watkins and Marsick (1998).

3. Research design and methodology

K. E. Watkins and V. J. Marsick created a model of the learning organization. An objective of building the model was to enable analysis of learning organizations. For that they worked through the viewpoints of major theorists of learning organizations. According to Yang et al. (2004:32), Senge's approach is applicable as a consultative aid rather than a research tool. Other general descriptions of learning organizations with occasionally overlapping characteristics are not suitable for research either. Therefore they built a model that is based on two organizational constituents: people and structure as interactive components of organizational change and development. The model underlines three key components: systems-level, continuous learning, this learning then generates and manages knowledge outcomes, and these outcomes lead to improvement in the organization's performance and value (both financial assets and nonfinancial intellectual capital). Learning helps people to create and manage knowledge that builds a system's intellectual capital (Yang, Watkins, Marsick 2004: 33-34).

K. E.Watkins and V. J. Marsick are the only theoreticians (Yang et al. 2004: 35) who analyse an organization at three levels: individual, team and organizational. They regard the learning organization as an organization where individuals learn at the workplace, where organization has an ability to remember, where through organizational climate they promote and facilitate individuals to learn and where organization is a flexible entity. They identified seven distinct but interrelated dimensions of a learning organization at the three levels. Each dimension has its own criteria (Yang et al. 2004:34).

The Dimensions of the Learning Organization Questionnaire (DLOQ), is organized around seven dimensions:

- (1) creating continuous learning opportunities;

- (2) promoting inquiry and dialogue;
- (3) encouraging collaboration and team learning;
- (4) establishing systems to capture and share learning;
- (5) empowering people towards a collective vision;
- (6) connecting the organization to its environment;
- (7) modeling/supporting learning, as well as measuring financial and knowledge performance (Marsick and Watkins, 1999, p. 50).

Watkins& Marsick's organization development principles provide the theoretical basis for the current study.

To solve the research task the authors interviewed employees of four higher education institutions. The institutions were selected so as the market participation rates were different. Market participation rate is denoted by the ratio of students who pay themselves for the studies, which in the private university Estonian Business School (EBS) is 100%, in Tallinn School of Economics and Business Administration of Tallinn University of Technology (TSEBA) 90%, in the Faculty of Civil Engineering of Tallinn University of Technology (BF) 30% and in the Faculty of Mechanical Engineering of Tallinn University of Technology (MF) 30%. Different faculties of the same university (TUT) were used in the research in order for other conditions of these institutions aside from the market participation rate to be as similar as possible. Considering the similar market participation rates, BF and MF are analyzed together. Key data on the institutions are provided in Table below.

Table1: Key data on the institutions

Name of studied institution/characteristics of the institutions	Estonian Business School (EBS)	Tallinn School of Economics and Business Administration of TUT (TSEBA)	Faculty of Civil Engineering and Faculty of Mechanical Engineering of TUT (BFMF)
Year of foundation	1988	1940	1918
Organizational status	Private university	Faculty of public university	Faculty of public university
Teaching levels	Bachelor, Master, PhD	Bachelor, Master, PhD	Bachelor, Master, PhD
Total number of students	1550	3300	2400
Percent of state commissioned students	0	10	70
Percent of students paying for their studies	100	90	30
Number of employees interviewed for current study	20	40	24

In order to measure the learning rate at TSEBA, EBS and BFMF the author used Watkins' and Marsick's dimensions of the learning organization questionnaire (DLOQ). TSEBA, EBS and BFMF are also compared to the international average value of the learning organization`s dimensions by Watkins and Marsick. The sample for interviewing employees was formed on the basis of random sampling for all three staff groups (managerial staff, teaching-research staff, administrative staff) and for all institutions separately. Interviews were conducted using the DLOQ questionnaire, which was given to employees in the sample. Interviews were conducted in the second quarter 2010. The time for answering the questions was not limited.

The one-way analysis of variances (ANOVA), multivariate analysis of variances (MANOVA) and several follow-up tests such as Fisher LSD test are used in order to test the existence of statistically significant differences between institutions and between staff groups. The appropriate condition for using such methods of analysis is controlled with Levene's test. The analysis is carried out on the significance level 0.05.

4. Results

4.1 Comparison of the learning organization rate by institutions

All answers given by the staff of TSEBA, EBS and BFMF are summed up in Table 2 and presented in Figure 1. The results are presented comparatively for all seven dimensions of the learning

organization. Schools' data have been compared to the international average learning rates of organizations expressed as a percentage of identified value for each dimension of the learning organization for each school to the international mean value.

Table 2: Average of the learning organization dimensions and comparison with international average

The Dimensions of the Learning Organization Questionnaire (DLOQ)*	TSEBA	EBS	BFMF	Inter-national average	TSEBA % from international average	EBS % from international average	BFMF% from international average
1	3,93	3,73	3,50	3,46	113,7	107,8	101,0
2	3,97	4,20	3,54	3,41	116,4	123,3	103,8
3	3,78	4,07	3,50	3,37	112,2	120,8	103,9
4	3,33	3,37	3,07	3,16	105,2	106,6	97,1
5	3,64	3,90	3,49	3,23	112,6	120,8	108,0
6	3,74	4,01	3,27	3,41	109,7	117,6	95,8
7	4,24	4,00	3,87	3,49	121,5	114,6	110,8
Total	3,81	3,89	3,46	3,36	113,4	115,9	103,1

*The Dimensions of the Learning Organization Questionnaire (DLOQ) are described in chapter 3. methodology.

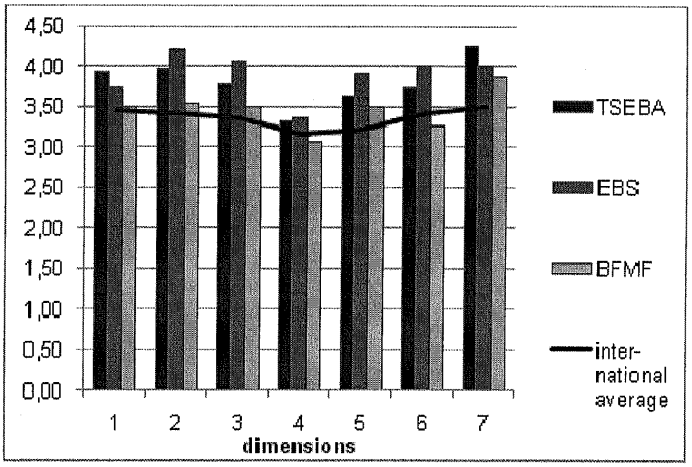

Figure 1: Average of dimensions and comparison with international average

According to the aggregate opinion of all employees of the schools examined by us by dimensions (Table 2), EBS has a narrow majority in the sum of all dimensions (3.89 against TSEBA's 3.81). BFMF which receives its revenue mainly, in the extent of 70%, from state-commissioned education, is considerably lacking behind (3,46) from the first two. All three schools, however, have better scores than the international average.

The multivariate analysis of variances (MANOVA) was used in order to test the existence of statistically significant differences in perceptions relevant to the learning organization across the institutions and the groups of employees. All 7 dimensions of DLOQ are considered and the analysis is carried out with the significance level 0.05. The results suggest that there are significant multivariate main effects for institutions on the LO scores (Wilks' λ=0.67, $F(14,124)=1.97$, $p<0.05$). The partial η^2=0.18 indicates 18% of multivariate variance of the perception is associated with the institution factor. According to follow-up tests, BFMF has significantly lower LO scores compared with two other institutions; TSEBA and EBS are not significantly different.

In comparison of individual dimensions between the two schools, TSEBA has superiority in the 1st („provide continuous learning opportunities", 3.93) and 7th dimension („provide strategic leadership for learning", 3.81). EBS has superiority in all other dimensions: 2nd („foster inquiry and dialogue", 4.20), 3rd („promote collaboration and team learning", 4.07), 4th ("create systems to capture and transform learning", 3.37), 5th („foster movement towards a collective vision", 3.90) and 6th („connect the organization to its external environment", 4.01). BFMF is the last in all seven dimensions.

The study of the individual dimensions of the learning organization using one-way analysis of variances (ANOVA) suggests (table 3) that there are significant effects based on school types for two DOLQ dimensions out of 7: dimension 2 and dimension 6 at the appropriate significance level ($p<0.05$). In both cases, the Fisher LSD test, like other follow-up tests, points out the statistically significant differences between BFMF and EBS and no differences between EBS and TSEBA. Dimension 2 (promoting inquiry and dialogue) of TSEBA is also significantly higher compared with BFMF.

Table 3: The comparison of learning organization dimension rates by institutions: ANOVA results

DLOQ*	Institutions		
	F	Sig.	partial η^2
1	1.844	0.166	0.049
2	3.154	0.049	0.080
3	1.943	0.151	0.053
4	0.688	0.506	0.019
5	0.731	0.485	0.020
6	3.212	0.046	0.083
7	0.947	0.393	0.026

*The Dimensions of the Learning Organization Questionnaire (DLOQ) are described in chapter 3. Methodology.

4.2 Comparison of the learning organization rates by groups of employees

Responses of the employees of all three higher education institutions were analyzed on the basis of their position in the organization's hierarchy.

The effects of employee groups on the LO scores appear statistically non-significant (Wilks' $\lambda=0.77$, $F(14,124)=1.24$, $p>0.05$). Attitudes of employees are not remarkably related to the position. However, the results indicate some interaction effects of employee groups by institutions.

The questionnaire results are analyzed separately for the managerial staff, teaching and research staff, and for the administrative staff in the cross section of seven dimensions of the learning organization. The answers given by the staff groups of the three schools are presented in Table 4.

Table 4: Average of learning organization dimensions by groups of employees

DLOQ*	Groups of employees		
	MS**	TRS	AS
1	3,76	3,69	3,69
2	4,14	3,70	3,98
3	4,10	3,54	3,92
4	3,26	3,24	3,27
5	3,91	3,58	3,57
6	3,86	3,53	3,65
7	4,49	3,78	4,04
Total	3,93	3,58	3,73

*The Dimensions of the Learning Organization Questionnaire (DLOQ) are described in chapter 3. methodology.

**MS – managerial staff, TRS - teaching and research staff, AS - administrative staff

There is not one significant effect based on staff groups at the appropriate significant level ($p<0.05$) (table 5), However, more influenced seemed to be dimension 2 and dimension 3. In dimension 2, there are differences between researchers and other staff and in dimension 3 between all groups ($p<0.1$).

Table 5: The comparison of learning organization dimension rates by groups of employees: ANOVA results

DLOQ*	Groups of employees		
	F	Sig.	partial η^2
1	0.215	0.807	0.006
2	2.458	0.093	0.064
3	2.402	0.098	0.064
4	0.014	0.986	0.000
5	0.695	0.502	0.019
6	0.675	0.512	0.019
7	2.087	0.132	0.055

*The Dimensions of the Learning Organization Questionnaire (DLOQ) are described in chapter 3. methodology.

The opinions expressed by the managerial staff allow drawing a conclusion that the managerial staff of a school which depends less on market competition than other value their organization as more learning than other groups of staff (Figure 2). This might imply satisfaction caused by the relatively secure and stable funding. The opinions expressed by managerial staff of all three schools about the learning rate in their organization in the sum of seven dimensions score higher than the international average (3,36), being highest in EBS (4.21), followed by BFMF (3.90) and TSEBA (3.67). Compared to other staff groups (see Table 6 and Figure 2), the managerial staff of EBS and BFMF value the learning rate of their organization higher, and the managerial staff of TSEBA lower than other staff groups. The latter fact may be due to that the managerial staff of TSEBA is somewhat in a conflicting situation between the managerial activity and the power of authority for that, since TSEBA is a rival to private higher schools in the education market and its managerial activity is limited and restricted rather by the constraints arising from the status of public university.

Table 6: Average of groups of employees

	TSEBA	EBS	BFMF	international average
1. managerial staff	3,67	4,21	3,90	3,36
2. teaching and research staff	3,81	3,66	3,29	3,36
3. administrative staff	3,87	3,81	3,51	3,36

Teaching and research staff regard TSEBA as the institution with the highest learning rate (3,81), followed by EBS (3,66) and BFMF (3,29) (Table 5, Figure 2).

In the sum of all dimensions (Figure 2), the opinions expressed by the administrative personnel of TSEBA and EBS about the organization's learning rate are almost equal (3.87 and 3.81, respectively). The opinion express by BFMF administration is much lower (3.51). However, unlike the opinion expressed by teachers-researchers, it is higher than the international average (3.36).

To sum up, it may be pointed out from the comparison of the three schools that the assessments by teaching-research staff and administrative personnel of TSEBA and EBS in the sum of all dimensions are similar by structure, differing however in individual dimensions. The teaching-research staff and administrative personnel of BFMF value the learning rate of their organization lower than the respective staff categories in TSEBA and EBS, whereas just BFMF's faculty are more critical regarding the learning rate. At the same time, the respondents in the BFMF's management assessed their institution as more learning than the managerial staff of TSEBA.

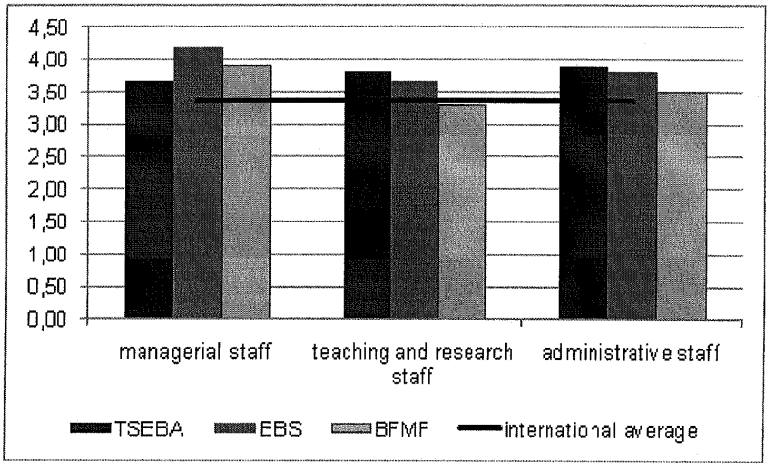

Figure 2: Average of groups of employees and comparison with international average

This analysis allows drawing a conclusion that the organization's estimated learning rate does not depend directly on the organization's ownership, since the private school EBS and public university affiliated TSEBA are much more similar by the learning rate than TSEBA and BFMF, which are affiliated with the same public university. However, the learning rate of a school as organization is highly dependent on the share of students who pay themselves for the studies from the total number of students taught at the school. The higher the share of students who pay themselves for the studies, the more the school which is teaching them needs (has had) to compete in the market with other schools in the same sphere for recruits. This in turn, according to the opinion of teachers-researchers and administrative personnel, has a positive effect on increasing the organization's conformity to the criteria of the learning organization. According to the results, the higher schools operating in the higher education market which rival with other schools for students are more learning organizations than the higher education institutions providing mainly state-commission education (fixed pay for fixed work).

The administrative personnel's assessments of the learning rate lack a well-defined connection to the ownership of the school and to the market participation rate. At the same time, the number of managerial staff is much smaller than other staff categories, which definitely influenced the credibility of the answers.

5. Conclusions

The results show that the participation rate in the market has a sizable impact on the organization's learning rate. In the sum of all seven dimensions and all staff groups, we can claim that the rate of participation in the market of a higher education institution and the organizational learning rate of the same institution are positively correlated. The highest learning rate on the basis of Watkins' and Marsick's questionnaire, 3.89, was in EBS where 100% of the students pay themselves for the studies. The next comes TSEBA with 3.81 points on the basis of Watkins and Marsick, where 90% of the students pay themselves for the studies. With the least points according to Watkins' and Marsick's questionnaire, 3.46, are the Faculties of Civil Engineering and Mechanical Engineering of Tallinn University of Technology (BFMF, in this paper studies as one), where 30% of the students pay themselves for the studies and 70% in student places filled on the basis of state-commissioned education.

At the same time, it may be stated that all three higher education institutions surpass the international average of Watkins' and Marsick's questionnaire (3.36).

Analyzing the answers given by the staff groups (managerial, teaching-research, administrative staff) it was identified that the effects of employee groups on the LO scores appear to be statistically non-significant. Attitudes of employees are not remarkably related to the position. However, the results indicate some interaction effects of employee groups by institutions.

The managerial staff of EBS as a private school (4.21) rated learning at their organization much higher than the managerial staff of other schools. The organizational learning was rated high also by the managerial staff of BFMF (3.90), which participates the least in the market competition. The lowest rating of learning in their organization was given by the managerial staff of TSEBA (3.67), which may be due to the conflict between the limited authority characteristic of a public university and high demands and responsibility for the management of the institution whose success depends on competition in the market. Teaching-research staff rates the organizational learning the highest at TSEBA (3.81), followed by EBS (3.66) and BFMF (3.29). The administrative staff evaluated the organizational learning at TSEBA (3.87) and EBS (3.81) almost equally; the administrative staff of BFMF valued their organizational learning much lower (3.51). In general, it may be stated that the employees' rating of the organizational learning on the basis of Watkins' and Marsick's learning organization questionnaire depends on the position of the staff member inside the organization, i.e. whether he/she is a member of managerial, teaching-research or administrative staff, because employees on different levels, coming across different problems, see different facets of their organization.

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Appendix 3. "A Validation Study of the Dimensions of the Learning Organization Questionnaire in the Business School Context"

A Validation Study of the Dimensions of the Learning Organisation Questionnaire in the Business School Context

Karen Voolaid[1] and Urve Venesaar[2]

Abstract

The paper investigates how to develop the business school into a learning organisation to ensure its sustainable development under global competition and whether it is possible to purposely develop and design the learning process at the business school. The aim of the paper is to evaluate Tallinn School of Economics and Business Administration (TSEBA) as a learning organisation based on the opinions expressed by the staff, to investigate which of the learning organisation's potentials our school might have and whether being a learning organisation will give TSEBA a competitive advantage. Watkins& Marsick's organisation development principles provide the theoretical basis for the current study. As a result of the survey TSEBA received a very high score in such learning organisation dimensions like 'provide continuous learning opportunities'; 'foster inquiry and dialogue'; 'promote collaboration and team learning' and 'provide strategic leadership for learning.' But it is still needs to develop some dimensions like 'create systems to capture and transform learning'; 'foster movement toward a collective vision' and 'connect the organisation to its external environment'.

1. Introduction

Universities in Europe have been challenged in many ways in recent decades, since their environment has become more complex (Clark 1987; Dill & Sporn 1995; Enders 2001; Sporn 1999). For example, the expansion of higher education has resulted in a larger and more heterogeneous student population, which has challenged traditional teaching methods. As a result, universities are nowadays forced to compete in an international market, which creates a complex situation as universities are expected to cooperate with one another, i.e. with their competitors (Dill & Sporn 1995; Kristensen 1999; Sporn 1999). To be able to cope with the competitive situation, universities need

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to borrow strategies and models from business life, such as market-led resource allocation, efficiency maximisation and focus on productivity (Birnbaum 1988; Clark 1998; Enders 2001; Gumport 2000; Huisman 1998). The development and application of innovative and entrepreneurial approaches in universities that Clark (1998) and Hölttä (1995) highlight, seem to support the notion put forward by Galbraith and Gumport. On the same basis as above, there have been suggestions that universities should become learning organisations (Boyce 2003; Dill 1999; Kristensen 1999; Mulford 2000). Different studies have been conducted about universities as learning organisations but they are mostly only theoretical discussions arguing that in increasing competition universities should become learning organisations (Lorange 1997, Willcoxson 2001, Martin 1999, Patterson 1999). Most of them describe either some models or various characteristics of the learning organisation at universities: university culture, structure, learning partner model, the role of leaders and teamwork. Empirical research in this sphere is scarce.

One of the main forces of the global economy is development of knowledge and technology in the constantly changing environment. Universities are expected to be ready for the incessant process of transformations and all this has changed the essence of universities. In addition to the traditional function to generate knowledge through science and teaching, the universities have to prepare high level professionals who would be able to achieve success in the rapidly changing world. According to Lorange (1995), organizational learning, in fact, can be expected to be a key driver for any leading business school which wants to advance and to respond to the challenges of its customers. The changes are great for any leading business school and they become particularly significant when the change agenda is reconciled with the change agendas of the leading client companies with whom the school is working; hence, the need for the business school to see itself as learning organization. The key is to pick a set of leading multinational corporate clients as learning partners to enable business school to be the best learning organization. We can expect to see many business schools working hard on this over the years to come and also, as a result expect much innovation when it comes to our understanding of the business school as an organizational learning entity. Closer contacts between universities and enterprises create ever more new challenges (Lorange 1995).

In order to look for better possibilities to survive in growing competition it is needed to find out if being a learning organisation helps to increase the competitive advantage of the university. The overall background for all universities/business schools will deteriorate in the short term: the number of secondary school leavers will decrease several fold and the number of those who come to universities will be decreasing, which in turn signifies sharpening of competition between universities, endeavours to increase provision of continuing education and numbers of foreign students. Several authors have suggested that in the increasingly sharpening international competition universities should also be learning organisations (Dill 1999, Kristensen 1999, Mulford 2000).

The aim of this paper is to analyse the conformity of a business school as organisation to the criteria of the learning organisation using Tallinn School of Economics and Business Administration (TSEBA) as an example. Tallinn School of Economics and Business Administration (TSEBA) has been defined as an entrepreneurial university and one of its strategic aims is internationalisation: competitive advantages are needed for survival in the growing competition between business schools. The mission of TSEBA is to be a national centre of education, research and development in the field of economics and business administration. In TSEBA´s strategy the emphasis is laid on: 1) quality; 2) intellectual and personal development; 3) international orientation; 4) relationship with government, corporate partners and professional organisations. Will being a learning organisation give TSEBA a competitive advantage and help survive in the growing competition? Is TSEBA a learning organisation or is it possible to develop it into a learning organisation?

The paper is structured as follows: In the first section, the author provides a theoretical framework of the main authors who have investigated the characteristics of the learning organisation and also of the main learning organisation evaluation methods. The second section describes the methods used and the third section is dedicated to the main conclusions. The questionnaire survey results conducted among TSEBA staff, faculty and administration are presented and analysed.

2. Theoretical Framework

2.1. Characteristics of the Learning Organisation

The term 'learning organisation' was first used in the seventies (Argyris 1976), but the definition has been in constant change. Chris Argyris (1976) considered organisational learning from the perspective of the process in his first papers, but in his later work Argyris describes the aspect of the cognitive environment of organisational learning (Argyris 1991). In the early 1990s the ideas of the learning organisation (Senge 1990) and the learning company (Pedler et al. 1991) were described, in which the authors stressed the new role of management in their work. The manager was seen as a researcher and shaper of the organisation rather than a supervisor and an inspector (Senge 1990). The ability to learn is considered a key factor in the organisation's success, and the learning organisation as such is by no means an end result, the end result being rather an intelligent organisation or company (Edvinsson 2002, Torokoff 2008).

The terms 'organisational learning' and 'learning organisation' have been used as alternatives and seen as the same concept or even synonyms (Örtenblad 2001).*The learning organisation* is defined as a form of organisation, and the learning organisations literature as an action orientation that is geared toward using specific diagnos-

tic tools which can help to identify, promote and evaluate the quality of learning processes. *Organisational learning* means learning related activity and the process by which organisations eventually reach the ideal of a learning organisation (Easterby-Smith et al. 1999*).* The two most frequently made distinctions between the two concepts are that a learning organisation is a form of organisation and organisational learning is the activities and processes related to learning in the organisation (Örtenblad 2001; Easterby-Smith et al. 1999).

There have been several definitions and characteristics of the learning organization, which have been examined from various aspects and a number of approaches to defining learning organisation have emerged (Senge 1990; Pedler, Boydell, Burgoyne 1991; Garvin 1993; Watkins&Marsick 1993). Senge (1990) represents the systems thinking approach. He defines the learning organisation as an organisation that possesses not only an adaptive capacity but also ability to create alternative futures. Senge identifies the five disciplines considered essential for a learning organisation: systems thinking – ability to make decisions that create desired results while seeing the whole picture; personal mastery – continually develop one`s personal abilities.; mental models – deeply held internal images how the world works; building shared vision – ability to unearth shared "picture of the future" that foster genuine commitment and enrolment rather than compliance; team learning – emphasis on the learning activities of the group rather than on the development of team process (Senge 1990). From the learning perspective the definition by M. Pedler, T. Boydell & J. Burgoyne (1991) expresses the important aspects of the learning organisation: learning and continuous transformation of all its members. Characteristics of a learning organisation are revealed in providing learning opportunities, interaction with the external environment, learning support structure, in learning climate and strategy of the organisation (Pedler et al. 1991). Both Moilanen (2001) and Pedler et al. (1991) understand learning as an essential strategy aspect. An important conclusion can be drawn from this: learning is an intentional strategic process for the achievement of the organisation's objectives. From strategic perspective Garvin (1993) defines a learning organisation as "an organisation skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights. The strategic perspective of the learning organisation posits that certain managerial practices are prerequisites for becoming a learning organisation" (Garvin 1993). From integrative perspective the learning organisation is viewed as one that has the capacity to integrate people and structures in order to move toward continuous learning and change (Watkins&Marsick 1993).

The author raises a question whether any of the learning organisation theories might be appropriate for universities to conduct an empirical research. They have made another attempt to open the approach of Watkins and Marsick since this is the most frequently used questionnaire, and to study how it could be adjusted to universities.

Watkins and Marsick`s (1993, 1996) framework of the learning organisation served as the theoretical foundation for the current study. They regard the learning organisation as an organisation where individuals learn at the workplace, where organisation has an ability to remember, where through organisational climate they promote and facilitate individuals to learn and where organisation is a flexible entity. Their learning organisation model is based on two organisational constituents: people and structure as interactive components of organisational change and development. Watkins and Marsick identify seven dimensions of a learning organisation, which are 1) provide continuous learning opportunities 2) foster inquiry and dialogue 3) promote collaboration and team learning 4) create systems to capture and transform learning 5) foster movement toward a collective vision 6) connect the organisation to its external environment and 7) provide strategic leadership for learning (Watkins and Marsick 1999).

Providing continuous learning opportunities identifies that a learning organisation values various learning opportunities that support continuous learning by individuals and groups. Learning by an individual is a precondition of the organisational learning (Argyris&Schön 1996; Pedler, Boydell, Burgoyne 1991, Senge 1990, Watkins&Marsick 1993). *The learning company* is not brought about simply by training individuals; it can only happen as a result of learning at the whole organisation level; the learning company is an organisation which fosters learning of all its members and purposeful changes itself and its environment (Pedler, Boydell & Burgoyne 1991).

Organization leaders need to think how to reward people for learning and how to create such a climate where people could openly discuss mistakes and learn from them, mutually support learning, ensure that relevant resources for learning are available, encourage attitude toward the work tasks as learning opportunities (Watkins&Marsick 1993). Learning can also take place at work as the work tasks are being performed, instead of at formal courses (Örtenblad 2002). *Learning at work* can be performed in a variety of ways. One variant is that employees learn from others how to better perform their everyday work tasks. More experienced colleagues or external specialists, who are being consulted, show how the work tasks could be performed more efficiently. Another variant is that the employees learn by performing everyday work tasks. A third variant of learning at work is to teach inexperienced new-comers how to perform their work tasks by letting them begin with performing simpler tasks and gradually increase the severity, under the supervision of a tutor or mentor. Thus, the workplace does in itself work as a school, and formal courses are unnecessary (Örtenblad 2010). *Personal mastery* is the skill of learning to apply one`s personal abilities, beginning with the most valuable. Personal mastery stands for constant development of one`s future vision and treating work as a creative process: understanding the present better supports the implementation of the vision (Senge 1990).

In the university/business school context faculty and staff success depends increasingly on having opportunities for personal learning and on practicing new skills. Or-

ganizations invest in personal learning through education, training, and other opportunities for continuing growth and development. Such opportunities might include job rotation and increased pay for demonstrated knowledge and skills (Baldridge 1983). This learning is directed not only toward better educational programmes and services at the university but also toward being more adaptive, innovative, flexible and responsive to the needs of students, stakeholders, and the market, as well as giving your workforce satisfaction and the motivation to excel (Baldridge 1983). In the university context, the dimension of learning opportunities means that university provides for its personnel various learning opportunities: participation in courses, training, conferences, visits to universities abroad, refresher courses, life-long learning and that university employees are systematically trained and developed, and that opportunities are created for professional development and career of the employees. Development seminars and training courses are conducted on regular bases for all staff target groups based on university development plan, personnel policies, principles of internationalization and other strategy documents.

In order to *foster inquiry and dialogue* it is important to improve the skills of having a dialogue, debating, active listening, giving feedback and chairing teams and meetings, to use decision-making methods that take into consideration everybody's opinion (Watkins&Marsick 1996). There should also be plenty of active dialogue in an intelligent organisation. That means deliberating on different questions and problems, listening attentively to other people`s thoughts and questioning one`s own thoughts. In a dialogue, people express different views and are required to defend them. The aim is to find the best possible solution together. Dialogue helps us to see new possibilities and assists the organisation in the learning process. A true dialogue requires an open organisational culture that allows, even encourages, questions and differences of opinion (Sydänmaanlakka 2002).

Neither dialogue nor teamwork are the strongest in a university since teaching is personal and collaboration with other teachers and disciplines not always necessary. But cooperation and teamwork are both extremely important for growing into the learning organization. Universities should find ways to increase collaboration between teachers both by teaching subjects jointly and by co-writing research papers. Interdisciplinarity should be promoted in every way.

Promote collaboration and team learning is another key part of an intelligent organisation. Individual learning is important, but does not go far enough to fertilise organisational learning. It is team learning that helps us find insights that individuals would not have found by themselves. Teams are the basic units of learning. For example, efficient team work is a prerequisite of success in knowledge-intensive enterprises (Sydänmaanlakka 2002).

The learning organization values collaboration and team learning and should to a greater extent reward and encourage joint contributions as a team and group, and

take more into consideration the teams' recommendations (Watkins&Marsick 1993). According to Senge, team learning emphasises the learning activities of the group rather than the development of team process; team learning facilitates the unification of thinking and energy and creates resonance and synergy in learning. Correctly functioning feedback and continuous dialogue and discussion are essential in the process (Senge 1990).

As mentioned above, teamwork at university is problematic. It is primarily due to the fact that teaching staff is not used to working in a team, university lacks teamwork traditions and teachers are excessively absorbed in their work of individual nature. Many university employees are used to work in research teams or committees but if teamwork is to be used successfully to develop a learning organisation, training for effective teamwork must be supported by the conscious development of teamwork strategies in each new teamwork context. Rewards and performance management strategies must also be tied to effective teamwork. Team building activities, focussing on enhancing interpersonal communication, conflict resolution and problem-solving skills must involve people from the highest to the lowest levels of staffing if an institution-wide learning potential is to be created (Willcoxson 2002). In a learning university, membership is involved in the decision-making process via active participation of the employees and every employee can candidate for a representative of employees in the council of the structural entity/faculty/university. University supports teamwork and learning in a team: colleagues are important in the individual and professional development process of every individual.

To *create systems to capture and transform learning* many opportunities should be created for bilateral communication and disseminating of information, using knowledge management instruments and endeavouring towards the establishment of knowledge networks; systematically gather information that is important for the organisation (Watkins&Marsick 1993). *The learning structure* is an organic and highly decentralized structure, where the employees work in teams and are responsible not only for performing their own work tasks but also for the business throughout the entire organization. This fact makes the organization very flexible and the autonomous units that the organization consists of (that is, individuals and teams) can quickly meet the customers 'changing and unexpected needs and desires, and satisfy these (Örtenblad, 2010).

In the university context there are different opinions whether the university structure is suitable for a learning organization. Notwithstanding the optimism of some authors (Willcoxson 2002), university is a structurally rigid and inflexible organization, which is the biggest obstacle to its development into a learning organization (White 2005, Örtenblad, 2010). Just the university structure is the biggest bottleneck to its development into a learning organisation. Also White (2005) discusses the institutional obstacles to creating learning organisation in higher education. The culture

of institution of higher education is full of examples of competitive ratings and rankings, acceptances and rejections and authoritarian and hierarchical structures. Where we write, do research, or teach, we generally fly solo in our work (White 2005). According to White, adaption and innovation are difficult for institutions of higher education and they are slow to change. Most universities operate as bureaucracies where social learning is as an ideal rather than actual practice. Faculty consider themselves knowledge creators for their professions but are not usually willing or empowered to learn or create knowledge on behalf of their institutions. A surprising number of values of academic life are antithetical to the values and ethos of a learning organisation community (White 2005).

According to Willcoxson, universities have existing structures and internal freedoms that would permit their development as learning organisations. They have, however, yet to build on the concepts of interdisciplinarity and teamwork to promote ongoing learning across established internal and external boundaries (Willcoxon 2002). According to Willcoxon, university's structure will enable development of the university into a learning organisation, but a prerequisite for that is to be open, have more cooperation and teamwork.

In the university context, this dimension means also development of internal communication for better provision of its members with information and establishing of organizational values; information directly concerning work of its members is disseminated with the help of knowledge management. Learning university is an innovative organization where attention is focused on continuously upgrading and improving teaching and learning processes, on creating and distributing new knowledge.

Foster movement toward a collective vision. People should be encouraged to take responsibility for the goals and decisions concerning their work, to stimulate people design their work based on the organisation's goals in a way that would be satisfactory for them, to contribute to building and implementing a vision and strategy decentrally (Watkins&Marsick 1993). *Building shared vision* is ability to unearth shared "picture of the future" that fosters genuine commitment and enrolment rather than compliance; shared vision describes how collective discipline establishes a focus on mutual purpose. People learn to nourish a sense of commitment in a group or organisation by developing shared images of the future, they seek to create the principles and guiding practices by which they hope to get there (Senge 1990).

In the university context, all employees can participate in formulating the objectives of the university and they have a common understanding of the university mission and vision; organizational objectives support achievement of individuals' objectives. A learning university is constantly analyzing, evaluating and gives meaning to its activity, objectives and mission. A problem in the university context is the fact that members of the university often lack a common understanding of the university objectives and mission. University leaders are increasingly more aware of the need to in-

volve members of the organization in the process of creating a common vision. Common vision as an objective of organization's activity is important for the development of the organization into learning organization.

Connect the organisation to its external environment. The organization needs to encourage people more to search for answers all over the organization and encourage global thinking based on local community and clients' needs (Watkins&Marsick 1993). An organization's performance measurements need to focus on key results. Results should be used to create and balance value for your students and for your key stakeholders – the community, parents, employers, your workforce, suppliers, partners, and the public. By creating value for the students and key stakeholders, the organization contributes to society and to improving overall education performance, and it builds loyalty; education organizations need to build internal and external partnerships to better accomplish overall goals (Baldridge 1983). According to Baldridge, internal partnerships might include cooperation among senior leaders, faculty, and staff. Partnerships with faculty and staff might entail workforce development, cross-training, or new organizational structures, such as high-performance work teams. Internal partnerships also might involve creating network relationships among work units to improve flexibility, responsiveness, and knowledge sharing. External partnerships might be with other schools, suppliers, businesses, business associations, and community and social service organizations – all stakeholders and potential contributors. Strategic partnerships or alliances are increasingly important kinds of external partnerships (Baldridge 1983). The aggregate learning partner model, developed by Lorange, pictures development of partnership relations between business schools and companies as learning organisations (Lorange 1997). The aggregate learning partner model should thus ideally lead to four complementary sets of learning organization focuses at the business school, but where the research dimension should be the main driver for choice of learning partner companies: 1) Research activities-research topics both from the faculty`s and from the client organization`s point of view; 2) Discovery event patterns develop meaningful patterns of knowledge focuses which can be discussed and be expanded with the clients, based on underlying joint client interests; 3) The portfolio of open teaching programmes would be structured according to what the companies need; 4) In-company tailored programmes should reflect the specific strategic needs of each major client (Lorange 1997). A learning university is responsible for development of all society and is learning organization both for its members and for all surrounding community. In a learning university important decisions are made with consideration of the opinions of key partners, including representatives of companies who are also members in the decision-making and advisory bodies of the university. Partnership relations are developed with the alumni and the quality of education and research activity is being improved in cooperation with nationally and internationally renowned educational and research institutions.

Provide strategic leadership for learning. The *driving forces* form uniting elements of the whole learning organization. The core idea is that learning organizations will not be based or developed without conscious attention and work of the managers. The organizational side is here named managing the whole and it can best be defined by stating that a manager is taking care of, or at least being conscious of, all organization-wide systems, processes and structures which could enable or hinder learning. The individual side of managerial work, leading learners and their learning, means taking care of individuals and groups for as long as they need assistance in becoming better learners or masters of learning processes (Moilanen 2001).

In *Visionary leadership* organization's senior leaders should set directions and create a student-focused, learning-oriented climate; clear and visible values; and high expectations. The directions, values, and expectations should balance the needs of all stakeholders. Leaders should ensure the creation of strategies, systems, and methods for achieving performance excellence, stimulating innovation, building knowledge and capabilities, and ensuring organizational sustainability. The values and strategies should help guide all of the organization's activities and decisions (Baldridge 1983). The key of structural changes is in the hands of managers. It is primarily a leader`s responsibility to ensure that the structures and systems in place maximise the opportunity for organisational learning (Willcoxson, 2002).

The keys to change in structure designed to increase organisational learning are therefore university leaders› capacity and willingness to model collaborative action and inquiry, to involve all staff in the initial setting of directions, to promulgate and maintain enthusiasm for a broadly shared vision that nevertheless provides for local variation, and to cede to staff, across all levels of appointment, authority and responsibility for development and implementation of ideas. The effective leader is therefore less necessarily a charismatic visionary than a collaborating designer (of organisational values, policies, strategies and learning), a steward (who leads by explicitly and visibly serving the interests of the organisational and wider community) and a teacher (who helps others discover their assumptions about the world and develop their full potential) (Senge 1996; Tichy & Cohen 1998). Good leadership, while essential at the top, needs also to be seeded throughout the organisation. Thus, leadership training and team building activities, focusing on enhancing interpersonal communication, conflict resolution and problem-solving skills (Cummings & Worley 1997) must involve people from the highest to the lowest levels of staffing if an institution-wide learning potential is to be created.

Leadership in a learning university is activity where all people employed by the university are involved: managerial staff, teaching staff, students as well as those who are not directly involved in teaching. In a learning university, leader is a leader in learning, i.e. leads him/herself as well as others, and conditions are created by the top management for the development of the mission, vision, values, policies and strategies. A

learning university is constantly analyzing and updating the university development plan and university leaders encourage employees and students to take part in objectives setting, implementation of changes and in betterment activities, inviting them to work in work groups and decision-making bodies.

3. Methodology

In order to learn what the staff of business school thinks about their organisation as a learning organisation, the author used Watkins' and Marsick's dimensions of the learning organisation questionnaire (DLOQ). The study was carried out among the staff of the Tallinn School of Economics and Business Administration (TSEBA) of Tallinn University of Technology (a public university). The questionnaire covers all three levels of the organisation: individual, team and organisational. This instrument has depth and integrates important attributes of learning organisations (e.g. continuous learning opportunities, learning and dialogue, team learning, empowerment, systems, and leading learning). This instrument has never been used on universities and business schools and therefore it is interesting to analyse how the DLOQ fits to the business schools. The DLOQ can be used to examine areas of strength as well as weaknesses and to initiate a process of group analysis and visioning as firms strive to sculpt and mold their own version of the learning organisation. Many later researchers of the learning organisation have used in their research just Watkins' and Marsick's questionnaire (Jamali, Sidani&Zouein 2009; Basim, Sesen&Korkmazurek 2007; Hernandez&Watkins 2003). It is a structured questionnaire that fits well with P. Senge's theory of the learning organisation and has been internationally tested. The authors of the questionnaire also give to the respondents an immediate comparative feedback from the first to 43rd question in the internet. An advantage of this questionnaire is the adequate degree of generalisation of the dimensions of the learning organisation, enabling based on the survey results to phrase some values that serve as a basis of the organisation's activity.

This questionnaire was to identify opinions of staff and the development potential of TSEBA to develop into a learning organisation. The questionnaire which included 43 questions was sent to employees by e-mail and they were asked to complete the questionnaire electronically; it was also possible to complete it on paper. Comparison of the responses given by different target groups shows how similarly or differently university employees, teaching, research and managerial staff perceive learning and development at the university.

Responses from different target groups can be compared to Watkins' and Marsick's international survey scores (Watkins and Marsick 1996). International average is the average result of all organisations which have conducted the Dimensions of Learning Organisation questionnaire (Watkins and Marsick 1996). While doing so it must

be considered that these are made on the basis of private sector organisations, but the method is highly credible (Yang et al. 2004). It is important to underline that these international scores used for comparison do not represent an ideal to pursue but an average of a very big sample of very different organisations and enterprises.

Calculating the mean values for the Likert scales attempts have been made to analyse TSEBA as a learning organisation by levels and characteristics of the learning organisation. The sample of the questionnaire was the managerial staff, faculty and administrative personnel of TSEBA. The survey was conducted between 1 March and 31 March 2010. The questionnaire asked employees' opinion about learning at the organisation from three aspects: individual level, team level and organisational level. For these three levels there are comparative data of an international survey by K. E. Watkins and V. J. Marsick and of the survey carried out among Estonian Business School (EBS) staff. The employees were asked to respond in a six-point scale where one signified almost never and six almost always.

The results are presented comparatively for all seven dimensions of the learning organisation and the respondents are grouped based on their standing in the organisation's hierarchy. The results are analysed separately for managerial staff, teaching and research staff, and for administrative staff. As according to K.E.Watkins and V.J. Marsick learning at the individual, team and organisational level represents seven dimensions of the learning organisation, then more specific features were identified on the basis of which it is possible to determine the development potential of TSEBA. In order to answer the question whether and to what extent TSEBA is a learning organisation or not, all seven dimensions of the learning organisation of Watkins and Marsick will be analysed using views of different TSEBA employee groups.

4. Results

4.1. Validation of the Dimensions of the Learning Organisation

According to the groups of TSEBA employees, all seven dimensions of Watkins and Marsick questionnaire received significantly high scores (Table 1). The highest scoring dimension was *provide strategic leadership for learning* at the organizational level with 4.24 points, followed by the individual level dimension *foster inquiry and dialogue* with 3.97 points and again individual level dimension *provide continuous learning opportunities* with 3.93 points. The least points, 3.33 and 3.64 were given to the organizational level dimensions *create systems to capture and transform learning* and *foster movement toward a collective vision*.

The highest score was given to the individual level followed by the team or group level and organizational level. The higher score of the individual level can be ex-

plained by the fact that individual level characteristics are more universal and less organization specific than organizational level characteristics. Secondly, considering the higher than average educational level and nature of work of the university staff, their ego is statistically hypertrophic compared to average organization`s average employee, which is expressed in attaching importance to everything that emphasises the individuality.

Creating continuous learning opportunities is one of the key drivers in the learning organisation and mentioned most often by the authors as a precondition for the learning organisation (Pedler, Boydell, Burgoyne 1991, Watkins &Marsick 1993; Lorange 1997). Like in the university in general, there are many learning opportunities also at TSEBA: employees can attend various training courses; the organisation supports learning by all its members by delivering continuous training courses and seminars, open lectures. Analysis demonstrated that the managerial staff of TSEBA regards provision of learning opportunities in the organisation as the poorest and the teaching staff and administrative staff are more satisfied with the situation.

Regarding this dimension, TSEBA leaders need to think how to reward people for learning and how to create such a climate where people could openly discuss mistakes and learn from them, for example, to encourage people open up and not be afraid of speaking of mistakes, experiment and take risks, systematically identify the skills for future business, mutually support learning, ensure that relevant resources for learning are available, provide coherence of studies, encourage attitude toward the work tasks as learning opportunities to find appropriate data for solving the tasks and to become aware of the problems and opportunities in the environment, to ensure that remuneration systems stimulate individuals learning. As the organisational aims can be achieved through learning and learning is discussed to be a strategic activity to achieve the organisation`s objective (Pedler, Boydell, Burgoyne 1991) TSEBA leaders need to make organisational learning a strategic development component of the school.

Looking at the dimension *foster inquiry and dialogue* and at the teamwork dimension together it can be noted that teaching and research staff of TSEBA are evaluating it lowest, which can be explained by the fact that the peer-review tradition reinforces individualistic and self-assertive behaviour among professionalism and disciplines within universities and such individualism may result in minimal contact between most specialists which makes the teamwork and dialogue a challenge among teaching staff.

Consequently, TSEBA needs to encourage people ask „why" and discuss things. For fostering inquiry and dialogue dimension TSEBA needs to focus on collegial rather than individual results. It is important to improve the skills of having a dialogue, debating, active listening, giving feedback and chairing teams and meetings, to use decision-making methods that take into consideration everybody's opinion (Watkins&Marsick 1996).

	Total	Managerial staff	Teaching and research staff	Administrative staff	International average
1. provide continuous learning opportunities	3,93	3,55	4,01	4,03	3,46
2. foster inquiry and dialogue	3,97	3,95	3,71	4,22	3,41
3. promote collaboration and team learning	3,78	3,88	3,71	3,81	3,37
4. create systems to capture and transform learning	3,33	3,10	3,48	3,29	3,16
5. foster movement toward a collective vision	3,64	3,57	3,71	3,60	3,23
6. connect the organisation to its external environment	3,74	3,40	3,82	3,82	3,41
7. provide strategic leadership for learning	4,24	4,26	4,17	4,29	3,49
Total	3,81	3,67	3,81	3,87	3,36

Source: authors' calculations

Table 1: Average of learning organisation dimensions by TSEBA employees

Promote collaboration and team learning at the group or team level is one of the prerequisites for development of the university into a learning organisation expressed by openness, cooperation and teamwork (Willcoxson 2002). The managerial staff of TSEBA values collaboration and team learning in their organisation the highest, while the administrative personnel and teaching staff are also quite content with the situation.

In the team level dimension, TSEBA should to a greater extent reward and encourage joint contributions as a team and group, and take more into consideration the teams' recommendations. The other criteria of the learning organisation under this dimension such as 'teams have the freedom to adapt their goals as needed', 'teams/groups focus both on the group's task and on how well the group is working' and 'teams/groups revise their thinking as a result of group discussions or information' are quite well developed in TSEBA, or they have low development potential. Since the teaching staff consists of individualists, TSEBA should focus simultaneously on the group tasks and team work quality, teach teams to model their thinking collectively based on the most suitable objectives of the organisation; to appreciate team and group contributions and reckon with their opinion.

The first dimension at the organisation's level, *create systems to capture and transform learning,* was evaluated the lowest by TSEBA employees among all seven dimensions. Many researchers, e.g. Sydänmaanlakka (2002) and Garvin (1993) define one of the most important features of learning organisation, the ability to transfer

knowledge quickly and efficiently throughout the organisation and share the knowledge with all its members, but TSEBA received the lowest result here. The lowest result (3.33) in that dimension could be explained by the fact that sharing knowledge is most difficult task in the university mostly because of the individual and autonomous character of academic work. Radical individualism is supported by academics' strong identification with their disciplines. In order to improve this situation in the universities and also in TSEBA processes should be established for identifying and communicating best practices. Also many opportunities should be created for bilateral communication and disseminating of information, using knowledge management instruments and endeavouring towards the establishment of knowledge networks; systematically gather information that is important for the organisation. In this dimension like in the first one (*provide continuous learning opportunities*) the managers of TSEBA are most critical to their organisation. It is somehow surprising because managers need to understand that it is mostly in their hands to make the situation better and create better conditions for their employees and improve the culture and climate in the organisation. In many cases the management is not the professional one and the faculty has also the position of management and maybe they do not have so many experiences in leading people. In that case more training possibilities should be created for the management of the school.

The organizational level second dimension's (*foster movement toward a collective vision*) lowest result (3.64) shows that academics are more likely to be loyal to their discipline and its norms than to the university as a whole. The faculty is involved in this discipline and does not care about the organisation as a whole, its mission and vision. In many cases university staff is not aware of its mission and vision. But we can still say that according to our research results TSEBA teachers and research staff value movement toward a collective vision in the organisation most highly. To sum up, in order to avoid conflicts between different parts of the organisation's value chain, TSEBA needs to make efforts to align visions of all parts of the organisation and encourage taking of calculated risks.

In the dimension *foster movement toward a collective vision* people should be encouraged to take responsibility for the goals and decisions concerning their work, to stimulate people design their work based on the organisation's goals in a way that would be satisfactory for them, to contribute to building and implementing a vision and strategy decentrally. One possibility to improve the situation may be to involve all the staff of TSEBA to make a new strategy for 2010–2015. In that process all the employees will be part of the process, it will improve their knowledge about the future of the organisation where they are working.

The fact that TSEBA received 3.74 in the sixth dimension (*connect the organisation to its external environment*) confirms Clark`s conclusion that in general universities have difficulties to integrate internal processes and therefore also find it difficult

to adapt to the environment (Clark 1987). But in order to compete in the market the university/business school can not be in isolation but needs to serve the society and have overview of the market needs. TSEBA like other universities needs to develop the ability to adapt to the rapidly changing environment in order to survive in competition between universities in the market. This task will also help fulfil one of TSEBA's strategic aims – develop relationships with the government, corporate partners and professional organisations. For that purpose TSEBA needs to encourage people more to search for answers all over the organisation and encourage global thinking based on local community and clients' needs.

The fourth dimension of the organisational level (*provide strategic leadership for learning)* has been scored the highest (4.24) by TSEBA from all seven dimensions, which in turn shows the overall satisfaction of the organisation. But TSEBA has minimal development potential in the last dimension; only provision of newest information should be developed further in the organisation.

Based on the survey results we can conclude that TSEBA leaders are thinking strategically about using learning in order to generate change and for the organisation to move toward new directions or markets. Moreover, TSEBA staff is inspired and encouraged to obtain the skills needed for achieving the goals; the newest information about rivals, industrial trends and organisational guidelines have been communicated to everybody and everybody has the right to implement the organisation's vision; they are aware of the need for continuous learning; organisation's activities are interlinked with the values.

4.2. Comparison of the Opinions of the Staff of Public and Private Business Schools

In order to identify which, the public or private business schools, correspond better to the criteria of the learning organisation, TSEBA as a business school of public university and EBS as private business school are compared to each other based on the validation study of Watkins and Marsick's DLOQ, which was carried out among managerial, faculty and administrative personnel of TSEBA and EBS (Voolaid and Ehrlich 2010). The results of the questionnaire survey conducted among the employees of TSEBA and EBS are summarised in Table 2.

Comparison of the opinions expressed by the managerial staffs of the two schools demonstrates that EBS has got better results in all dimensions. The difference in this hierarchy level shows that the managerial staff of EBS appreciates their school as a learning organisation better than the public university, i.e. for them their organisation has a higher rate of learning. At the same time, one could speculate that the managerial staff of TSEBA comprises not only professional managers but scientists who might be more critical in their attitudes toward their organisation. Comparing the teaching

and research staffs' assessments, the differences between schools are smaller than in the case of managerial staff. It is noteworthy that teaching and research staff, unlike the managerial staff, regard TSEBA as a more superior learning organisation. This could be explained by the fact that most of the teaching and research staff at TSEBA are full-time employees who feel a strong connection toward their organisation. EBS, on the other hand, has few full-time employees among the teaching and research staff, most of the teaching staff members deliver lectures on an hourly basis and their principal job is elsewhere, which makes their connection to the EBS weaker. Anyway, different assessment of learning at the organisation by the managerial staff and teaching and research staff of the private school is noteworthy. Nearly equal are the attitudes of administrative staffs toward the dimensions of their employer as a learning organisation (0.05).

Dimensions	Managerial staff			Teaching and research staff			Administrative staff			Total		
	TSEBA	EBS	difference	TSEBA	EBS	difference	TSEBA	EBS	difference	TSEBA	EBS	difference
1	3,55	3,84	-0,29	4,01	3,65	0,36	4,03	3,71	0,31	3,93	3,73	0,2
2	3,95	4,51	-0,56	3,71	4,00	-0,29	4,22	4,13	0,09	3,97	4,2	-0,23
3	3,88	4,38	-0,51	3,71	3,67	0,03	3,81	4,29	-0,48	3,78	4,07	-0,29
4	3,10	3,48	-0,38	3,48	3,24	0,24	3,29	3,42	-0,13	3,33	3,37	-0,04
5	3,57	4,32	-0,75	3,71	3,63	0,08	3,60	3,71	-0,11	3,64	3,9	-0,26
6	3,40	4,55	-1,15	3,82	3,67	0,14	3,82	3,74	0,08	3,74	4,01	-0,27
7	4,26	4,50	-0,24	4,17	3,67	0,50	4,29	3,71	0,58	4,24	4	0,24
Av	3,67	4,22	-0,55	3,80	3,65	0,15	3,86	3,81	0,05	3,81	3,89	-0,08

Source: authors' calculations

Table 2: Average of learning organisation dimensions by groups of employees of TSEBA and EBS

Comparing the TSEBA and EBS staff categories between themselves, the assessment by EBS managerial staff is much higher than the respective assessment by TSEBA staff. In the opinion of two other groups of employees – teaching and research staff, and administrative staff – TSEBA is by a narrow margin a better learning organisation. According to the aggregate opinion of all employees of the two universities, EBS is slightly better in the sum of all dimensions (3.89 against TSEBA's 3.81).

Comparison of TSEBA and EBS as learning organisations did not identify any big differences between the two schools, which allows drawing a conclusion that the

learning rate at universities as learning organisations does not depend much on the ownership form. Public university (TSEBA) as a learning organisation is rated the highest, compared to other groups of employees, by employees in the group of teaching and research staff, which allows drawing a conclusion that teaching and research conditions in a public university are better than in a private university, which makes the whole organisation more capable of learning in the opinion of this staff group (Voolaid and Ehrlich 2010).

5. Conclusions and Prospects for Future Research

In the survey of two business schools (Tallinn School of Economics and Business Administration and Estonian Business School – EBS) the Watkins' and Marsick's measurement tool of learning organisations culture has been used, which allows to state that this method is appropriate for identifying the learning rate of a learning organisation and for comparing the learning rates between the staff groups. The learning rates of TSEBA and EBS received significantly high scores, which allows concluding that the university is rather a learning organisation.

According to the aggregate opinion of all employees of the two business schools (TSEBA and EBS), EBS is slightly better in the sum of all dimensions (3.89 against TSEBA's 3.81). Comparing different groups of employees it was possible to identify that the administrative and teaching-research staff of TSEBA was evaluating TSEBA as a learning organisation the highest and the managerial staff the lowest. As the management of organisation plays a key role in development of the learning organisation process it is necessary to develop the motivation among the leading team of TSEBA to develop TSEBA into a learning organisation.

During this analysis it was possible to determine the development potential of TSEBA as a learning organisation. Although all seven dimensions of the learning organisation have received higher scores from TSEBA than the international average it is still possible to develop some dimensions like 'create systems to capture and transform learning'; 'foster movement toward a collective vision and connect the organisation to its external environment'. In order to develop these dimensions TSEBA should create many opportunities for bilateral communication and for dissemination of information, use instruments of knowledge management and pursue toward the creation of knowledge networks, systematically gather important information for the organisation. In the movement toward a collective vision TSEBA needs to encourage people take responsibility for the goals and decisions regarding their work, stimulate people model their work based on the organisation's objectives in a way that would be satisfactory for them, decentrally contribute to building and implementing a vision and strategy. It is important to promote global thinking based on local community and clients' needs.

But the question remains whether TSEBA has to develop all seven dimensions at the same rate and maybe it is not necessary to develop all dimensions in a business school? For more grounded conclusions the number of investigated business schools should be increased. By using DLOQ for evaluating TSEBA as a learning organisation it turned out that TSEBA is a learning organisation in all seven dimensions by Watkins and Marsick, but it is worth investigating whether using other learning organisation research methods/models/approaches the result will be different? In order to achieve deeper knowledge and understanding of learning university criteria also qualitative research methods (e.g. in-depth interviews) should be applied. One of the future perspectives is to analyse the connections between learning and entrepreneurial university and find out if there are similarities between them.

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Appendix 4. "Organizational Learning Rate Measurement Instruments for Business Schools"

Organizational Learning Rate Measurement Instruments for Business Schools

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Abstract: The article presents new instruments for measuring the organizational learning rate of business schools as organizations. The development of a new instrument was caused by the fact that business schools are specific organizations which possess the characteristics of both public universities and business organizations, and the learning organization questionnaire developed by Watkins and Marsick, which has up to present been widely used for measuring the organizational learning, has been mainly designed for measuring the organizational learning of a business organization and in many aspects does not take the peculiarities of a business school into account. The composition, structure and length of Dimensions of Learning Organization Questionnaire (DLOQ) developed by Watkins and Marsick have been used as a basis for developing a questionnaire expedient for business schools. About 50% of the DLOQ characteristics which are the most adequate for business schools have not been changed, the rest ones have been replaced by the characteristics which consider the peculiarities of a business school. The DLOQ characteristics, which have been retained unchanged in the questionnaire, were selected on the basis of an empirical study, where the employees of the Tallinn School of Economics and Business Administration (TSEBA) had evaluated the relevance of the DLOQ characteristics for measuring the organizational learning rate of a business school as a learning organization. New characteristics, which take the peculiarities of business schools into consideration (e. g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between business school and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, creation of external partnerships and interaction on both business school and business, business school leaders' capacity and willingness to model collaborative action), were developed according to the research on universities and business schools as organizations; the mission, management and organizational structure of a business school were specifically reckoned with. On the basis of the findings a learning organization questionnaire appropriate for business schools, which will enable to measure and compare the learning rates of different business schools as organizations, was constructed.

Keywords: business school, university, organizational learning, learning rate, organizational learning measurement instruments

1. Introduction

High-quality economic and business education is one of the most important factors of economic competitiveness and sustainability, as business schools are expected to assure the graduates' competitiveness and satisfy the employers' demands, and provide their graduates with a potential for life-long learning. All that shows the high expectations and responsibility business schools have to face, and which they are capable of responding to only by continuously improving and upgrading their organization.

In practice it is solely possible when a business school meets the criteria of a learning organization. The term 'learning organization' was for the first time used in the seventies (Argyris 1976), and having been continuously improved it has developed into a cornerstone of both an organization theory and organizational development practices.

The present paper seeks to develop such learning organization instruments that would be appropriate for business schools and which take into account business schools' missions, their specific tasks and their organizational and structural peculiarities. In their previous research, in order to measure the university learning rates, the authors have used Watkins and Marsick's Learning Organization Questionnaire (Voolaid and Ehrlich 2010, 2011). Business schools have many tasks and functions in society that business organizations are usually not involved in. Therefore a question arises whether the Watkins and Marsick's questionnaire is adequate for assessing business schools as learning organizations and for objectively and comprehensively measuring their learning rate. Watkins and Marsick's questionnaire has primarily been developed for measuring the learning rate of business organizations, and it does not take into consideration the specific features of a business school, and therefore may not describe business schools as learning organizations adequately enough. To devise

specific measures for business schools the authors have, by using empirical data, modified the questionnaire developed by Watkins and Marsick, and included characteristics and components that take into account the peculiarities of a business school.

The paper is structured as follows: the second chapter of the article gives an overview of the literature on business schools as learning organizations; the third chapter deals with measuring the organizational learning rate and relevant measurement tools; the fourth chapter considers the expediency of using Watkins and Marsick's Questionnaire (DLOQ) for measuring the learning rate of business schools and the survey DLOQ carried out in TSEBA in order to ascertain characteristics applicable to business schools. The aforementioned chapter covers all DLOQ characteristics with their scores that indicate their relevance, and according to which the applicability of a characteristic in the new questionnaire will be determined. The fifth chapter presents the specific characteristics, which were developed by the authors of the article, with appropriate argumentation for each dimension (subsections 5.1-5.7). References to the literature and relevant reviews, according to which the new characteristics were developed, have been given in the beginning of the subsections which deal with DLOQ dimensions, just before presenting the new characteristics formulated by the authors.

Unfortunately the length of the article does not allow presenting the whole new questionnaire which was developed for measuring the organizational learning rate. Although, the chapters four and five cover all new characteristics (according to DLOQ dimensions), which would make it possible for the reader to easily formulate the questionnaire for measuring the organizational learning rate, and implement it in business schools.

2. Universities and business schools as learning organizations

Many authors (e.g. Baldridge 1983, Birnbaum 1988, Clark 1987) point out that universities differ from other organizations in many ways, e.g. universities are non-profit organizations, their missions tend to be more diffuse and vague; they have to meet demands of a complex mix of stakeholders - internal and external; they rely on traditions, tend to individualism, and have problems of adaptability. There have been various discussions about universities as learning organizations (Lorange 1997, Portfelt 2006, White and Weathersby 2005, Willcoxon 2002). The authors discuss different aspects in a university, which are important, if we view our universities as learning universities. The most important characteristics of a university as a learning organization are: the university structure, culture, the role of leaders and teamwork, and the role of the university in society.

Business schools are specific organizations which possess characteristics of both public universities and business organizations. In addition to common characteristics with universities, business schools also have many specific features that could be used for measuring the learning rate of business schools as organizations. Unfortunately business schools have not been much studied as learning organizations except Lorange, who has developed the aggregate learning partner model (Lorange 1997).

The aggregate learning partner model developed by Lorange pictures the development of partnership relations between business schools and companies as learning organizations. The aggregate learning partner model should thus ideally lead to four complementary sets of learning organization focuses at the business school, but where the research dimension should be the main driver for choosing learning partner companies: 1) Research activities-research topics both from the faculty`s and from the client organization`s point of view; 2) Discovery event patterns develop meaningful patterns of knowledge focuses, which can be discussed and expanded with the clients, based on underlying joint client interests; 3) The portfolio of open teaching programs would be structured according to what the companies need; 4) In-company tailored programs should reflect the specific strategic needs of each major client (Lorange 1997).

3. Learning organization measurement tools

There have been theoretical discussions about universities and business schools as learning organizations, but empirical research in this field has been rare. There is a variety of tools available for measuring and evaluating learning organizations. Through the literature review, seven such measurement instruments were identified: the Complete Learning Organization Benchmark (Mayo and Lank 1994), the Learning Company Questionnaire (Pedler et al. 1991), the Learning Environment Survey (Tannenbaum 1997), the Learning Audit (Pearn 1995), the Recognizing Your Organization

(Sarala and Sarala 1996), the Learning Organization Capability Assessment (Redding and Catalanello 1997).

The dimensions of the learning organization questionnaire (DLOQ) have been developed by Watkins and Marsick (1996) to analyze learning organizations; the authors are of the opinion that learning organizations can be developed purposefully.

K. E. Watkins and V. J. Marsick identified seven distinct but interrelated dimensions of a learning organization at the three levels. Each dimension has its own criteria (Yang et al. 2004). Watkins and Marsick identify seven dimensions of the learning organization, which are 1) provide continuous learning opportunities, 2) foster inquiry and dialogue, 3) promote collaboration and team learning, 4) create systems to capture and transform learning, 5) foster movement toward a collective vision, 6) connect the organization to its external environment, and 7) provide strategic leadership for learning.

Many researchers of the learning organization have later specifically used Watkins and Marsick's questionnaire in their research (Jamali, Sidani and Zouein 2009; Basim, Sesen and Korkmazurek 2007; Hernandez and Watkins 2003).

So far the DLOQ by Watkins& Marsick has mainly been used for business organizations and not for universities. The current study is an attempt to fulfill this gap and use the DLOQ to evaluate business schools as learning organizations.

4. Suitability and adaptation of Watkins and Marsick's characteristics of DLOQ for business schools

In order to learn whether and to what extent Watkins and Marsick's questionnaire conforms to the specificity of a business school as an organization, the authors asked the employees of the Tallinn School of Economics and Business Administration (TSEBA) to assess the importance of all learning organization characteristics in Watkins and Marsick's questionnaire for a business school as an organization. TSEBA is the most appropriate organization for testing the importance of W&M questionnaire characteristics for a business school because it has the qualities of both a university and a business school. Hence, TSEBA as an organization has the commercial component of a business school and academic components characteristic to a research institution well balanced and the judgment by TSEBA employees of the relative importance of W&M characteristics simultaneously takes into account the aspects typical to both a university and a business school. The latter fact adds greater generalization power to the judgment by the TSEBA staff. The employees of TSEBA were asked to assess the characteristics in a six point scale (1–utterly unimportant, 6–extremely important). This questionnaire, which included 43 questions, was sent to employees by e-mail and they were asked to complete the questionnaire electronically; it was also possible to complete it in paper. Approximately half of the total number of the TSEBA personnel, 63 employees in total, responded to the questionnaire. The respondents represented all levels of the organization – managerial, administrative and teaching staff. The results are presented in Table 1 by levels and dimensions. The scores of levels and dimensions are formed of the arithmetic mean of the values of respective characteristics.

The survey conducted by the authors indicated that the importance of various characteristics in Watkins and Marsick's questionnaire at the relatively high average importance for characterizing a business school as a learning organization still varies considerably. For supplementing the questionnaire, to make it better characterize a business school as a learning organization, inevitably a question arises about the structure of the questionnaire and amending or replacing individual characteristics. It is difficult to define a completely objective criterion for that.

Considering that Watkins and Marsick's questionnaire has been used for a long time to measure a learning organization, and it has quite justified itself, the authors find it expedient to maintain the division of the overall structure of the questionnaire into levels, dimensions and characteristics, and include some specific and important dimensions for a business school. Considering the need to add characteristics it would be neither appropriate nor expedient to make the questionnaire longer by retainig all the characteristics in Watkins and Marsick's questionnaire and mechanically adding specific characteristics of a business school.

The authors replace characteristics on the basis of the survey results conducted at TSEBA, at the same time not significantly changing the structure and hierarchic setup of Watkins and Marsick's questionnaire, since their objective was not to develop a completely new questionnaire but to adjust Watkins and Marsick's questionnaire to make it more suitable for measuring a business school as a learning organization. A criterion for the replacement was the median score of characteristics – 4.91. The characteristics, which received this amount or more points, were not replaced and their formulation was not changed significantly. The subsequent criterion was that not more than 50% of the questions were replaced in any of the dimensions of Watkins and Marsick's questionnaire. The questionnaire with the maintained and omitted characteristics and the scores included is presented by dimensions in Table 1 (omitted characteristics are *in italics*).

Table 1: Evaluation of Watkins and Marsick's learning organization characteristics by TSEBA employees

Individual level	5.04
1.provide continuous learning opportunities	4.95
5 In my organization, people are given time to support learning	5.14
1 In my organization, people openly discuss mistakes in order to learn from them	5.11
3 In my organization, people help each other learn	5.11
6 In my organization, people view problems in their work as an opportunity to learn	5.09
4 In my organization, people can get money and other resources to support their learning	4.91
2 In my organization, people identify skills they need for future work tasks	*4.80*
7 In my organization, people are rewarded for learning	*4.47*
2. foster inquiry and dialogue	5.13
12 In my organization, people treat each other with respect	5.63
8 In my organization, people give open and honest feedback to each other	5.26
11 In my organization, whenever people state their view, they also ask what others think	5.09
9 In my organization, people listen to others' views before speaking	5.06
10 In my organization, people are encouraged to ask "why" regardless of rank	4.97
13 In my organization, people spend time building trust with each other	*4.80*
Team or group level	4.84
3. promote collaboration and team learning	4.84
15 In my organization, teams/groups treat members as equals, regardless of rank, culture, or other differences	5.37
16 In my organization, teams/groups focus both on the group's task and on how well the group is working	5.18
17 In my organization, teams/groups revise their thinking as a result of group discussions or information collected	5.03
19 In my organization, teams/groups are confident that the organization will act on their recommendations	*4.60*
14 In my organization, teams/groups have the freedom to adapt their goals as needed	*4.46*
18 In my organization, teams/groups are rewarded for their achievements as a team/group	*4.46*
Organizational level	4.83
4. create systems to capture and transform learning	4.70
21 My organization enables people to get needed information at any time quickly and easily	5.34
24 My organization makes its lessons learned available to all employees	4.74
20 My organization uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings	4.66
23 My organization creates systems to measure gaps between current and expected performance	*4.55*

22 My organization maintains an up-to-date data base of employee skills	*4.48*
25 My organization measures the results of the time and resources spent on training	*4.43*
5. foster movement toward a collective vision	4.79
26 My organization recognizes people for taking initiative	5.00
28 My organization invites people to contribute to the organization's vision	4.97
27 My organization gives people choices in their work assignments	*4.80*
29 My organization gives people control over the resources they need to accomplish their work	*4.74*
31 My organization builds alignment of visions across different levels and work groups	*4.63*
30 My organization supports employees who take calculated risks	*4.55*
6. connect the organization to its external environment	4.71
33 My organization encourages people to think from a global perspective	5.06
37 My organization encourages people to get answers from across the organization when solving problems	4.89
36 My organization works together with the outside community to meet mutual needs	4.79
35 My organization considers the impact of decisions on employee morale	*4.57*
34 My organization encourages everyone to bring the customers' views into the decision making process	*4.51*
32 My organization helps employees balance work and family	*4.47*
7. provide strategic leadership for learning	5.12
43 In my organization, leaders ensure that the organization's actions are consistent with its values	5.51
38 In my organization, leaders generally support requests for learning opportunities and training	5.26
42 In my organization, leaders continually look for opportunities to learn	5.15
39 In my organization, leaders share up to date information with employees about competitors, industry trends, and organizational directions	5.11
41 In my organization, leaders mentor and coach those they lead	5.03
40 In my organization, leaders empower others to help carry out the organization's vision	*4.69*

5. New specific characteristics for business schools

To work out new characteristics which would take into account the specific nature of business schools the authors used studies discussing universities and business schools as organizations, taking specifically into consideration the mission, structure of management and organisation of the business schools. Further, all the seven dimensions of Watkins and Marsick's DLOQ are analyzed separately and discussed regarding to their importance in the business school context, and new specific characteristics for business schools are presented based on available studies about university and business school as an organization.

5.1 First dimension – provide continuous learning opportunities

In the business context, the dimension of learning opportunities means that an organization offers its employees diverse opportunities: participation in training courses, conferences, visiting business schools abroad, continuing education, life-long learning; university employees are systematically trained and developed; possibilities are created for the employees' professional development and career. In order to create learning organization it is important that business schools provide powerful learning environments. Learning processes that co-focus on academic/scientific methods and practice/applied connections and continuing education and learning are obviously a big challenge and a great opportunity for business schools (Sattelberger 2011).

New specific characteristics for the 1st dimension:

- In my business school, powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections are created.
- My business school keeps contributing to the development of managers` knowledge and capabilities: many continuous education opportunities are created for business school graduates.

5.2 Second dimension – foster inquiry and dialogue

Neither the dialogue nor teamwork are the strongest in business schools, since teaching is individual and collaboration with other teachers and disciplines not always necessary. In the development into learning organization, however, cooperation and teamwork are both extremely important. In a business school context, the dialogue between business school and business should be in place. Working with experienced managers stretches the capabilities and expertise of faculty and makes them more aware of real corporate problems (Canals 2010).

New specific characteristic for the 2nd dimension:

- In my business school, active dialogue between business school and business is taking place and faculty members are working in the classroom with senior executives, which make the faculty more aware of corporate problems.

5.3 Third dimension – promote collaboration and team learning

Many of the business school staff are used to working in research teams or on committees, but if teamwork is to be used successfully to develop a learning organization, training for effective teamwork must be supported by the conscious development of teamwork strategies in each new teamwork context. Teaching integrated courses and helping people to think in an integrated way is a transformational experience business schools should aim at.

New specific characteristics for the 3rd dimension:

- In a business school teaching integrated courses and helping people to think in an integrated way is supported in different ways.
- In my business school, team building activities, focusing on enhancing interpersonal communication, conflict resolution and problem-solving skills are organized for the staff.
- In my business school, rewards and performance management strategies are tied to effective teamwork.

5.4 Fourth dimension – create systems to capture and transform learning

A learning business school is an innovative organization, where the focus is on continuously upgrading and improving teaching and learning processes, on creating and distributing new knowledge. It would not therefore be a huge step to establish innovative 'microcosm groups' empowered to, for example, 1) establish a mechanism for the sharing of interdisciplinary knowledge leading to the publication of interdisciplinary research; 2) establish a mechanism for the sharing of interdisciplinary knowledge in teaching leading to the development of a full interdisciplinary course; 3) develop and implement links with industry, other education providers, and academic/industry exchange programs or 4) develop and implement the prototype of a university leadership and management system that maximizes staff involvement and the responsible use of autonomy (Willcoxson 2002).

New specific characteristics for the 4th dimension:

- In my business school, a mechanism for sharing interdisciplinary knowledge leading to the publication of interdisciplinary research is established.
- In my business school, a mechanism for the sharing of interdisciplinary knowledge in teaching leading to the development of a full interdisciplinary course is established.
- In my business school, links with industry, other education providers, and academic/industry exchange programs are developed and implemented.

- In my business school, adjustments to the program design have been made in the light of feedback from program teams and key stakeholders.

5.5 Fifth dimension – foster movement toward a collective vision

Common vision as an objective of an organization's activity is important for the development of an organization into a learning organization. Business school leaders are increasingly more aware of the need to involve members of the organization in the process of creating a common vision. All employees can participate in formulating the objectives of a business school and they have a common understanding of the business school mission and vision.

New specific characteristics for the 5th dimension:

- In my business school, members of the organization are involved in the process of creating a common vision.
- In my business school, the views are made explicit and connected with its strategy, faculty development, program design, and research initiatives.
- In my business school, all employees can participate in formulating the objectives of the business school.
- In my business school, all employees have a common understanding of the business school mission and vision.

5.6 Sixth dimension – connect the organization to its external environment

Education organizations need to build internal and external partnerships to better accomplish overall goals. External partnerships might be with other schools, suppliers, businesses, business associations, and community and social service organizations – all stakeholders and potential contributors. Strategic partnerships or alliances are increasingly important kinds of external partnership (Baldridge 1983). In a learning university and business school, important decisions are made by taking into consideration the key partners' opinions, including representatives of companies and alumni who are also members in decision-making and advisory bodies of a business school.

New specific characteristics for the 6th dimension:

- In my business school, important decisions are made with consideration of the key partners' opinions, including the representatives of companies and alumni, who are also members in decision-making and advisory bodies of the business school.
- My business school has developed a higher capability to scan the environment, and is able to act on early signals.
- In my business school, leaders are also recruited from the corporate market, and many of them have taken up their careers in companies.
- In my business school practices that are common to the corporate world have been incorporated into the daily routines.

5.7 Seventh dimension – provide strategic leadership for learning

The keys to make changes in the structure that is designed to increase the organizational learning are business school leaders' capacity and willingness to model collaborative action and inquiry, to involve all staff in the initial setting of directions, to promulgate and maintain enthusiasm for a broadly shared vision that nevertheless provides for local variation, and to cede to staff, across all levels of appointment, authority and responsibility for development and implementation of ideas (Sattelberger 2011).

New specific characteristic for the 7th dimension:

- In my business school, good governance is created by the faculty who is strongly committed to the long-term development of the school and the leaders are willing to model collaborative action and inquiry, and involve all staff in the initial setting of directions.

6. Conclusions and discussion

Analyzing business schools' special characteristics, the authors come to a conclusion that Watkins and Marsick's learning organization questionnaire (DLOQ) characteristics do not describe sufficiently the specific features of business schools and therefore possibilities to use DLOQ for measuring the business schools' learning rate are limited.

The survey conducted by the authors indicated that the importance of various characteristics in Watkins and Marsick's questionnaire at the relatively high average importance for characterizing the business school as a learning organization still varies considerably.

The higher score of the individual level can be explained by two facts. First, the individual level characteristics are more universal and less organization specific than the organizational level characteristics, and therefore also appropriate for characterizing the university learning. Secondly, considering the higher than average educational level and nature of work of the university staff, their ego is statistically hypertrophic compared to average organization's average employee, which is expressed in attaching importance to everything that emphasizes the individuality.

Lower scores than the average of the organizational level dimensions (with the exception of "*provide strategic leadership for learning*", 5.12) show clearly that this level characteristics do not sufficiently take into account the specificity of university as organization and these need to be partly replaced by those that characterize the university as an organization better.

26 characteristics out of 43 in Watkins and Marsick's questionnaire were included in the questionnaire for measuring the learning rate of business schools as organizations. In order to detect new business school specific characteristics for the questionnaire to measure business schools' learning rate, all the seven dimensions of Watkins and Marsick's DLOQ were analyzed separately and discussed regarding their importance in the business school context. As a result, the authors give 19 new specific characteristics for measuring business schools´ learning rate. New characteristics enable for measuring the learning rate to take into account specific characteristics of business schools as organizations, such as creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between business school and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, creation of external partnerships and interaction on both business school and business, business school leaders' capacity and willingness to model collaborative action. To judge the new questionnaire it requires to be tested in practice, in different business schools.

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Appendix 5. “How Business Schools as Learning Organizations Meet New Challenges: a Worldwide Study”

How Business Schools as Learning Organizations Meet new Challenges: A Worldwide Study

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Abstract: Today there are more than 12,000 known business schools (hereinafter BS) across the globe, and the number is increasing every year. This is due to increasing demand from the global student population, people at work who wish to advance their careers and employers of graduates in business and management. BSs today are facing many challenges. Despite the positive impact of BSs on society, the current financial crisis and the eroding of corporate reputations have given rise to strong criticism of BSs and their role in those events. For these reasons, BSs will have to change if they want to keep having positive impact on people, firms and societies. The paper examines the organizational learning rate of BSs worldwide and dependence on various characteristics of the BSs. The authors measured, using a special instrument (questionnaire) elaborated by them, the learning rate of 105 BSs worldwide. The structure of the measuring instrument is based on Watkins` and Marsick's learning organization questionnaire DLOQ. The questionnaire comprises three dimensions divided into seven levels, which in turn are divided into 45 characteristics. The paper analyses the dependence of the general learning rate of BSs, as well as the dependence of its individual components (dimensions and levels) on the geographical-cultural region of the school location, ownership form and the international accreditations the school has. The most reliable statistically was the dependence on school's ownership form: private capital based BSs are more learning than state or public schools. Less significant is the dependence of learning on geographical-cultural region: BSs in Eastern Europe are slightly more learning than schools in other regions. A significant correlation was missing between the possession of international accreditations and the learning rate. The characteristics that gathered low scores in the questionnaire are addressed separately. Analysis of them enables to identify weaknesses in the organisational learning of BSs, indicating the ways for improving the competitiveness of BSs.

Keywords: business school as learning organization, business school learning rate measurement instrument, organizational learning

1. Introduction

The current financial crisis and the eroding of corporate reputations have given rise to strong criticism of BSs and their role in those events. For these reasons, BSs have to change if they want to keep having positive impact on people, firms and societies (Canals, 2010). As institutions educating managers and business leaders, BSs have to rethink the role of companies in society, the job of business leaders and how to include these dimensions in their programmes. New challenges for BSs are integration, leadership development, a humanistic view of the firm, life-long learning and organizational structure (Sattelberger, 2011). The more forward-looking BSs are already beginning to implement changes to their curricula, their marketing strategies, their alliances and partnerships. They have realized that in the future the business education market will become increasingly competitive. More providers, new methods, creative strategies, global opportunities will provide a varied choice to students across the world (Cornuel, 2007). The BSs need to adopt strategies that allow them to distinguish themselves from their competitors and prove the value.

The implementation of organizational changes in BSs requires from the BS members obtaining of new skills, changing of attitudes and manners. All this happens in the process of organizational learning. BSs, as well as people, should learn to be able to change as fast as the surrounding environment requires. The learning rate of BSs as organizations has been studied insufficiently so far. The authors of this paper in their previous research have measured the learning rate of BSs in Estonia, using for that one of the most popular learning measurement instrument in the world, Watkins and Marsick's questionnaire (Watkins, Marsick, 1996). Many researchers of the learning organization have later specifically used Watkins and Marsick's questionnaire in their research (Jamali, Sidani and Zouein, 2009; Basim, Sesen and Korkmazurek, 2007; Hernandez, Watkins, 2003). It turned out that this questionnaire does not take into consideration the specific features of BSs and therefore the authors have worked out a special instrument for measuring the learning rate of BSs as organizations (Voolaid, Ehrlich 2011). Using this instrument the authors have carried out a worldwide empirical study of more than 100 BSs in 40 countries on all continents.

The paper seeks to measure the organizational learning ability of BSs worldwide, map the learning rate of these BSs as organizations, analyse it based on the levels and dimensions, identify the learning-related bottlenecks and provide a basis for increasing their competitiveness. On the basis of the empirical information BSs across the world have been positioned on the basis of different characteristics and statistical correlation between the learning rate and various criteria (e.g. ownership, accreditations, cultural differences).

The paper also provides the complete questionnaire for measuring business schools' organizational learning with the average learning rate of all 45 characteristics and its percentage differences from the average learning rate of the study (Table 1). Considering the limitations of the paper in terms of volume, a more detailed analysis of business schools learning by characteristics will be done in the future.

2. Methodology

The authors have used the Watkins' and Marsick's questionnaire for measuring the learning rate of BSs before (Voolaid, Ehrlich, 2010), but it turned out that this questionnaire does not take into consideration the specific features of BSs. Therefore the authors worked out a special BS learning rate measurement instrument (Voolaid, Ehrlich, 2011). The authors replaced the characteristics in Watkins' and Marsick's questionnaire on the basis of the conducted survey. The authors have not changed significantly the structure and hierarchic setup of Watkins' and Marsick's questionnaire, since their objective was not to make a completely new questionnaire but to adjust Watkins' and Marsick's questionnaire to make it more suitable for measuring the BSs as a learning organization. In order to detect new BS specific characteristics for the questionnaire to measure BSs' learning rate, all seven dimensions of Watkins' and Marsick's DLOQ were analyzed separately and discussed regarding their importance in the BS context. As a result, the authors provided new specific characteristics for measuring BSs´ learning rate (Voolaid, Ehrlich, 2011). Using this instrument the authors have measured the learning rate of 105 BSs in 44 countries worldwide.

The questionnaire comprising 45 questions was sent to 719 BSs by e-mail and the representative of the school had been asked to complete it electronically and received 105 responses (14,6%). The survey was conducted from 1 February to 30 April 2012.

3. Results

In general it may be stated that the organizational learning rates of BSs worldwide are quite even, with the average learning rate of a majority of the schools not differing from each other more than three points on a six-point scale, while the highest learning rate measured was 5.7 and the lowest 2.7. The average learning rate of BSs studied was 4.62, while the average rates of individual questions varied very little – from 5.09 to 3.99. The results of analyzes are provided in Table 1. The 7th dimension "Provide strategic leadership for learning" received the highest score (4.80) among the BSs worldwide. Only the question 42 "In my BS, leaders mentor and coach those they lead" in this dimension need to be improved by BS leaders. Scores in BSs are high also in the 5th dimension "Foster movement toward a collective vision" and in the 2nd dimension "Foster inquiry and dialogue". The survey results show that some improvement in the 5th vision dimension should be mostly in the question 31 "in my BS, all employees can participate in formulating the objectives of the BS" and in the 2nd dimension in question 8 "in my BS, people give open and honest feedback to each other". Definitely more learning opportunities should be created in BSs (1st dimension) and relationships with the external environment and corporate world need to be improved (6th dimension). Educational organizations need to build internal and external partnerships to better accomplish overall goals (Baldridge, 1983). The survey results indicate in the 1st dimension more powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections should be created in BSs. Like the authors, having studied many universities as learning organizations, have pointed out, and as the BSs worldwide survey demonstrated, in order for the BSs to grow more learning first of all team-working opportunities must to be improved (Willcoxson, 2001; Lorange, 1997; White and Weathersby, 2005). Training for effective teamwork must be supported by the conscious development of teamwork strategies in each new teamwork context (Voolaid, Ehrlich, 2011). But the biggest improvement is required for creating systems to capture and transform learning, to create interdisciplinarity. BSs worldwide should continuously upgrade and improve teaching and learning processes, create and distribute new knowledge (Voolaid, Ehrlich, 2011). Although the 4th dimension average was the weakest (4.44), question 26 in this dimension, "in my BS, adjustments to the program design have been made in the

light of feedback from program teams and key stakeholders" was ranked 2–3rd in the list of all questions by BS leaders worldwide. Very high rating was given also to the 6th dimension question "my BS encourages people to think from a global perspective". The lowest evaluated dimensions 18 and 19 show that BSs need to develop team learning abilities and skills. Dimensions 24, 23 and 22 show that there is also a need to create systems to capture and transform learning and knowledge and information should be made available to all employees in BSs. There is also a need for BSs to develop better connections with outside community as dimensions 37, 38, 39 were also evaluated low.

Table 1: BSs average learning rates (LR) by dimensions, levels and characteristics

	LR	% from Average	Order
Individual level	4.64	100.4	
1.dimension: provide continuous learning opportunities	4.59	99.2	
1In my business school, people openly discuss mistakes in order to learn from them	4.66	100.8	23.
2 In my business school, people help each other learn.	4.78	103.6	15.
3 In my business school, people can get money and other resources to support their learning.	4.43	95.9	35.
4 In my business school, people are given time to support learning.	4.75	102.8	17.
5 In my business school, people view problems in their work as an opportunity to learn.	4.30	93.0	39.
6 In my business school, powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections are created.	4.58	99.1	30.
7 My business school keeps contributing to the development of managers` knowledge and capabilities: many continuous education opportunities are created for business school graduates.	4.60	99.6	26.
2. dimension: foster inquiry and dialogue	4.70	101.7	
8 In my business school, people give open and honest feedback to each other.	4.51	97.6	31.
9 In my business school, people listen to others' views before speaking.	4.58	99.1	29.
10 In my business school, people are encouraged to ask "why" regardless of rank.	4.82	104.2	13.
11 In my business school, whenever people state their view, they also ask what others think.	4.47	96.8	34.
12 In my business school, people treat each other with respect.	5.09	110.2	1.
13 In my business school, active dialogue between business school and business is taking place and faculty members are working in the classroom with senior executives, which make the faculty more aware of corporate problems.	4.71	102.0	19.
Team or group level	4.48	97.0	
3. dimension: promote collaboration and team learning	4.48	97.0	
14 In my business school, teams/groups treat members as equals, regardless of rank, culture, or other differences.	4.89	105.8	8.
15 In my business school, teams/groups focus both on the group's task and on how well the group is working.	4.65	100.6	24.
16 In my business school, teams/groups revise their thinking as a result of group discussions or information collected.	4.64	100.4	25.
17 In a business school teaching integrated courses and helping people to think in an integrated way is supported in different ways.	4.67	101.1	21.
18 In my business school, team building activities, focusing on enhancing interpersonal communication, conflict resolution and problem-solving skills are organized for the staff.	3.99	86.3	45.
19 In my business school, rewards and performance management strategies are tied to effective teamwork.	4.04	87.6	44.
Organizational level	4.65	100.7	
4. dimension: create systems to capture and transform learning	4.45	96.4	
20 My business school uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings.	4.42	95.6	37.
21 My business school enables people to get needed information at any time quickly and easily.	4.60	99.5	27.
22 My business school makes its lessons learned available to all employees.	4.16	90.0	41.
23 In my business school, a mechanism for sharing interdisciplinary knowledge leading to the publication of interdisciplinary research is established.	4.11	89.0	42.
24 In my business school, a mechanism for the sharing of interdisciplinary	4.11	89.0	43.

	LR	% from Average	Order
knowledge in teaching leading to the development of a full interdisciplinary course is established.			
25 In my business school, links with industry, other education providers, and academic/industry exchange programs are developed and implemented.	4.77	103.3	16.
26 In my business school, adjustments to the program design have been made in the light of feedback from program teams and key stakeholders.	5.02	108.6	2.-3.
5. dimension: foster movement toward a collective vision	4.76	103.1	
27 My business school recognizes people for taking initiative.	4.94	107.0	6.
28 My business school invites people to contribute to the organization's vision.	4.86	105.2	10.
29 In my business school, members of the organization are involved in the process of creating a common vision.	4.85	104.9	11.
30 In my business school, the views are made explicit and connected with its strategy, faculty development, program design, and research initiatives.	4.79	103.7	14.
31 In my business school, all employees can participate in formulating the objectives of the business school.	4.48	97.0	33.
32 In my business school, all employees have a common understanding of the business school mission and vision.	4.66	100.9	22.
6. dimension: connect the organisation to its external environment	4.60	99.7	
33 My business school encourages people to think from a global perspective.	5.02	108.6	2.-3.
34 My business school works together with the outside community to meet mutual needs.	4.86	105.2	9.
35 My business school encourages people to get answers from across the organization when solving problems.	4.60	99.5	28.
36 In my business school, important decisions are made with consideration of the key partners' opinions, including the representatives of companies and alumni, who are also members in decision-making and advisory bodies of the business school.	4.73	102.4	18.
37 My business school has developed a higher capability to scan the environment, and is able to act on early signals.	4.37	94.5	38.
38 In my business school, leaders are also recruited from the corporate market, and many of them have taken up their careers in companies.	4.24	91.7	40.
39 In my business school practices that are common to the corporate world have been incorporated into the daily routines.	4.42	95.8	36.
7. dimension: provide strategic leadership for learning	4.82	104.3	
40 In my business school, leaders generally support requests for learning opportunities and training.	4.98	107.9	5.
41 In my business school, leaders share up to date information with employees about competitors, industry trends, and organizational directions.	4.69	101.5	20.
42 In my business school, leaders mentor and coach those they lead.	4.50	97.4	32.
43 In my business school, leaders continually look for opportunities to learn.	4.90	106.0	7.
44 In my business school, leaders ensure that the organization's actions are consistent with its values.	5.01	108.5	4.
45 In my business school, good governance is created by the faculty who is strongly committed to the long-term development of the school and the leaders are willing to model collaborative action and inquiry, and involve all staff in the initial setting of directions.	4.84	104.8	12.
Average	4.62		

3.1 Learning rate by Eduniversal academic zones

A major purpose of the research is, in addition to measuring the learning rates of BSs worldwide, to identify the factors that influence the learning rate. In this paper the authors analyze the dependence of the learning rate on school's geographical-cultural location (Table 2), as well as on its ownership and accreditations the school has (Tables 3, 4).

To find the learning rate's dependence on geographical-cultural location BSs were distributed into regions according to Eduniversal (Eduniversal, 2010) classification (Table 2). The table describes the average LR (hereinafter learning rate) of schools in the region on the basis of the whole questionnaire as well as its individual components (levels and dimensions), so as to get a better picture of the dependence of different aspects of the learning rates.

Table 2: BS learning rate by academic zones (by Eduniversal)

Academic zones (by eduniversal)	Average learning rate										
	Total	By level			By dimension						
		Indi-vidu-al	Team or group	Orga-nizat-ional	1	2	3	4	5	6	7
Eastern Europe (22 schools)	4.9	4.9	4.8	4.9	4.8	4.9	4.8	4.8	4.9	4.9	5.0
Far Eastern Asia (14)	4.7	4.6	4.6	4.7	4.5	4.8	4.6	4.6	4.9	4.7	4.9
Latin America (4)	4.7	4.8	4.5	4.7	4.9	4.7	4.5	4.5	4.5	4.6	5.1
North America (13)	4.7	4.7	4.3	4.8	4.6	4.7	4.3	4.3	5.2	4.7	4.9
Western Europe (39)	4.6	4.6	4.4	4.6	4.5	4.7	4.4	4.4	4.6	4.5	4.7
Eurasia&Middle East (3)	4.3	4.5	4.0	4.2	4.6	4.5	4.0	3.8	4.6	4.0	4.5
Oceania (5)	4.1	4.3	4.0	4.1	4.5	4.2	4.0	3.7	4.6	4.0	4.1
Central Asia (3)	4.0	3.8	3.8	4.1	3.8	3.8	3.8	3.9	4.2	4.0	4.4

Somewhat surprisingly, the average learning rate was the highest (4.9) in East-European BSs, followed by Far East Asia, Latin and North America, equally with 4.7 points, with Western Europe (46) slightly lagging behind. The lowest learning rate level is in Central Asia (4.0). East-European BSs have the highest average learning rate also by all levels (individual 4.9, team or group 4.8 and organizational 4.9) and dimensions 2, 3, 4 and 6 (for descriptions of dimensions see Table 1). Only in dimensions 1 and 7 the highest average learning rate is in Latin America and in dimension 5 in North America.

The higher average learning rate of East-European BSs, especially in comparison with West-European BSs, is somewhat surprising, but considering the sufficient number of schools studied within this research it cannot be regarded as accidental. Eastern Europe has been more unstable, both politically and economically, having experienced a transition from one political-economic formation to the other over the past couple of decades, i.e. socialism was replaced by capitalism. This has involved very big changes also in the higher education organization in Eastern Europe; it may be said even that BSs in the classical sense became largely possible in Eastern Europe only after the re-establishing of market economy. Due to fast changes in all society also BSs have had to learn and change fast, which explains their higher organizational learning rate compared to other regions. In regions with a more stable development, such as, for example, Western-Europe, BS have had no need for so fast and radical changes, which, as the research demonstrated, has exerted impact also on their organizational learning rate. The biggest difference in the learning rate level in comparison with West-European and North American BSs is in the Team or Group level (0.4 and 0.5 respectively), which consists of one dimension: „promote collaboration and team learning“. Obviously just this dimension is extremely important for an organization in a very rapidly changing environment. The hypothesis is confirmed also by the fact that this dimension has higher average than in Western European and North American BSs also in Far East Asia and Latin America, which are also rapidly advancing regions. North America has the leading position in dimension 5: “foster movement towards a collective vision“, which got the highest average rating among the dimensions – 5.2. Obviously it is this organizational learning component that satisfies the needs of the North-American environment. Latin America received higher average than others (4.9) in dimension 1: „Provide continuous learning opportunities” and in dimension: 7 „provide strategic leadership for learning“. However, the small number of schools in the survey would not allow drawing any significant conclusions about Latin America. The same is true about BSs in Oceania and Central Asia where the learning rates are somewhat lower than in other regions.

3.2 Organizational learning rate dependence on ownership form

It is often argued that privately owned enterprises are more effective in terms of economic performance than state-owned and publicly owned enterprises. This hypothesis was tested on the BSs learning rate, where the state-owned and public BSs were addressed together. To find out the connections the authors built a regression equation where in addition to ownership form they included such an important indicator for BSs as whether they have or not an international accreditation. Regression equations (OLS method) were made for the average of the questionnaire as well as separately for averages of all dimensions and levels as follows:

$$\ln(LR) = \beta_0 + \beta_1 OWNERSHIP + \beta_2 ACCREDITATIONS + \mu_i$$

The results of analysis are presented in Table 3, containing in addition to the regression parameters the arithmetic means of all dimensions and levels. The results demonstrate that the learning rate dependence on ownership form is statistically significant (prob.0.0787). The average learning rate of privately owned BSs as organizations (4.8) is higher than that of state-owned and public BSs (4.5). Private schools have a higher arithmetic mean of the learning rate also in all dimensions and levels (Table 3). The level that depends the most on ownership form is the first (individual) with the average rates 4.9 and 4.5 respectively (prob.0.0208). Dependence of both of the individual level dimensions (1st „provide continuous learning opportunities“, prob.0.0122 and 2nd „foster inquiry and dialogue“, prob. 0.0626) on ownership form is also noteworthy. The significance of the team or group level dependence is smaller (prob.0.0927). The difference in the organizational level is statistically insignificant (prob.0.1541).

Hence it may be said that the biggest learning rate difference between private and state/public BSs is related with the individual level – private schools have a higher learning rate. A reason may be that a profit oriented private capital based organization can better motivate the learning by their members than state or public organizations. At the same time, the difference in the learning rate may be caused also by smaller guarantees for individuals in the organization and the ensuing greater uncertainty for the future, which makes one constantly improve the individual learning level. Considering the privately owned BSs orientation to profit it may be assumed that the school owners and management are eager to and focused on raising the learning level of all members of the organization, since the school's competitiveness is at stake. State and public schools are somewhat more inert in the development of the individual dimension of organizational learning.

Table 3: BS learning rate by ownership form

	State/ public	Private	Ownership (public-1, private-2)				
	average	average	Coefficient	Std. Error	t-Statistic	Prob.	R-squared
Total	4.4750	4.7889	0.285191	0.160471	1.777214	0.0787	0.059421
Individual level	4.4597	4.8533	0.355934	0.151491	2.349532	0.0208	0.103566
Dimension 1	4.3929	4.8259	0.394307	0.154392	2.553934	0.0122	0.113478
Dimension 2	4.5376	4.8852	0.311165	0.165133	1.88433	0.0625	0.075538
Team or group level *(Dimension 3)*	4.3078	4.6477	0.322007	0.189646	1.69794	0.0927	0.038489
Organisatio-nal level	4.5214	4.7893	0.24127	0.167966	1.436424	0.1541	0.042967
Dimension 4	4.3272	4.5714	0.226494	0.191138	1.184979	0.2389	0.022806
Dimension 5	4.6694	4.8690	0.158347	0.187173	0.845991	0.3996	0.045066
Dimension 6	4.4389	4.8160	0.349754	0.179031	1.953591	0.0536	0.059576
Dimension 7	4.6976	4.9326	0.213153	0.16815	1.267635	0.208	0.031624

Statistically significant at the organizational level (prob.0.0536) is only dependence of the 6th dimension „connect the organization to its external environment“. Differences in other dimensions, like in the total level, are statistically insignificant and although arithmetically the private BSs' learning rate is somewhat higher, it might be said that private ownership does not provide a definite advantage to the organizational level of learning. Comparison of the average rates of organizational learning still is

clearly in positive dependence on ownership – this decreases, however, from the first to the third level.

3.3 Learning rate dependence on BS accreditations

Accreditation is one of the value proposition, and measure for success for BSs. Agencies such as AACSB in the USA, EFMD with its EQUIS and EPAS in Europe and AMBA in the UK offer professional accreditations for BSs and their certification is viewed as a valuable quality rating (and associated marketing tool) by many BSs. This is clear from web-site evidence showing that many leading BSs trumpet their ability to gain the „triple-crown" of accreditation (from AACSB, AMBA and EQUIS) as a signal of their high quality and value to potential students (Howard, 2007).

The dependence of the learning rate on accreditations was studied with the same regression analysis as the dependence on ownership. The results of analysis are provided in Table 4. Although the BSs which have an accreditation have a higher arithmetic mean of the learning rate at all levels and dimensions, the regression results show that the impact of accreditations on the whole is statistically insignificant (prob.0.1371). Notwithstanding that the average learning rate does not indicate any dependence on whether the BS has international accreditations or not, the dependence of individual learning components is different. The possession of accreditations quite obviously is related with the individual learning level (prob.0.0394) and with both dimensions of this level (descriptions of the dimensions, see Table 1). The results allow drawing a conclusion that the organizational learning ability at the individual level is important for getting and keeping accreditations. Somewhat surprisingly, the differences in other dimensions and levels are not statistically significant.

Table 4: BS learning rate by accreditations

	With accredi-tations	Without accredi-tations	Accreditations (with-1, without-0)				
	average	average	Coefficient	Std. Error	t-Statistic	Prob.	R-squared
Total	4,7114	4,4923	0,23942	0,159693	1,49925	0,1371	0,059421
Individual level	4,7589	4,4533	0,314742	0,150757	2,087738	0,0394	0,103566
Dimension 1	4,7068	4,4031	0,323606	0,153644	2,106205	0,0378	0,113478
Dimension 2	4,8197	4,5119	0,3044	0,164333	1,852343	0,067	0,075538
Team or group level *(Dimension 3)*	4,5362	4,3948	0,149199	0,188727	0,790555	0,4311	0,038489
Organizational level	4,7282	4,5343	0,222634	0,167152	1,331928	0,186	0,042967
Dimension 4	4,5045	4,3793	0,148256	0,190212	0,779425	0,4376	0,022806
Dimension 5	4,8720	4,6012	0,344672	0,186266	1,850423	0,0673	0,045066
Dimension 6	4,6952	4,4694	0,228469	0,178164	1,282352	0,2028	0,059576
Dimension 7	4,8852	4,7242	0,182297	0,167335	1,089413	0,2787	0,031624

It is difficult to draw conclusions about the correlation looseness between the learning rate and possession of accreditations. The authors hypothesise that the BS which have accreditations as a rule are at a higher level than others and hence have a higher learning rate also. Attention should be focused on the reasons why this is not so in reality. A possible explanation is that a BS applying for an accreditation is more motivated to be learning than a BS which already has got the accreditation. This research examined all major BS international accreditations together; in the future it would be interesting to analyse the impacts of different accreditations on the total learning rate of BS as well as on its individual dimensions.

4. Conclusions

The authors investigated 105 BSs across the world using a special instrument developed by them for measuring the organizational learning in BS, which is based on Watkins` and Marsick`s organizational learning model. Based on the model, the questionnaire covered all organizational learning aspects, comprising three levels, which in turn were divided into seven dimensions and 45 questions.

The research measured the learning rate and structure of BSs and identified the strengths and weaknesses in the organizational learning ability of BSs. Also the dependence of the BS learning rate on the geographical-cultural location, ownership and possession of international accreditations was measured.

In general it may be stated that the organizational learning rates of BSs worldwide are quite even, with the average learning rate of a majority of the schools not differing from each other more than three points on a six-point scale, while the highest learning rate measured was 5.7 and the lowest 2.7. The average learning rate of BSs studied was 4.62, while the average rates of individual questions varied very little – from 5.09 to 3.99. The highest average score (4.08) was received by the 7th dimension: „provide strategic leadership for learning" and lowest (4.44) by the 4th dimension: „create systems to capture and transform learning". The questions that received the least points were from several dimensions, which enabled to conclude that the organizational learning weaknesses of BSs are not related with one or a couple of specific aspects of learning. However, a more detailed analysis of the questions shows that there is a need to develop team learning abilities and skills, as well as to improve ability to create a system to capture and transform learning and knowledge.

To measure the BS learning rate dependence on geographical-cultural location the schools were grouped into zones proposed by Eduniversal. The highest learning rate was discovered in East-European BSs (4.9), which in the authors' opinion indicates that BSs in Eastern Europe respond to very fast and radical changes in the operating environment that have taken place in Eastern Europe over the past decades, with increased organizational learning ability. Eastern Europe was followed with equal scores (4.7) by Far East Asia, Latin America and North America. Western Europe was fourth. The smallest average score were collected by Central Asia BSs.

Investigation of the learning rate dependence on ownership form revealed that privately owned BSs are more learning than public or state-owned BSs (average learning rate 4.8 and 4.5 respectively, prob.0.0787). Statistically significant was the difference at individual and team or group level, insignificant is the difference at the organizational level. The better learning ability of privately owned BSs may have several reasons; the authors believe the most important are the greater dependence of private schools on external environment and the small or non-existent state financing, inducing privately owned Bs to react to changes in the environment faster and more flexibly, which in turn has a positive impact on the learning ability. Private schools often are also profit earning organizations with owners interested in higher learning ability for the sake of profit and therefore invest in this.

Statistically significant correlation was not found between the international accreditations and learning rate (prob.0.1371). However, there is a correlation between the possession of accreditations and the individual level of learning, and both dimensions of that level are also dependant.

Information on the BS learning rate would help, in the opinion of authors, to analyse and improve BSs as organizations and as a result increase their global competitiveness. Hence the BSs themselves should be interested in investigating their organizational learning and where necessary, also perfect the measuring instrument.

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Appendix 6.

ELULOOKIRJELDUS

1. Isikuandmed

Ees- ja perekonnanimi	Karen Voolaid
Sünniaeg ja -koht	22.07.1972 Märjamaa
Kodakondsus	eesti

2. Kontaktandmed

Aadress	Akadeemia 3, Tallinn, 11712, Eesti
Telefon	+372 6203537
E-posti aadress	karen.voolaid@ttu.ee

3. Hariduskäik

Õppeasutus (nimetus lõpetamise ajal)	Lõpetamise aeg	Haridus (eriala/kraad)
EBS (Estonian Business School)	2001	Ärijuhtimine/ magistrikraad
Tartu Ülikool	1996	Saksa filoloogia/ bakalaureusekraad
Märjamaa Keskkool	1990	Keskharidus (hõbemedal)

4. Keelteoskus (alg-, kesk- või kõrgtase)

Keel	Tase
Eesti	kõrgtase
Inglise	kõrgtase
Saksa	kõrgtase
Rootsi	kesktase
Vene	kesktase

5. Täiendusõpe

Õppimise aeg	Täiendusõppe teema ja õppe korraldaja
1995/96, sügis	University of Augsburg, Saksamaa; Hans Seideli stipendium (5 kuud); bakalaureusetöö
1994/95, sügis	Albert Ludwigs University Freiburg, Saksamaa; DAAD stipendium (5 kuud); saksa keele õpingud
1994, kevad	Hampnäs Folkhögskola, Rootsi; Svenska Institutet i Stockholm, stipendium (5 kuud); rootsi keele õpingud

6. Teenistuskäik

Töötamise aeg	Tööandja nimetus	Ametikoht
2006–…	Tallinna Tehnikaülikool, Majandusteaduskond	Dekanaadi direktor, Rahvusvaheliste programmide keskuse juhataja
1997–2004	Estonian Business School	MBA programmijuht

7. Teadustegevus:

Publikatsioonid:

Voolaid, K. and Ehrlich, Ü. (2012). How Business Schools as Learning Organizations Meet new Challenges: a Worldwide Study. F. Chaparro (Ed.). Proceedings of the 9th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning (286–294). Bogota, Colombia: Academic Publishing International.

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Ling, H., Venesaar, U. and Voolaid, K. (2009). Assessing the Results of Entrepreneurship Training through Changes in Metacognitive Awareness of Participants. ESU Conference on Entrepreneurship, September 8-13th, Benevento, Italy.

8. Kaitstud lõputööd

Magistritöö:
Karen Voolaid. MBA programmide võrdlev analüüs neljas Eesti ülikoolis. Juhendaja Kaire Kroos. Estonian Business School, 2001.

Bakalaureusetöö:
Karen Voolaid, *Deutsch-estnische terminologische Wortliste des Völker-und Europarechts und der Rechtsgeschichte (mit einer theoretischen Einleitung über den gegenwärtigen Status der theoretischen und praktischen Lexikographie und der Wörterbücher)*. Juhendaja Karl Lepa. Tartu Ülikooli filosoofiateaduskond, 1996.

9. Teadustöö põhisuunad

Organisatsiooni arendamine ja õppiv organisatsioon

Ärikoolide juhtimisteooria ja -praktika
Ettevõtlusõppe metakognitiivsus

10. Teised uurimisprojektid

Tasuvusuuring (CBA) ühistranspordi teenuse pakkumise parandamiseks Lääne-Harjumaal ja Läänemaal (2011)

Appendix 7.

CURRICULUM VITAE

1. Personal data

Name	Karen Voolaid
Date and place of birth	22 July 1972, Märjamaa
Citizenship	Estonia

2. Contact information

Address	Akadeemia 3, Tallinn, 11712, Estonia
Phone	+372 6203537
E-mail	karen.voolaid@ttu.ee

3. Education

Educational institution	Graduation year	Education (field of study/degree)
EBS (Estonian Business School)	2001	MBA degree, specialization in Management
University of Tartu	1996	bachelor degree in German philology
Märjamaa High School	1990	silver medal awarded

4. Language competence/skills (fluent, average, basic skills)

Language	Level
Estonian	fluent
English	fluent
German	fluent
Swedish	average
Russian	average

5. Special Courses

Period	Educational or other organisation
1995/96, autumn	University of Augsburg, Germany; Hans Seidel scholarship (5 months); Bachelor thesis
1994/95, autumn	Albert Ludwigs University Freiburg, Germany; DAAD scholarship (5 months); German language studies

1994, spring	Hampnäs Folkhögskola, Sweden; Svenska Institutet i Stockholm, scholarship (5 months) ; Swedish language studies

6. Professional Employment

Period	Organisation	Position
2006–…	Tallinn University of Technology, Tallinn School of Economics and Business Administration	Director of the Dean`s Office, Head of the Centre for International Programs
1997–2004	Estonian Business School	MBA Program Manager

7. Scientific work

Publications:

Voolaid, K. and Ehrlich, Ü. (2012). How Business Schools as Learning Organizations Meet new Challenges: a Worldwide Study. F. Chaparro (Ed.). Proceedings of the 9th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning (286–294). Bogota, Colombia: Academic Publishing International.

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Ling, H., Venesaar, U. and Voolaid, K. (2009). Assessing the Results of Entrepreneurship Training through Changes in Metacognitive Awareness of Participants. ESU Conference on Entrepreneurship, September 8–13th, Benevento, Italy, 2009.

8. Defended theses

Master's Degree:
MBA degree in the world and in Estonia: comparative study of MBA programmes at four Estonian universities and the role of an MBA degree in the local labour market. Supervisor Kaire Kroos. Estonian Business School, 2001.

Bachelor of Science:
Karen Voolaid, *Deutsch-estnische terminologische Wortliste des Völker-und Europarechts und der Rechtsgeschichte (mit einer theoretischen Einleitung über*

den gegenwärtigen Status der theoretischen und praktischen Lexikographie und der Wörterbücher). Supervisor Karl Lepa. Tartu University, 1996.

9. Main areas of scientific work/Current research topics

Organizational development and learning organization
Business schools management theory and practices
Metacognition of entrepreneurship studies

10. Other research projects

Cost-Benefit Analysis of Improvement of Public Transport Service in Lääne-Harjumaa and Läänemaa County (2011)

KOKKUVÕTE

Ärikoolide organisatsioonilise õppivuse mõõtmine

Teadmistepõhises majanduses on äärmiselt oluline, et kõrgkoolidel oleksid teadmised ja oskused, mis võimaldaksid neil olla haridusturu üha tihenevas konkurentsis jätkusuutlik ja keskkonnas toimuvatele muudatustele paremini reageerida. On oluline, et majandus- ja äriharidus tagaks lõpetajate konkurentsivõime tööjõuturul, vastaks tööandjate nõudmistele ja valmistaks lõpetajaid ette elukestvaks õppeks. Eelnimetatud ülesanded näitavad kujukalt ärikoolidega seotud ootusi, millele ärikoolid suudavad edukalt vastata ainult oma organisatsiooni pidevalt täiustades.

Tulevikus muutub konkurents äriharidusturul veelgi tihedamaks: lisandub õppimisvõimalusi, suureneb ärikoolide hulk, võetakse kasutusele uued meetodid ja strateegiad, globaliseeruvad võimalused. Kõiki neid aspekte silmas pidades peavad ärikoolid leidma strateegia, mis annab neile konkurentsieelise. Organisatsiooniliste muutuste elluviimine ärikoolides nõuab organisatsiooni liikmetelt uute oskuste omandamist ja hoiakute muutmist organisatsioonilise õppimise käigus. Ärikoolid seisavad ülesande ees õppida muutuma sama kiiresti kui ümbritsev keskkond. Ülesande täitmise eeltingimuseks on piisava organisatsioonilise õppimisvõime olemasolu. Ärikoolide kui organisatsioonide õppivust ei ole seni küllaldaselt uuritud.

Käesoleva doktoritöö üheks oluliseks eesmärgiks on töötada välja spetsiaalne, universaalselt kasutatav ärikoolide organisatsioonilise õppivuse uurimise ja mõõtmise instrument. Töös analüüsitakse nii ärikoolide organisatsioonilise õppivuse kui ka selle üksikute komponentide (tasemete ja dimensioonide) sõltuvust ärikooli geograafilis-kultuurilisse regiooni kuuluvusest, omandivormist ja koolidele omistatud rahvusvahelistest akrediteeringutest.

Doktoritöö põhineb viiel avaldatud teadusartiklil, mille ühendavaks teemaks on ärikoolide organisatsiooniline õppimine. Teadusartiklid keskenduvad organisatsioonilise õppimise kolmele aspektile. Esimene aspekt on seotud ärikoolide organisatsioonilise õppivuse taseme mõõtmise ja võrdlemisega nii teiste äriorganisatsioonide kui ka Eesti ülikoolidega, kasutades selleks Watkinsi ja Marsicki mõõtmisinstrumenti. Teine aspekt käsitleb ärikoolide eripära arvestava organisatsioonilise õppivuse mõõtmise võimalusi, hõlmates ka spetsiaalse ärikoolide õppivuse mõõtmise instrumendi väljatöötamist. Kolmas aspekt on maailma ärikoolide organisatsioonilise õppivuse taseme mõõtmine uue mõõtmisinstrumendiga ja saadud tulemuste põhjal organisatsioonilise õppivuse taseme sõltuvuse väljaselgitamine ärikoolide erinevatest tunnustest. Töö esimesel etapil uuriti ärikoolide organisatsioonilist õppivust Eesti majandus- ja äriharidust andvate kõrgkoolide näitel, kasutades selleks üldtunnustatud Watkinsi ja Marsicki organisatsioonilise õppivuse mõõtmise instrumenti. Tulemused näitavad, et TTÜ majandusteaduskonna ja EBSi organisatsioonilise õppivuse taseme kõik dimensioonid on rahvusvaheliste äriorganisatsioonide õppivuse keskmisest kõrgemad, mis kinnitab, et ärikool on keskmisest õppivam

organisatsioon. Edasiste uuringute tulemusel selgus, et organisatsiooni õppivuse tase sõltub kooli turul osalemise määrast. Küsimustiku seitsme dimensiooni ja kõigi küsitletud töötajarühmade kaupa on kõrgharidust andva institutsiooni turul osalemise ja organisatsioonilise õppivuse taseme vahel positiivne sõltuvus. Uuringu põhjal saab teha ka järelduse, et organisatsiooni õppimisvõime ei sõltu ainuüksi omandivormist, sest eraülikool EBS ja avalik-õigusliku ülikooli TTÜ majandusteaduskond on sarnasema organisatsioonilise õppivuse tasemega kui TTÜ keemia- ja mehhaanikateaduskonnad.

Watkinsi ja Marsicki mõõtmisinstrument, mida doktoritöö esimeses ja teises artiklis kasutatakse organisatsioonilise õppivuse mõõtmisvahendina, osutus sobivaks ärikoolide õppivuse võrdlemisel nii teiste äriorganisatsioonide kui ka ülikoolide teiste teaduskondadega, millel on erinev turul osalemise määr. Samas ei ole Watkinsi ja Marsicki instrument piisav ärikoolide kui spetsiifiliste organisatsioonide õppivust määravate tunnuste mõõtmiseks ja erinevate ärikoolide organisatsioonilise õppivuse taseme omavaheliseks võrdlemiseks. Süüvimine valdkonna teoreetilistesse seisukohtadesse ja erialakirjandusse ning igapäevane praktiline juhtimistegevus näitasid, et ärikoolidel kui organisatsioonidel on palju spetsiifilisi tunnuseid, mida Watkinsi ja Marsicki küsimustik mõõta ei võimalda. Seda arvestades töötas autor välja ärikoolide organisatsioonilise õppivuse mõõtmiseks ärikoolide eripära arvestava uue mõõtmisinstrumendi. Töö autor koostas 19 uut ärikoolide spetsiifikat arvestavat tunnust. Uued tunnused on akadeemiliste/teaduslike meetodite ja praktika seostele keskenduva õppimist soodustava õpikeskkonna ja õppimisprotsessi loomine, ärikooli ja ärisektori vaheline aktiivne dialoog, integreeritud kursuste õpetamine, erialadevaheliste teadmiste jagamise mehhanism, ühtse visiooni loomise protsessi kaasamine, suhete arendamine väliskeskkonna ja ettevõtetega ning nende kaasamine ärikooli tegevusse, ärikooli juhtide võime ja tahe teha koostööd ja kaasata partnereid.

Uue ärikoolide eripära arvestava küsimustiku loomisel kasutati Watkinsi ja Marsicki küsimustiku ülesehitust, pikkust, struktuuri ja TTÜ majandus-teaduskonnas tehtud Watkinsi ja Marsicki küsimustiku tunnuste olulisuse uuringut ärikoolile kui õppivale organisatsioonile. Uus ärikoolide küsimustik koosneb 50% ulatuses ärikoolidele suhteliselt olulisematest Watkinsi ja Marsicki küsimustest, ülejäänud Watkinsi ja Marsicki küsimused on asendatud uute, autori koostatud ärikoolide eripära arvestavate küsimustega.

Uus, ärikoolide jaoks loodud spetsiaalne organisatsioonilise õppivuse mõõtmise instrument koosneb kolmest tasemest, mis omakorda on jaotatud seitsmeks dimensiooniks ja 45 tunnuseks, mis hõlmavad ärikooli kui õppiva organisatsiooni olulisi aspekte.

Uue küsimustikuga uuris autor 44 riigis asuva 105 maailma ärikooli õppivust. Uuringust selgus, et ärikoolides on vaja luua rohkem õppimisvõimalusi ning parandada ja arendada suhteid ettevõtetega. Kõige rohkem aga on vaja soodustada teadmiste jagamist ja parandada meeskonnatööd.

Peale maailma ärikoolide organisatsioonilise õppivuse taseme mõõtmise uuris autor ka õppivust mõjutavaid tegureid. Uuringu tulemusena selgus, et

ärikoolide õppivus sõltub kooli asukohamaa geograafilis-kultuurilisest regioonist. Kõige kõrgema organisatsioonilise õppivuse tasemega olid Ida-Euroopa ärikoolid, millele järgnesid Kagu-Aasia, Ladina- ja Põhja-Ameerika regioonide ärikoolid ning Lääne-Euroopa ärikoolid. Kõige madalama tulemuse said Kesk-Aasia ärikoolid. Ida-Euroopa ärikoolide kõrgemat organisatsioonilise õppivuse taset võrreldes teiste regioonide koolidega võib selgitada sellega, et ühiskonna kiirete muutuste tõttu pidid Ida-Euroopa ärikoolid õppima ja muutuma väga kiiresti. Ida-Euroopa ärikoolide organisatsioonilise õppivuse taseme kõige suurem erinevus Lääne-Euroopa ja Põhja-Ameerika ärikoolidega võrreldes on meeskonnatöötasand, mis koosneb ühest dimensioonist „soodustada meeskonnatööd ja ühispanustamist“. Just see dimensioon on organisatsioonile kiiresti muutuvas keskkonnas väga oluline.

Maailma ärikoolide hulgas korraldatud uuringu tulemused näitavad ka, et organisatsioonilise õppivuse tase sõltub omandivormist. Eraomandis olevate ärikoolide organisatsioonilise õppivuse tase on kõrgem avalik-õiguslike ärikoolide omast. Eraomandis olevate ärikoolide kõrgemat organisatsioonilist õppivuse taset saab autori arvates selgitada sellega, et erakapitalil põhinevad ärikoolid sõltuvad rohkem väliskeskkonnast, neil puudub riiklik rahastus ja seetõttu on nad sunnitud reageerima keskkonnamuutustele kiiremini ning on kokkuvõttes paindlikumad. Kõik need tegurid mõjutavad positiivselt ka õppivuse taset.

Uuringu tulemusena selgus veel, et ärikooli õppivuse tase ei sõltu koolile omistatud rahvusvahelise akrediteeringu olemasolust.

Informatsioon ärikoolide organisatsioonilise õppivuse taseme kohta aitab autori arvates analüüsida ja arendada ärikoole kui organisatsioone ning parandada selle tulemusena nende rahvusvahelist konkurentsivõimet.

Uue spetsiaalse ärikoolide organisatsioonilise õppivuse mõõtmisinstrumendi abil on võimalik ärikoole omavahel võrrelda. Ärikoolid saavad kasutada uut väljatöötatud küsimustikku juhtimisinstrumendina organisatsiooni arendamisel ja õppivuse parandamisel. Ärikoolidel on võimalus hakata mõõtma oma õppivust ning võrdlema seda nii omaenda varasemate tulemuste kui ka teiste ärikoolidega. Doktoritöös kogutud rohke empiiriline materjal võimaldab edaspidi uurida ärikoolide õppivuse tunnuste ja dimensioonide vahelisi seoseid ning jätkuvalt välja selgitada, missuguseid tunnuseid määrab organisatsiooni väliskeskkond ja millised organisatsioon ise.

ABSTRACT

Measurement of Organizational Learning of Business Schools

The thesis is based on five independent research papers, which are connected by a common theme – organizational learning of business schools. The research papers focus on three aspects of organizational learning. The first aspect relates to the organizational learning rate of business schools and its comparison with average learning rate of business organizations and of Estonian universities using Watkins and Marsick's measurement instrument (DLOQ). The second aspect is devoted to how to measure the organizational learning rate of business schools as specific organizations and development of the new special BS learning rate measurement instrument (BSLOQ). The third aspect is about measuring the learning rate of business schools worldwide and its dependence on various characteristics of the business schools using the new special business school learning rate measurement instrument elaborated by the author.

The results of the survey in the first research paper indicate that the learning rates at TSEBA and EBS, which were surveyed using Watkins and Marsick's DLOQ, were superior to the international average (Watkins and Marsick, 1996) in all dimensions of the learning organization and in all groups of employees, which allows concluding that university is rather a learning organization.

The research results of the second research paper show that the participation rate in the market has a sizable impact on the organization's learning rate. One can claim that the rate of participation in the market of a higher education institution and the organizational learning rate of the same institution are positively correlated.

Watkins and Marsick's measurement instrument, DLOQ, which was used in the first and second research paper, was suitable for comparing the learning rate of universities/business schools to those of other business organizations, as well as departments of other higher schools which have a different market participation rate. However, it is not specific enough for studying the organizational learning of business schools and comparing the business schools' learning rates. The author went deep into the theoretical aspects of the area and special literature and found everyday practical management to reveal that business schools have many specific characteristics which the questionnaire used by Watkins and Marsick does not measure.

On that ground the author worked out a special BS learning rate measurement instrument (BSLOQ). She replaced the characteristics in Watkins and Marsick`s questionnaire on the basis of the survey conducted by her. She did not significantly change the structure and hierarchic setup of Watkins and Marsick` s questionnaire since the objective was not to make a completely new questionnaire but to modify Watkins and Marsick`s questionnaire to make it more suitable for measuring the BSs as learning organizations. The new

characteristics which reflect the specific character of business schools (e. g. creation of powerful learning environment and learning processes that co-focus on academic/scientific methods and practice/applied connections, active dialogue between business school and business sector, teaching integrated courses, a mechanism for sharing interdisciplinary knowledge, involvement in the process of creating a common vision, development of external partnerships and interaction on both business school and business, business school leaders' capacity and willingness to model collaborative action) were developed on the basis of the research on universities and business schools as organizations; the mission, management and organizational structure of a business school were specifically reckoned with. As a result, the author provided 19 new specific characteristics for measuring BSs´ learning rate and on the basis of these, drafted a new questionnaire that reflects the specific features of business schools. The new special business school learning rate measurement instrument, BSLOQ, complies with the structure of Watkins and Marsick's questionnaire: it consists of three levels, which in turn are divided into 7 dimensions and 45 characteristics addressing all learning aspects of BS as organization.

Using the new special BS learning rate measurement instrument the author measured the learning rate of 105 business schools in 44 countries all over the world. The average learning rate of business schools surveyed was 4.62 on the 6-point scale, while the average rates of individual characteristics varied from 3.99 to 5.09. The characteristics that received the least points were from several dimensions, which enabled to conclude that the organizational learning weaknesses of BSs are not related to one or a couple of specific aspects of learning. However, a more detailed analysis of the characteristics shows that there is a need to further develop team learning abilities and skills, as well as to improve the ability to create a system to capture and transform learning and knowledge.

The most reliable statistically was the dependence on school`s ownership form: private capital based business schools are more learning than state or public schools. To measure the BS learning rate dependence on geographical-cultural location the schools were grouped into zones proposed by Eduniversal. The highest learning rate was discovered in East-European BSs, which in the author's opinion indicates that BSs in Eastern Europe respond very fast to radical changes in the operating environment that have taken place in Eastern Europe over the past decades with increased organizational learning ability. A significant correlation was missing between the possession of international accreditations and the learning rate.

Information on the BS learning rate would help, in the opinion of the author, to analyse and improve BSs as organizations and as a result increase their global competitiveness.

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