

DISSERTATIONES RERUM OECONOMICARUM
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ANNE AIDLA

The impact of individual and organisational
factors on academic performance in Estonian
general educational schools



The Faculty of Economics and Business Administration, University of Tartu,
Estonia

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THE LIST OF AUTHOR'S PUBLICATIONS AND CONFERENCE PRESENTATIONS

I. Chapters in monographs

1. **Aidla, A., Vadi, M.** (2006). Relationships between organizational culture and performance in Estonian schools with regard to their size and location, *National and International Aspects of Organizational Culture*, pp. 147–171, Tartu: Tartu University Press.
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2. **Aidla, A., Vadi, M.** (2007). Relationship between Organizational Culture and Performance in Estonian Schools with Regard to their Size and Location, *Baltic Journal of Economics*, 7(1), pp. 3–17.

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1. **Aidla, A.** Performance perspective on the relationships between school administrations' attitudes and national examination results, *Management Theory and Practice: Synergy in Organisations: III International Conference*, 3–4 April 2007, Tartu, Estonia.
2. **Aidla, A.** Organisational Culture in Estonian Schools: opinions of people in different positions, *VIII Conference "Cultura Europea"*, 19–22 October 2005, Pamplona, Spain.
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VI. Editorial work

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INTRODUCTION

Motivation for the research

Every country is interested in ensuring that its citizens make a good contribution to its development. This is especially true in small countries where it is assumed that a higher competitive advantage may come from a knowledge-based economy, which emphasises the quality of labour rather than the quantity of labour. Instead of cheap mass production, new ideas and the ability to apply them is the key to success in a knowledge-based economy — so the issue here is whether the education system of a country supports the development of such citizens or not and also how we can measure the quality of school education.

The Estonian Ministry of Education and Research in their development plan for 2007–2013 is guided by the principle that the future of Estonia and the sustainability of its citizens depends on good, high quality general education. The goal of the Estonian general educational system is: “In the General education system equal opportunities and conditions are created for all pupils for acquiring education according to their capability and interest, and an education of high quality which enables them to continue studies and to cope with life in dignity.” (Development plan..., 2009, approximate translation from Estonian) The question is what kind of education system supports this goal. There is ongoing discussion about what can be done to make general education institutions (henceforth schools) work more effectively and attain this high quality, but so far there is no consensus about what exactly should be done to achieve this.

Often the quality of schools is measured on the basis of their academic performance (e.g. Stewart, 2008; Lan, Lantier, 2003; Roscigno, Crowley, 2001; Bradley, Taylor, 1998 etc.). There are a lot of publications discussing this issue at the national and also the international level. In many countries (e.g. US and UK) there are standardized national tests for comparing the academic performance of pupils and schools. To measure pupil academic performance and compare schools, national examinations have now also been conducted in Estonian schools for about ten years. The examination results are publicly available for each school and sometimes these stimulate discussion about why some schools have better results than others. There is no consensus about this matter, but as there is little or no evidence about other fields of school success, some pupils and teachers tend to choose schools where pupils get higher national examination results. Furthermore, these schools are very beneficial for pupils who want to study at university because the national examination results are an important criterion for entrance into universities in Estonia.

At the international level, there are two tests for comparing pupils from different countries. The first of them is PISA (Programme for International Student Assessment), and the second, TIMSS (Trends in International Mathematics and Science Study). Hanushek (2005) discusses whether this interest in international pupil test results is connected to the belief that better results in standardised test results lead to economic advantages — academically better

achieving pupils are later more successful in the labour market and this means higher economic growth. Hanushek (2004) explains that pupils' results in tests in the US are not as high as the US desires (US results in the 2003 PISA test in mathematics and problem solving were below the OSCD average putting the US in 24th place) and if US achievement levels could be moved up to the middle of the European achievement levels one could expect growth rates that were one half of one percent higher. He says that one-half of one percent sounds like a small difference, but it does in fact represent a considerable improvement. However, US growth rates have been quite high over a long period despite these low results in international academic achievement tests. Hanushek (2005) says that the reasons for that are other determinants of economic growth, for example, the openness and fluidity of US markets, free labour and product markets, less regulation on firms, lower tax rates and minimal government production through nationalized industries. Although, the US growth rates could be even higher if the US could raise academic performance among their pupils compared to previous years.

As a high academic performance in schools is important for the development of a country the question is how to achieve higher academic performance. One extreme is to train pupils to achieve better academic results by concentrating mainly on improving test results. However, this option has caused dissatisfaction in Estonia among parents, teachers, school administrations¹, representatives of pupil organisations and in society in general (Piipuu, 2007; Koorits, Kuus, 2007; Tiit, 2006 etc.). There are many concerns in this matter. For example, there have been cases where some Estonian schools or teachers have hindered academically low performing pupils from taking part in national examinations in order to improve the school's rank in the comparative list of schools based on the national examination results (Raun, 2009). In many schools the pre-selection of pupils begins before primary school, where elite schools can choose from many pupil candidates whereas other schools must accept all pupils. The same process continues in the selection of secondary school pupils. This kind of pre-selection deepens educational inequalities in society and the elite schools become more and more dominant (Aava, 2004). Additionally, concentration only on one criterion (national examination results) hinders the delivery of a more comprehensive education (Kass, 2007). For example, schools that specialize in music, sports, literature etcetera do not have to be on the same level in mathematics with schools that specialize in the sciences etc. There are also known cases where overestimation of national examination results causes cheating. For example some teachers help the pupils or let them use forbidden materials etc (Aasmäe, Tammert, 2004).

¹ School administrations consist of school principals and head teachers in this dissertation. Head teachers are subordinate to the principal in Estonia and, for example, coordinate the work of the teachers, help develop curricula, mediate communication between principal, teachers, parents and pupils, and organise various school events, extra-curricular activities etc.

Mentioned problems encourage finding other ways for improving academic performance in schools. Instead of over concentrating on test results one could find out which individual² and organisational factors³ contribute to the academic performance of schools and attend to these factors. It is obvious that even though schools usually have unified predetermined teaching programmes from the state, some schools are more successful at realizing them. They take better advantage of the potential of their pupils, teachers and parents, and they create a school internal environment that supports teaching and learning.

The aim of this dissertation and its research tasks

The aim of the present dissertation is to find out how individual and organisational factors are related to academic performance in Estonian schools. This knowledge can help school administrations and other interested parties to develop strategies and discover new ways to improve school academic performance.

To achieve this aim, the following research tasks were established:

1. Provide a theoretical overview of how individual and organisational factors influence academic performance in schools;
2. Create principles for measuring academic performance and carry out empirical research among Estonian teachers, administrations and support personnel to find out information about their individual characteristics and school properties;
3. Analyse how individual and organisational factors are related to academic performance in Estonian schools;
4. Make implications for improving academic performance in Estonian schools via considering individual and organisational factors.

The basic framework of the dissertation is illustrated in figure 1. School performance in this dissertation is measured using the academic performance of schools. The individual characteristics considered are school administration attitudes and personality traits of school members (administration, teachers and support personnel). Organisational culture is viewed as an organisational level characteristic. Four hypotheses are going to be set. Firstly, about how the attitudes of school leaders relate to school academic performance (H1). Secondly, about what connection there is between the school's organisational culture and its academic performance (H2). Thirdly, how the attitudes of the school leader are related to estimations of organisational culture expressed by school members (H3) and finally, what impact do the personality traits of school members have on estimations of the school's organisational culture (H4).

² Individual factors are for example attitudes, personality, motivation, values etc. Only the first two aspects are analysed in this dissertation.

³ Organisational factors are for example organisational culture, organisational climate, organisational values etc. Only the first of these factors is considered in this dissertation.

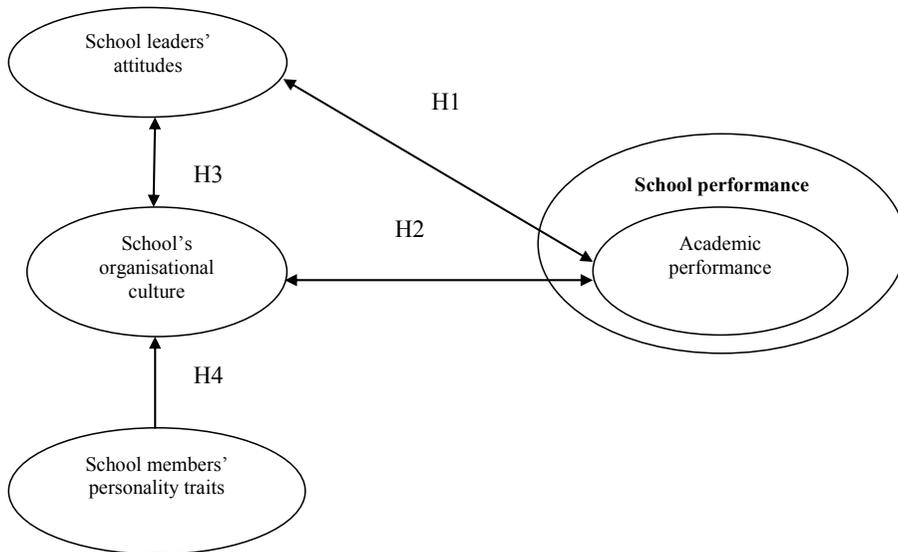


Figure 1. The basic framework of the dissertation

The originality of the research

The main focus of this dissertation is on factors influencing school academic performance that can be managed by the school administration by considering the specifics of individual and organisational factors. This kind of research problem and the methods for solving it are original because so far none of the available research publications have distinguished in terms of the school administration manageable and non-manageable academic performance factors or have concentrated only on factors that can to some extent be managed by the school administration. The vast majority of previous studies discuss how the socio-economic background of pupils and school size and location influence school academic performance (e.g. Tajalli, Ophein, 2004; Reeves, Bylund, 2005; Bradley, Taylor, 1998; Young, 1998 etc). This is rather a one-sided approach in the author's opinion because these factors cannot be influenced by the school administration. We should concentrate less on those problems that hinder pupil learning and more on what we could do to improve their academic performance. This dissertation provides a wide-ranging overview of the factors influencing pupil academic performance, and moreover it distinguishes those factors that can to some extent be influenced by the school administration. Six categories of factors influencing school academic performance are analysed: individual pupil characteristics, the characteristics of pupil peer background, the characteristics of pupil family background, the characteristics of school background, the characteristics of teachers and the characteristics of leadership. After distinguishing those factors that are to some extent manageable, the

dissertation discusses what individual and organisational factors could be considered to raise the academic performance of schools.

When we know what factors can be managed by school administrations on a large scale to influence pupil academic performance, we must clarify what exactly the school administration can do to raise pupil academic performance. There is also a lack of a systematic overview in this field. Usually, researchers concentrate on quite narrow aspects of the topic, and more general picture of the field is not presented. In this dissertation the ideas of different sources are collected and systematized.

The behaviour of the school administration is influenced by their attitudes. For example, when school leaders believe that academic performance is the most important area of school success then they pay attention primarily to getting high results in national examinations. The attitudes of the school administration are therefore an important research object. In order to find out whether school administrations in Estonia value academic or non-academic school performance areas more a new method was compiled by author. This enables us to distinguish administration attitudes about school performance areas including measures of academic performance like the national examination results, final examination results, final grades and so on, and also non-academic performance measures related to school leadership, the school internal environment etc. Both academic and especially non-academic measures for the questionnaire were selected based on evidence gathered in the theoretical part of the dissertation.

Although, the school administration and their attitudes and behaviour have a guiding role they are not solely responsible for the school's academic performance and they cannot do anything alone. School employees like teachers and support personnel are viewed as the main supporters of the school administration by achieving the high academic performance in a school. This is a rather novel approach because most often only pupils are included in the analysis followed by teachers and the administration (e.g. in studies by Stewart, 2008; Mulford *et al*, 2004; Levačić, Woods, 2002; Hallinger *et al*, 1996). Again, as opposed to previous studies, the school organisation in this dissertation comprises the school administration, teachers and support personnel (e.g. psychologists, speech therapists, librarians etc.). Their responsibility is to involve pupils and parents in this process, assure good relationships between various groups and consolidate their efforts to achieve good academic results. As said before the role of the school administration is to bring all parties together and guide their behaviour. Building the school's internal environment is thereby one of the important aspects in the context of school academic performance.

A substantial part of the internal environment of an organisation is its organisational culture. Many influential studies of organisational culture claim that organisational culture may influence organisational performance (e.g. Deal, Kennedy, 1982; Peters, Waterman, 1982; Wilkins, Ouchi, 1983; Schein, 1985; Kotter, Heskett, 1992 etc.), and therefore, it is important to analyse how organisational culture could contribute to academic performance in schools.

Whether organisational culture influences organisational performance or not has been widely discussed in research literature. Many different methods for analysing organisational culture have therefore been used. Usually, researchers concentrate on their own chosen approach and previous results related to this. For example, Desphande, Farley (2004) and Dwyer *et al* (2003) discuss the results of the Competing Values Framework, Chan *et al* (2004) and Yilmaz, Ergun (2008) discuss the four trait model of organisational culture developed by Denison Mishra (1995); Nahm *et al* (2004) and Homburg, Pflesser (2000) analyse Schein's framework which distinguishes three layers of organisational culture etc. This dissertation analyses all the main approaches previously used to research into the link between performance and organisational culture and conclusions are drawn about which kind of organisational culture could contribute to organisational performance in general and in the school context in particular. A comprehensive overview of what in the author's opinion are the most influential empirical studies of this theme are summarized in a single table (see subchapter 1.3) containing sample characteristics, performance and organisational culture measurement principles, statistical methods used and a short overview of the results. This table gives a unique overview of how wide-ranging the research principles and results in studies of the link between organisational culture and performance are.

Previous research shows that organisational culture is connected to many other organisational behaviour issues. For example, organisational culture is related to motivation, socialization, job satisfaction, commitment, cooperation and the success of communication between organisational members, which also all contribute to the performance of an organisation. Usually, researchers concentrate on one or limited number of aspects of research into organisational behaviour (for example relationships between organisational culture and commitment or organisational culture and job satisfaction etc.), whereas in this dissertation all the main relationships between organisational culture and single aspects of organisational behaviour are discussed. This kind of analysis of the interaction between individual and organisational level variables provides valuable information about how organisational culture may influence organisational performance including school academic performance.

Researchers argue that organisational culture is created by all organisational members, but organisational leaders provide direction in the process of creating the organisational culture (Kavanagh, Ashkanasy, 2006; Balthazard *et al*, 2006; Holbeche, 2005; DiPaola *et al*, 2004; Alvesson, 2002; Schein, 1992; Wilson, Firestone, 1987; Schein 1985). Moreover, organisational culture is seen as a mediating variable in the influence that organisational leaders exert on organisational performance (e.g. Wilderom, van der Berg, 1998; Ogbonna, Harris, 2000; Xenikou, Simosi, 2006 etc.). Whether and how the organisational leaders with their attitudes, beliefs, values and behaviours influence organisational culture and consequently performance is to some extent discussed in the research literature, although empirical evidence in this area is still limited. The available evidence is summarized and systematized in this dissertation.

Organisations consist of many different individuals with different characteristics. Every organisation needs organisational members that are suited to working there. One important part of the person-organisation fit is how well the personality of an individual fits in the organisation, for example, school work involves a lot of responsibility and requires emotional stability, stress tolerance, good interpersonal skills, presentation skills, adaptation skills etc. Furthermore, the personality of organisational members is a relevant factor that may influence the organisational culture and consequently organisational performance. This kind of indirect association between personality traits and organisational performance mediated through organisational culture has never been researched before. In the research literature there is also very little empirical evidence about the relationships between personality and organisational culture. Available evidence about connections between personality traits and organisational culture are analysed in this dissertation and in addition, with help of indirect association, the kinds of personality traits that are preferable for organisational performance mediated through organisational culture are put forth. School specifics are thereby considered. The direct relationship between the personality traits of school members and school academic performance is not analysed because this connection may be random, for example, the personality specifics of one teacher are hardly enough to influence a whole school's academic performance.

Bringing all these four areas (organisational culture, leader attitudes, the personality traits of organisational members and organisational performance) together in one framework has not been done before. The reason for this may be that these areas belong to different sub-disciplines of the field of Organisational Studies. Organisational culture is typically studied by those working in the area of organisational theory and organisational behaviour. Leader behaviour is mainly analysed by organisational psychologists and those interested in personnel management. Personality traits are usually analysed by personality psychologists. The performance of organisations is of interest for those studying strategic management. Novel in this dissertation is that these four research topics as four different islands are connected by building bridges between them. Although, the research is based on a sample of Estonian schools, the information gathered and resulting understandings may be beneficial for other types of organisations. It is also novel to analyse, discuss and offer implications separately considering school size and location specifics arising from the fact that the results for large and urban schools are noticeably different from those for small and rural schools. In previous studies the authors usually analyse only the effect of size or the effect of location. Only a few studies are available where both factors are considered (e.g. Reeves, Bylund, 2005; Sawkins, 2002), but they do not offer separate recommendations considering size and location specifics. Taking into account both size and location gives valuable information and ideas for school administrations, teachers, parents, educational policy creators and society in general for improving school academic performance considering the individuality of school members and school organisational

culture in the context of size and location specifics. In the author's opinion this makes a lot of unused resources available for improving academic performance in Estonian schools.

The structure of the dissertation

The present dissertation consists of two parts. The first part creates the theoretical basis for the research. The second part consists of the empirical analysis. The structure of the dissertation is presented on figure 2. The logic of the theoretical part is presented in the form of questions that should be answered in the corresponding subchapters. The empirical part represents the activities that are going to be carried out to test the hypotheses and draw conclusions.

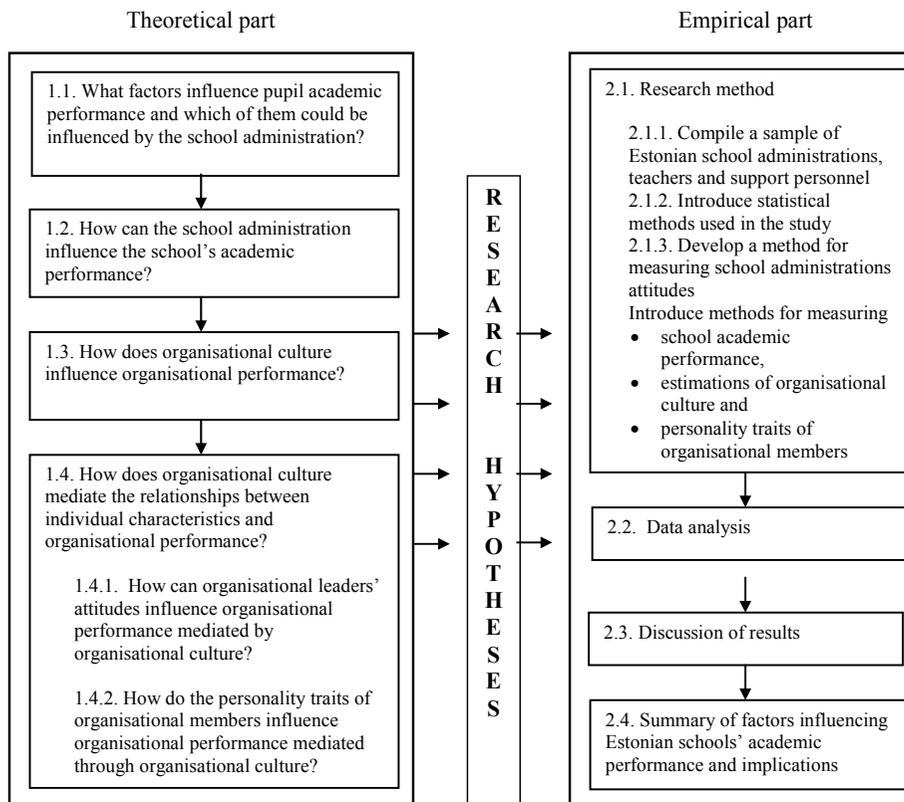


Figure 2. The structure of the dissertation

In subchapter 1.1 the factors influencing academic performance in schools are determined. These can be broadly divided into pupil background characteristics and school background characteristics. Pupil background factors include family background, peer group background and individual characteristics. Some of these support pupil learning and some do not. School background characteristics include school size, location and so on, teacher characteristics and school leadership. Similarly, they can favour pupil learning or not. There have also been some controversial results — in some studies certain factors do influence pupil academic performance, and some studies do not. Moreover, some of these factors can be influenced by the school administration and some not.

In subchapter 1.2 the main interest is how a school administration can influence school academic performance by managing factors that they can influence. School leadership has its own specifics that differ to business organisations, but there is also much in common between these two. For example, setting a clear vision, mission and goals for the organisation, involving stakeholders in decision-making, creating good cooperation and communication between stakeholders, creating a suitable internal organisational environment (including organisational culture) etc are important here.

In subchapter 1.3 the specifics of organisational culture are analysed in the context of organisational performance. Compared to subchapters 1.1 and 1.2, which were mainly school centred, subchapter 1.3 is more general and provides ideas for leaders in all types of organisations. Organisational culture is defined and characterised. Empirical research results into the relationships between organisational culture and performance are summarised and conclusions are made. In addition, critical views about this topic are presented.

Subchapter 1.4 analyses how organisational leaders' attitudes and organisational members' personality traits influence organisational performance mediated through organisational culture. This subchapter analyses these relationships in a more general manner applicable in every type of organisation, but the specifics of the school are also considered. Subsection 1.4.1 analyses how organisational leaders' attitudes and behaviour influence organisational culture. Furthermore, opportunities for leaders to change the organisational culture are discussed. Moreover, critical views about this topic are brought forward. Two examples of successful changes to organisational culture resulting higher academic performance initiated by school administrations are presented. In subsection 1.4.2 the principles of the person-organisation fit are discussed. One important aspect of this fit is the personality traits of organisational members. The specifics of personality traits in the organisational context are clarified and generalised in this subchapter. School specifics are thereby considered.

The empirical part is divided into four subchapters. In subsection 2.1.1 the data collection principles are introduced. The empirical research was carried out from 2003 to 2006. School administrations, teachers and support personnel participated in the study. Three types of datasets were collected: 1) the attitudes of the school administration about different school performance criteria, 2) estimations of organisational culture, and 3) the personality traits of school members.

In the subsection 2.1.2 the statistical methods used in the dissertation are introduced. More particularly information about the mean comparison methods t-test and analysis of variances (ANOVA), factor analysis, correlation analysis and regression analysis is given. It is discussed which method is used for which purposes, what are the assumptions of each method, and in addition opportunities for examining the reliability of the methods are put forward.

Subsection 2.1.3 introduces the measurement tools. To measure academic performance in schools, the national examinations results of schools are used. Only secondary schools are thereby considered. Although, state-wide tests are also conducted in Estonia at the end of basic education (in the 9th grade) data about these results are unfortunately not available. A new method for measuring the attitudes of the school administration about school performance is developed with the help of an expert group from the University of Tartu, two officials from the Estonian Ministry of Education and Research and school principals. Estimations of organisational culture are measured using a method developed by Vadi *et al* (2002) where two orientations of organisational culture are distinguished: task orientation and relationship orientation. The personality traits were measured using the *Five Factor Model* of personality (Costa *et al*, 1995).

In subchapter 2.2 the results of the study are presented and in subchapter 2.3 these are discussed. Subchapter 2.4 presents a summary of factors influencing school academic performance. Consequently, some policy implications and recommendations for school administration are brought forward.

School education plays an important role both for society in general and for every single person. Everyone is interested that school education promotes the development of all members of society to provide them with good knowledge and skills for coping with their lives. Therefore, it is reasonable to look for ways to improve the performance of our schools.

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Naturally, all the mistakes and errors found in this dissertation are the sole responsibility of the author.

I. THEORETICAL FOUNDATIONS FOR THE ANALYSIS OF THE IMPACT OF ORGANISATIONAL AND INDIVIDUAL CHARACTERISTICS ON SCHOOL PERFORMANCE

I.1. Factors influencing academic performance in schools

The vast majority of organisations would like to show high levels of performance, but one problem that they meet in this respect is how to define performance and how to measure it. “Organisational performance is a widely used dependent variable in organisational research today, yet at the same time it remains one of the most vague and loosely defined constructs” (Rogers, Wright, 1998, p. 314). The term “performance” is also strongly related to the term “effectiveness”. Sometimes these terms are used as synonyms. In this dissertation organisational performance is defined as the actual results of an organisation compared to its intended goals (Rogers, Wright, 1998). These goals could be very different for different organisations. In profit-seeking organisations the goal is often financial success, and therefore, performance is measured using financial indicators such as profit, sales volume, return on assets, return on equity, return on investments etc. But non-financial measures are also used, for example, turnover rates, job satisfaction rates etc. It has been established that these non-financial factors could also contribute to the financial performance of profit-seeking organisations (Ittner, Larcker, 2003). So it is important to clarify the organisation’s goal and how to achieve this goal.

The term “performance” is also widely used in the school context, for example, by the following researchers: Reeves, Bylund (2005); Torff, Sessions (2005); Anderson *et al* (2004); Griffith (2004); Dolton, Newson (2003); Visscher, Coe (2003); Storey (2002); Woods, Levačić (2002); Ascher, Fruchter (2001); Goldstein (2001); Haque, Bell (2001); Karatzias *et al* (2001); Baumert, Koller (2000); Bosker, Scheerens (2000); Tomlinson (2000); Bradley, Taylor (1998) and Hanushek (1997). The term “school effectiveness” is used, for example, by LaPointe, Davis (2006); Griffith (2003); Cullingford, Swift (2001); Coe, Fitz-Gibbon (1998) and Hallinger, Heck (1998). As performance seems to be the most frequent concept used in the research literature, and is also used when schools are publicly compared with each other (for example in the UK, US etc.), this concept will also be used in this dissertation.

In this dissertation the notion “organisational performance” is used where any kind of organisations’ performance is meant. These could be profit organisations or non-profit organisations (including schools) in general. When more precisely school specifics are being analysed the notion “school performance” is used. School performance comprises both academic and also non-academic performance measures. The “academic performance” measures are various examination and test results. Additionally, academic performance can be meas-

ured by observing the number of pupils who repeat a year and pupil dropout rates (Lan, Lantier, 2003; Lee, Burkam, 2003). Logically, repeating a year and pupil dropout rates are strongly related to pupil grades (Lan, Lanthier, 2003). Those pupils who have poor grades are more likely to drop out of school or repeat a year. The non-academic school performance measures could be for example job satisfaction rates among school members⁴ or issues related to school internal environment etc. The different generalized levels of performance in the present dissertation are illustrated in figure 3.

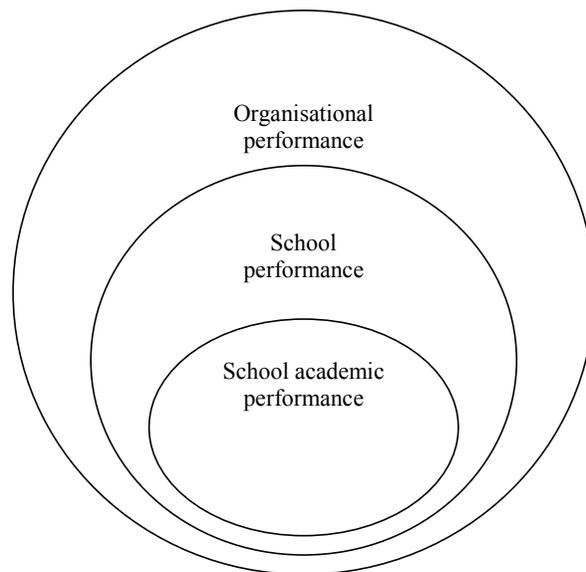


Figure 3. Different generalized levels of performance in this dissertation
Source: compiled by the author

In empirical studies, academic performance is the most frequent parameter for analysing school performance. So it is assumed that the goal of a school is to show good academic results. In the author's opinion the twenty most influential studies using academic performance criteria from the past ten years are listed in table 1, where we can see that examination results and standardized tests in English, mathematics and science are most often used to measure the academic performance of schools and pupils. Half of the studies were conducted in the US and seven in the UK. Public and private schools were analysed as well as different levels of education (elementary, middle and secondary). The sample sizes differ greatly.

⁴ In this dissertation school principals, head teachers, teachers and support personnel are viewed as school members.

Table 1. Overview of studies analyzing school and pupil academic performance

Source	Sample	Criteria for measuring performance (dependent variable)
Shin, 2007	466 children in secondary school in Korea	Maths and language tests
Stewart, 2008	715 US schools	Grades in maths, English, history, science
Graddy, Stevens, 2005	Private schools in the UK	Average of standardized examination results
Gruenert, 2005	81 US schools (Indiana)	Maths scores
Reeves, Bylund, 2005	1111 US Kentucky schools	Tests of reading, writing, maths, science, social studies, arts and humanities
Tajalli, Opheim, 2004	827 US Texas public schools	Standardized tests
van der Westhuizen <i>et al</i> , 2005	341 secondary schools in South Africa	Grade 12 national examination results
Machin <i>et al</i> , 2004	All English secondary schools	Maths and English tests
Griffith, 2004; Griffith, 2003	117 elementary schools in the US	Standardized test scores
Lan, Lantier, 2003	1100 public and private schools in the US	Course grades and standardized test scores
Ross, Lowther, 2003	200 schools, 60 districts and 30 states in the US	Tests in maths, reading, language, science and social studies
Levačić, Woods, 2002	300 secondary schools in England and Wales	Examination performance
Sawkins, 2002	389 Scottish public secondary schools	Examination results
Ascher, Fruchter, 2001	US New York	State mandated standardized tests
Goldstein, 2001	All secondary schools in England and Wales	Public examination results
Haque, Bell 2001	20 minority ethnic origin pupil schools in the UK	Standardized tests in English, Mathematics and Science
Roscigno, Crowley, 2001	1000 US middle schools	Maths, reading achievement
Goldhaber <i>et al</i> , 1999	490 US schools, 10 th grade public school pupils	Tests in maths
Bradley, Taylor, 1998	About 1500 UK secondary schools in 1992–1996	National examination results
Young, 1998	28 secondary schools in Western Australia	Pupils' science and maths achievement

Source: compiled by the author

This overview of studies from the past ten years shows that the academic performance of schools depends on various pupil and school level factors. In the author's opinion, some of these factors can to a large extent be influenced by the school administration and some cannot. The paper will now analyse what factors influence school academic performance and how and whether these can be influenced by the school administration.

The factors that may possibly influence school academic performance are roughly divided into pupil background variables and school background variables. Pupil background variables usually contain individual pupil characteristics, family background characteristics and the characteristics of his or her peer group (see table 2). School background characteristics involve the characteristics of the school, its teachers and the school leadership.

This is not a complete list of all the factors influencing academic performance of pupils. More factors are analysed in the research literature, for example, the number of siblings, whether a pupil lives in an extended family or in a single parent family etc. In the US and UK, skin colour, ethnic origin or home language are also taken into account. But the factors presented in table 2 are the most relevant factors in the author's opinion that influence academic performance in schools and the following, these academic performance influencing factors are explained more thoroughly.

Family background

One of the factors in the literature that is most studied when looking at what influences academic performance is the details of family background (e.g. Stewart, 2008; Roscigno, Crowley, 2001; Haque, Bell, 2001; Goldhaber *et al*, 1999; Walberg, Fowler, 1987). It has been proposed, for example, that the education and income level of the parents play an important role in how well their children learn.

In many studies, pupil background is measured by looking at the number of pupils entitled to free school meals (Erb, 2006; Dolton, Newson, 2003; Sawkins, 2002; Ascher, Fruchter, 2001), presuming that pupils who apply for free meals are from lower income families. Pupils with well-educated parents earning high incomes generally do better at school than pupils with less-educated parents on low incomes (Hanushek, 1989). It is assumed that more educated parents create an environment that facilitates learning and involve themselves in their children's school experiences and school environments (Jacobs, Harvey, 2005). Also, parents with a higher education are better qualified to help their children with homework than less educated parents (DePlanty *et al*, 2007). The more financially stable a family is, the more time parents have for their children and the more concern they have for their education (Sheldon, Epstein, 2005).

Table 2. Factors influencing academic performance in schools

Pupil background characteristics		School background characteristics			
Pupil's family background	Pupil's peer group background	Pupil's individual characteristics	School characteristics	Teacher characteristics	School leadership*
<ul style="list-style-type: none"> ● parents' education ● family income ● family investments ● parents' expectations, support ● parents' involvement in school life 	<ul style="list-style-type: none"> ● values, attitudes and behaviour of peers ● peer acceptance ● positive friendship quality ● number of friends ● loneliness 	<ul style="list-style-type: none"> ● values, attitudes ● motivation ● school attachment ● school commitment ● school involvement ● self-perception 	<ul style="list-style-type: none"> ● size ● location ● budget ● teacher salaries ● class size ● school safety, discipline, ● climate, culture ● extra-curricular-activities 	<ul style="list-style-type: none"> ● basic education ● previous experience ● teaching abilities ● inter-personal skills ● commitment ● motivation ● job satisfaction 	<ul style="list-style-type: none"> ● vision, mission and goals ● stakeholder relationships ● training and development ● increasing stakeholder commitment, motivation and job satisfaction ● creating suitable school environment

Source: compiled by the author

* school leadership issues are further discussed in subchapter 1.2

Furthermore, Roscigno and Crowley (2001) emphasise the importance of such family investments as household educational items (e.g. number of educational items in the home, including books, newspapers, encyclopaedia, computer, places to study) and cultural capital (e.g. the extent to which pupils attend museums and take classes in art, music, language, history etc. outside of school). It is obvious that parents with a higher income can afford these kinds of expenditures more than parents on a lower income. Also, parents with a higher education may value their children's education too, and invest more in it than less educated parents.

Nevertheless, there are many pupils who come from low-income and less educated homes who are high achievers and many pupils from high socio-economic backgrounds who are low achievers. Pupils may also come from homes where the parents are highly educated and involved in their children's education, yet they achieve poorly at school (Jacobs, Harvey, 2005). Also, other authors (e.g. Milne, Plourde, 2006; Molfese *et al*, 1997; Caldwell, Ginther, 1996) have discussed the idea that we cannot oversimplify this matter and say that the academic performance of pupils depends on the educational level and income of other family members. The author agrees with this opinion and claims that it is also a question of priorities not only finances and education. Not all parents are willing to invest in their children's education even if they have an opportunity to do so. It is also not really possible for the school administration to manage parental income and education; therefore, parental interest in their children learning is much more important.

The results of various studies show that parental expectations, support and involvement in their children's school work were positively related to the likelihood that the children would successfully graduate from school (e.g. Chiu, 2007; Shirvani, 2007; Stewart, 2008; Torff, Sessions, 2005; Lan, Lanthier, 2003; Bradley, Taylor, 1998; Davis, 1998; Scheurich, 1998; Gaziel, 1995; Epstein, Dauber, 1991; Bartell, 1990). For example, parental interest in home/school work, assistance with homework, discussing school progress, parents contacting the school, the school contacting the parents and parents volunteering at school are also important (Fan, Chen, 2001). Bradley, Corwyn (2002) found that pupils did better at school when parents talk with their children more, engage them in more meaningful and deeper conversations, read to them more and provide many more teaching experiences, but also when parents generally try to get their children to talk more, encourage them to engage in conversations with adults and encourage their children to use a richer vocabulary. Milne and Plourde (2006) have said that pupils that achieve better academically have parents who spend much quality time with them and the parent-child relationships are good. Therefore, when pupils live in a supportive and academically stimulating home their academic performance is higher.

Shirvani (2007) says that when teachers take advantage of parental involvement, they are able to change a pupil's negative attitudes toward school. Moreover, Shirvani (2007) and Ballantine (1999) mentioned that when parents become active participants in their children's education, pupils develop more

positive attitudes toward teachers and schools, pupil attendance increases and pupil engagement in classroom activities also increases. Ma (1999) says that when parents spend time with their children on schoolwork, children develop a positive attitude toward school. Wang and Wildman (1994) found that parental involvement results in more pupils completing their homework. Some research has shown that when parents are involved, pupils are more likely to graduate from high school and enter college (Shirvani, 2007). Parental participation motivates pupils to raise their academic expectations, which results in higher academic performance (Shirvani, 2007). Therefore, if one wants pupils to learn well, one should create good parent-pupil relationships and encourage parents to show more interest in their children's learning.

Peer background

Naturally, parents can do their best, but their child may not be willing to learn. This leads to the next pupil background variable that affects academic performance, peer group. Peer group values, attitudes and behaviour concerning school have an impact on pupil academic performance (Chang, Le, 2005; Pashiardis, Ribbins, 2003; Sawkins, 2002; Hanushek, 1989). When the values, attitudes and behaviour of peers toward school and learning are positive pupil academic performance is higher. Positive peer relationships are associated with higher levels of academic performance (Stewart, 2008). On the contrary, pupils who do not get support from friends or are even rejected by their peers have a higher risk of dropping out of school (Stewart, 2008; Lan, Lanthier, 2003). One example of the impact of the peer group on pupil academic performance can be found in the research by Shin (2007), where test scores in mathematics and language were measured and a correlation with four social relationship measures were found. Acceptance by peers had the strongest positive correlation with academic performance followed by positive friendship quality and more friends. Vice versa, perceived loneliness decreased academic performance. In short, the specifics of the peer group are an important aspect when good academic performance is desired. The members of the peer group can be supportive of pupil learning, but can also become a hindrance.

Individual characteristics

The final factors of pupil background affecting academic performance are the pupils' individual characteristics. Mostly, his or her effort, values, attitudes and motivation toward studying are important here (Bradley, Taylor, 1998). Logically, the amount of effort that pupils put into their schooling affects their academic results. Stewart (2008) measures pupil effort at school using three variables: school attachment, school commitment and school involvement. School attachment shows the extent to which pupils care about and have positive feelings for their school. School commitment indicates how important and interesting studying is for pupils. School involvement shows to what extent

pupils participate in school life, for example in pupil government, the school newspaper, organising events etc. These kinds of activities may increase the bond between pupil and school and hereby contribute to the learning effort.

In Stewarts (2008) study, school attachment and commitment were positively correlated with pupil grades in maths, English, history, and science. Whereas, the school involvement was not as significantly related to academic performance as Stewarts had expected. Stewart explains this result with the idea that extra-activities concerned with school need extra time and energy, and therefore, there is less time for studying. Although, in the author's opinion we cannot say that pupils then spend their spare time on studying. Generally, it has been proposed that increasing school attachment, school commitment and school involvement has a positive impact on their grades.

Another aspect affecting academic performance of pupils is their self-esteem. It is argued that pupils with a better opinion of themselves have better grades. For example, Gilloc and Reyes (1996) studied pupils' perceptions about themselves and the correlation between this and academic performance. The results showed that pupils who perceived themselves as intelligent, talented and motivated towards schoolwork had higher grades in reading and mathematics. There was also a positive relationship between general self-worth and school grades. These results show that pupils who are more satisfied with themselves get better grades, or that pupils who get better grades at school have higher self-esteem. Consequently, when the academic performance of pupils is the goal, it is not enough to concentrate on raising grades, but also to pay attention to their individual characteristics as well.

School characteristics

The next important factors affecting a school's academic performance are school size and location. Not all schools have equal opportunities to teach pupils, and there can be numerous reasons for this. The size of the school is mostly measured on the basis of the number of pupils enrolled in it (e.g. Barnett *et al*, 2002; Taylor, Bradley, 2000; Bradley, Taylor, 1998). There are numerous studies that highlight that school size has an impact on academic performance (e.g., Torff, Sessions, 2005; Borland, Howsen, 2003; Driscoll *et al*, 2003; Barnett *et al*, 2002; Bradley, Taylor, 1998; Eberts, Schwartz, 1990; Mok, Flynn, 1986). Therefore, in the following sections, a more precise overview of how school size and location impacts academic performance is presented.

The results of empirical studies mostly show that in larger schools academic performance is better (e.g. Driscoll *et al*, 2003; Barnett *et al*, 2002; Bradley, Taylor, 1998; Mok, Flynn, 1986). For example, Bradley and Taylor (1998) found that in schools with fewer than 799 pupils, examination results were significantly lower compared to schools with more than 800 pupils. However, Young (1998) points out three studies that have shown that pupils from smaller schools performed as well as pupils from larger schools. So far, there have been no publications where smaller schools performed better than larger schools

when academic performance was the criterion for measuring success. But Eberts and Schwartz (1990) used performance indicators other than academic performance in their study (i.e. pupil, teacher and leadership characteristics), and their results show that smaller schools perform better than larger ones. This evidence, in the author's opinion, indicates that the role that the size of a school plays in a school's success can depend on what factors are considered when measuring performance. If the focus is on examination results and tests, then larger schools have an advantage; however, when other criteria are used, smaller schools show good results.

Bradley and Taylor (1998) confirm this view by saying: "The benefits of a smaller school may include, for instance, the development of personal and social skills and a greater awareness of each person's responsibility towards their fellow human beings, rather than focusing blindly on developing skills to pass exams" (p. 318). Several researchers have hypothesized that smaller school size, which is often associated with more personal attention and more opportunities for involvement, leads to positive behavioural and academic outcomes for the pupils (Rumberger, Palardy, 2005; Johnson *et al*, 2001; Holland, Andre, 1987).

Deutsch (2003) highlights studies concluding that small classes stimulate pupil engagement, allow more innovative instructional strategies, increase teacher-pupil interactions, reduce the amount of time teachers devote to discipline and improve teacher morale. Lee and Loeb (2000) say that smaller schools (750 or fewer pupils) are more favourable as educational environments not just for learning, but also for positive teacher attitudes toward pupils. More specifically, teachers in smaller schools took more personal responsibility for their pupils' learning than teachers in larger schools. In addition, Borland and Howsen (2003) indicate that there can be an optimum number of pupils in a school (they found that 760 is optimum), because too small is not beneficial, but too large has disadvantages, too. Also, Lee and Smith (1997) demonstrated that pupils learned more in secondary schools that enrolled 600–900 pupils (i.e. small but not too small).

So there is controversial evidence about the impact of school size on the academic performance of schools. Some point to large schools having advantages, but at the same time there are also disadvantages. Some of the advantages and disadvantages of large schools presented in the relevant literature are summarized in table 3. As we can see, there are some relevant disadvantages for large schools, but it is not fully understandable why these do not affect academic performance in large schools.

When analyzing the effect of location on academic performance, urban areas show better results. For example, Roscigno and Crowley (2001) suggest that pupils living in rural areas of the US exhibit lower levels of educational achievement and a higher likelihood of dropping out than their urban counterparts. The average likelihood of dropping out of secondary school is approximately 15 percent higher in rural places. Additionally, Reeves and Bylund (2005) found in their study carried out between 1999 and 2003 that rural locations are significantly lower performing than urban areas. Also, Young (1998)

summarizes that rural pupils are disadvantaged in terms of their achievement compared to urban pupils. Still, some available evidence shows that rural pupils performed about as well as their peers in urban schools (Greenberg, Teixeira, 1995), but generally when academic performance is a criterion of school performance rural areas are not in favour.

Table 3. Advantages and disadvantages of large schools

Advantages	Disadvantages
More effective in recruitment of teachers Greater specialization among teachers More effective in offering diverse and comprehensive curricula Greater specialization among curriculum subjects Fewer administrative tasks for teachers Additional resources for teaching Less teacher turnover More cost effective	School governance is more complicated Teachers and administration are less accessible to parents Fewer opportunities for developing pupil leadership Interaction between pupils and teachers may suffer Less attention to the personal and social skills of pupils Less attention to pupils with special needs Problems with school discipline Higher dropout rates A less improved school climate

Compiled by the author, sources: Tajalli, Opheim (2004); Borland, Howsen (2003); Lan, Lanthier (2003); Lee, Burkam (2003); Barnett *et al* (2002); Taylor, Bradley (2000); Bradley, Taylor (1998); Eberts, Schwartz (1990); Mok, Flynn (1986)

One reason for lower academic performance in rural schools can be the economic disadvantage in these regions. As discussed earlier, family income seems to have a noticeable effect on pupil academic performance. Also parental education is sometimes lower in rural areas compared to urban areas. Roscigno and Crowley (2001) compared rural and non-rural areas by considering family income, parental education, percentage of pupils receiving free school meals and per pupil expenditure. Family income comparisons showed that rural families lag significantly behind non-rural families in terms of income. The education level was also lower in rural families. Roscigno and Crowley (2001) also found that more pupils in rural areas receive free school meals and the per pupil expenditure is less in rural areas.

In short, when academic performance is a criterion of performance, the rural schools are in a disadvantaged position. But many researchers emphasise the importance of rural schools in other areas, saying that these schools are often an integral part of the local community and their closure could result in serious social consequences (Bradley, Taylor 1998). Rural schools are often a centre for community activity and this provides pupils with a greater sense of belonging and a better self-concept (Young, 1998). Pashiardis and Ribbins (2003) claim that the advantage of living in a small community is that pupils with their

parents, and often most of their extended family, know each other and that could be beneficial for creating a suitable atmosphere for improving the pupils' abilities. Rural schools are often small and this also enables them to take advantage of all the benefits of a smaller school (see table 3).

In addition to the previously discussed family resources (income and education), school budget also affected pupil academic performance in standardized tests in mathematics and reading in the study by Roscigno and Crowley (2001). These results indicate that to increase pupil academic performance it might be reasonable to increase the financial resources of families and schools especially in rural areas. If schools have more financial opportunities they can spend more money on teachers' salaries, on reducing class sizes, on additional courses, on school renovation projects etc. Although, for example, the study by Walber and Fowler (1987) shows that school finances do not significantly affect academic performance (maths and reading tests), after analysing three indexes: day school expenses, total expenses and current budget. Hanushek (1989) found that from 65 studies (from years 1967–1987) only 16 showed that school expenditures per pupil are significant for pupil academic performance. Consequently, more money does not always automatically lead to higher academic performance in schools. Some intangible aspects may play a much greater role than presumed. For example, evidence about the effect of teachers' salaries on pupil academic performance is very contrary.

Verstegen and King (1998) analyzed the role of teachers' salaries in pupil performance and found a positive correlation between teacher salary and pupil achievement in 74 percent of cases. However, Dolton and Newson (2003) indicate that extra pay for teachers only had marginal and short-term effects on teacher effort. Hanushek (1989) summarizes studies from 1967–1987 and finds that from 69 studies about the effect of teacher salary on pupil academic performance, only 15 were statistically significant. In the recent study (2003), Borland and Howsen also found that teacher salary is insignificant with respect to pupil achievement. Therefore, it can be said that there is no clear evidence about the impact of teacher salary on pupil academic performance, but the majority of studies show that increasing teachers' salaries is not the secret key to better learning. There must be other characteristics of teachers that influence educational outcomes. Many motivational theories emphasise that money is not the only motivator of individuals.

It is often discussed that class sizes in schools are too big and teachers cannot attend to every individual and his or her needs. When academic performance is measured then most studies have also found that pupil-teacher ratio or class size has no effect on pupil examination results (e.g. Tajally, Opheim, 2004; Dearden *et al*, 2002; Feinstein, Symons 1999; Bradley, Taylor 1998). In an influential series of papers, Hanushek (1986, 1989, 1997, 1998) reviewed the many studies of the effect of school resources (particularly class size or pupil-teacher ratio) on pupil achievement in US schools. He claimed that there is no strong or consistent relationship between school inputs and pupil performance. In Hanushek's (1989) work, he summarizes 152 studies about the effect of class

size on pupil academic performance and the result was that only 18 percent of the studies showed statistically significant relationships between class size and pupil examination results. From later research for example, Boozer and Rouse (2001), Angrist and Lavy (1999) and Sander (1999) all found statistically significant effects of class size on pupil achievement. As we can see there are contradictory results when looking at the effects of class size on pupil performance when the performance measure is academic performance, but mostly class size does not affect pupil performance. But it is clear that smaller class sizes are beneficial for numerous other reasons. Smaller classes encourage pupil-teacher relationships and allow more personal attention to individual needs. Tajally and Ophem (2004) say that small classes positively impact the school internal environment, thus improving performance indirectly.

School size, location, budget, teacher salaries and class sizes are to a large extent not things the school administration has much control over. Studies also present controversial results for these factors. In some studies they influence pupil academic performance, but in other studies not.

The next school characteristics that influence academic performance are school safety and discipline. Without safety teachers cannot teach properly and pupils cannot learn effectively (van der Westhuizen *et al*, 2005; Kitsantas *et al*, 2004). Stewart (2008) found that schools with many social problems (like violence, robbery, disorder, lack of discipline etc.) have lower levels of academic performance. Osher and Fleischman (2005) indicate that pupils perform better in warm and safe environments with social support. Kitsantas *et al* (2004) say that the best safe school plans involve the entire community — teachers, pupils, parents, politicians, academics, business, community leaders etc. Thus, creating safe schools is an inclusive and cooperative process that involves more than just the school.

Other popular fields of research into school performance include the school's climate and organisational culture. These concepts are very similar and sometimes these are used as synonyms or subparts of each other. In the present dissertation, climate and culture are viewed as distinct notions. Climate is defined as the individual's perception about the particular organisation and/or its subsystems or "the way things feel within an organisation" (Holbeche, 2005; Wilmore, 2002). Whereas organisational culture refers to "the way we do things around here". The concept of organisational culture and its role in organisational performance are further discussed in subchapter 1.3.

School climate is an extensively discussed topic in school literature (e.g. Karatzias *et al*, 2001; Bosker, Scheerens, 2000; Haynes *et al*, 1997 etc.). Haynes *et al* (1997) say that research has shown a relationship between school climate and pupil self-concept, pupil behaviour, absenteeism, dropout rates and pupil academic performance. Vice versa, a negative school climate contributes to a greater risk of school failure and dropout (Gillock, Reyes, 1996). Fostering a positive and supportive climate in schools is associated with lower levels of risk behaviours and positive effects on pupil academic performance and behaviour in school. Pupils who feel a sense of belonging and a bond to the

school and who trust the administration are less likely to commit violent acts (Kitsantas *et al*, 2004). According to these results the school internal environment is relevant to academic performance and the school administration's task is to create an environment that supports learning and teaching.

Offering extracurricular activities such as clubs and groups for journalism, music, sports, drama and science, as well as class parties, field trips, school camps, excursions and so on constitute another part of the characteristics of schools that are important for pupil academic performance. A number of studies have demonstrated relationships between pupil involvement in extracurricular activities and their grades (Guest, Schneider, 2003; Broh, 2002; Marsh, 1992). Extracurricular activities are a good opportunity to communicate with other pupils outside the classroom and also increase ones self-confidence and self-esteem. As discussed previously pupils' relationships with others and their opinion of themselves are very important areas affecting academic performance. Research shows that those pupils who participate in extracurricular activities develop more positive feelings towards the school, and pupils who feel more attached to their school make a bigger effort as discussed earlier. This indicates that the school's role is not only to concentrate on the academic curriculum, but also to provide extracurricular activities for its pupils (Mulford *et al*, 2004; Lan, Lantier 2003), and in the end this also helps to improve the success (also academic) of its pupils. It is suggested that successful schools help pupils regulate their own behaviour and deal with the many social and academic challenges they face. Pupils who take part in extracurricular activities are less likely to engage in high-risk behaviour and are more able to manage academic challenges.

Pritchard *et al* (2005) made a study among pupils and found that in many pupils' eyes extracurricular activities are a positive side of the school. Leithwood and Jantzi (1999) showed that pupils who made more positive comments about extracurricular activities earned significantly higher achievement scores in writing than those who made negative comments. One could argue that when a pupil is engaged with extracurricular activities then he or she may not have enough time for learning and therefore the grades are not so good, but this seems not to be true in most cases. So it is important that in addition to academic curricula schools should also find opportunities to offer extracurricular activities.

Teacher characteristics

The experience and knowledge of teachers is considered to be an important aspect of school academic performance (Childress *et al*, 2006). Verstegen and King (1998) bring up a positive correlation between teacher experience and pupil academic performance in 85 percent of studies, and also that teacher experience was a significant predictor of pupil academic performance in 24 out of 40 studies. Ferguson (1991) found that master's degrees and experience among teachers had more impact on achievement levels in reading and

mathematics than socio-economic standing of the pupils. Darling Hammond's (2000) analyses indicate that assessments of teacher preparation and certification have a strong positive correlation with pupil achievement in reading and mathematics.

Ascher and Fruchter (2001) indicate that pupils assigned to ineffective teachers for several consecutive years have significantly lower achievement levels and lower gains than those who are assigned to highly effective teachers for several years running. Ascher and Fruchter (2001) compared low performing schools with high performing schools in the US and found that there are noticeable differences. In low performing schools, the percentage of teachers that were not fully licensed was 25.9 percent compared to high performing schools 7.6 percent. In low performing schools 33.3 percent of the teachers had less than 5 years teaching experience. In high performing schools, the same value was 23.7 percent. In low performing schools, there were also more teachers who did not have an advanced degree (30.9 percent) compared to high performing schools where only 18.1 percent of teachers did not have an advanced degree. It is clear that the results for low performing schools are not as good as in high performing schools.

On the contrary, Hanushek (1989) has concluded that teacher education and experience do not contribute to pupil academic performance and that one cannot confidently say that hiring more educated and experienced teachers will raise pupil achievement. Teacher education was significant only in 12 percent of 113 studies in the years 1967–1987 analyzing pupil academic performance. Still, teacher experience was more important because 36 percent of 140 studies showed significant relationships between teacher experience and pupil educational outcomes. Hanushek (1997) also states that obtaining an advanced degree does little to ensure that teachers do a better job in the classroom. Because a teacher's salary invariably increases with the completion of a master's degree, this is another example of increased expenditure yielding no gains in performance. From recent studies, Goldhaber *et al* (1999) have also found that teacher's years of experience at secondary school, teacher qualification and teacher has a master degree is not significantly correlated with pupils' maths test scores.

We see that results about the effect of teacher education and experience on pupil academic performance are contradictory. These are measurable or tangible aspects of teacher characteristics, but they are not generally within the direct control of the school administration. Their impact on school academic performance is controversial in the author's opinion because we can raise teachers' salaries, encourage them to get higher degrees and hire experienced teachers, but this is no guarantee that these kinds of teachers will do the best job. There are also other important matters that undoubtedly contribute to pupil achievement. These factors include for example teachers' teaching abilities, interpersonal skills and so on.

Shirvani (2007) indicates that several researchers have found that improved teacher communication increased pupil academic achievement. Communication

is the process by which two or more parties exchange information and share meaning (Moorhead, Griffin, 1989). Epstein (1995) mentions that communication between a teacher and a parent could consist of personal contacts, phone calls, e-mails etc. Both school-to-home and home-to-school communication are effective in improving pupil learning (Shirvani, 2007). Bowen (1999) stated that communication with schools helped parents to develop positive attitudes toward schools and a better understanding of the school curriculum. So it is important to encourage good communication between teachers and other stakeholders.

Organisational commitment among teachers is the next factor influencing pupil academic performance. Researchers generally define organisational commitment as the psychological strength of an individual's attachment to the organisation (e.g. Pool, 2000; Lahiry, 1994), and also identification with and involvement with a particular organisation (Dee *et al*, 2006; Nguni *et al*, 2006; Øgaard *et al*, 2005; Bogler, Somech, 2004; Mowday *et al*, 1979). So, commitment is based on three factors: 1) the acceptance of the organisation's goals and values (identification), 2) the willingness to invest effort on behalf of the organisation (involvement), 3) and a definite desire to maintain organisational membership (loyalty) (Nguni *et al*, 2006; Øgaard *et al*, 2005; Bogler, Somech, 2004; Mowday *et al*, 1979). These characteristics imply that the members of the organisation wish to be active players in the organisation, have an impact on what is going on in it, feel that they have high status within it, and are ready to contribute beyond what is expected of them.

Organisational commitment is assumed to be directly linked to organisational performance (Dee *et al*, 2006; Silverthorne, 2004; Taormina, 2000). Park (2005) and Nir (2002) refer to studies that have found that teacher commitment is correlated to pupil achievement in maths and reading. Individuals who are highly committed to their work often extend way beyond to ensure they perform their jobs with maximum effectiveness (Pool, 2000). Park (2005) states that committed teachers are willing to invest more time and energy in classroom activities and will perform better. Another important aspect is that more committed employees means less turnover because a highly committed person enjoys working for the organisation and seeks to remain a member of the organisation in the future (Park, 2005; Pool, 2000). Park (2005) believes that teacher commitment is a key to solving the teacher turnover problem. According to this evidence, organisational commitment is an important factor in school academic performance and the role of the school administration is to find ways to increase the commitment of school stakeholders.

Work motivation is a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behaviour and to determine its form, direction, intensity and duration (Latham, Pinder, 2005, p. 486). It is generally believed that more motivated organisational members give more effort to contribute to organisational goals. There are lots of motivational theories (e.g. Maslow's hierarchy of needs, Herzberg's two factor theory, Adam's equity theory, Vroom's expectancy theory etc), but these will not be discussed in this dissertation. Only a very brief discussion will be provided

about the role of the teacher's salary and extrinsic and intrinsic motivators in subchapter 1.2. Generally, it is the role of the leader of every organisation to develop a rewarding motivational system for their organisational members. In the school context, this concerns mainly teachers and pupils, but the motivation of other organisational members and parents is also relevant here.

The final teacher characteristic analysed here is job satisfaction. DeNobile and McCormick (2008) define job satisfaction as "the extent to which a staff member has favourable or positive feelings about work and the work environment" (p. 103). According to Pool (2000) the definition is "job satisfaction reflects the extent to which people find gratification or fulfilment in their work" (p. 35). Nguni *et al* (2006) defined job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job and job experience" (p. 152). All these definitions indicate that job satisfaction refers to some kind of positive opinion that organisational members hold about their work, work colleagues and work environment.

It is proposed that the greater the job satisfaction, the higher the performance in the organisation (Liu, Ramsey, 2008; Xiaofu, Qiwen, 2007; Silverthorne, 2004; Lund, 2003). This is because when employees are more satisfied they are willing to work harder toward organisational objectives, and on the contrary, dissatisfied employees will give a minimum of the expected behaviour and perform at less than their potential (Ostroff, 1992). Judge *et al* (2001) conducted a meta-analysis of 312 samples that specifically tested the relationship between job satisfaction and performance and found that the average correlation between them is about 0.30.

In the school context, there is also a relationship between job satisfaction and performance. For example, teacher job satisfaction influences his/her quality of teaching and as a consequence pupils perform better (Sharma, Jyoti, 2006; Griffith, 2003). Ostroff (1992) found that the correlation between a teacher's job satisfaction and pupil achievement in maths, reading and social sciences is about 0.30. Thus, understanding the factors that contribute to teacher satisfaction (or dissatisfaction) is essential to improving the information base needed to support a successful educational system.

One should consider that the previously mentioned areas are also inter-related. For example the greater the job satisfaction, the more likely it is that employees will be engaged to achieve organisational goals (Ostroff, 1992) and will be more motivated (Matzler, Renzl, 2007; Sharma, Jyoti, 2006). Job satisfaction is higher when the communication is open (DeNobile, McCormick, 2008) and employee commitment is higher (Liu, Ramsey, 2008; Matzler, Renzl, 2007; Weiqi, 2007; Sharma, Jyoti, 2006; Nguni *et al*, 2006; Lund, 2003; Taormina, 2000). Commitment is higher when there is more open communication between organisational members (Dee *et al*, 2006). There are also relationships between commitment and motivation (Shaw, Reyes, 1992). More of these interrelationships between various organisational research fields exist, but these will not be extensively discussed in this dissertation.

The early publication by Coleman *et al* (1966), “Equality of Educational Opportunity”, created the impression that schools make little, if any difference in children’s learning and that the child’s family, peers and general social background exert a much greater effect on learning than does the school. Some recent studies have come to the same conclusion (e.g. Tajalli, Opheim, 2004; Levačić, Woods, 2002; Hanushek, 1989). For example, Reynolds and Packer (1992) concluded from their review of research into school effectiveness that schools have an independent effect on only 8–15 percent of pupil outcomes. Additionally, Thomas and Mortimore (1996) say that once background factors have been accounted for, the variation in total examination scores attributable to the schools is 10 percent. Also, Goldhaber *et al* (1999) have found that school and teacher variables account for only about 21.3 percent of the variation in pupil achievement. Indeed, from these 21.3 percent only 0.9 percentage points are observable aspects like per-pupil spending, teacher experience, or teacher higher degree. The remaining 20.4 percentage points are unobservable aspects like teacher motivation and school climate. However, other researchers say that social background has an influence, but there are also factors that school principals and/or head teachers can have an impact on (Ayres *et al*, 2004; Machin *et al*, 2004; Ascher, Fruchter, 2001; Gewirtz, 1998). Brown and Taylor (1996) highlighted opinions from Stringfield and Teddlie (1988), and Fullan (1985), who indicate that there are several areas where schools can make a noticeable difference and contribute to pupil academic performance.

The author of this dissertation agrees with the previous opinion and thinks that there are factors influencing school academic performance that can to some extent be managed by school administrations. Table 4 presents a summary of the literature overview of factors influencing school academic performance. The factors that can to some extent be influenced by school administration and those that cannot are distinguished. Naturally, there are always exceptions.

As we can see from table 4 there are numerous factors affecting pupil academic performance that to large extent can be influenced by school administrations. For example, family investments, parent expectations, and support and involvement in school life can be increased by school administrations. Although, some factors influencing pupil academic performance cannot to a large extent be influenced by school administrations in the author’s opinion. For example, parents’ education and income are definitely beyond the control of school administrations. Except where the school administration selects pupils according to their family background. In most cases school administrations also cannot influence the school budget and therefore also teacher salaries and class sizes. Although, in selecting teachers, the school administration could take into account their education level and experience, but in most cases this is not possible because there are not so many candidates for positions and also as discussed earlier, higher education and experience do not guarantee better teaching. Only the factors that can to large extent be influenced by school administrations are discussed in the following analysis.

Table 4. Overview of factors that can or cannot predominantly be managed by school administrations

	Factors that to a large extent can be managed by school administrations	Factors that to a large extent cannot be influenced by school administrations
Family background level	Family investments in school matters, parent expectations about learning, support and involvement in school life	Parent education, family income
Peer background level	Peer acceptance, quality of positive friendships, number of friends, loneliness	Peer values, attitudes and behaviour towards school and learning
Pupil individual level	Pupil values and attitudes towards school and learning, pupil motivation, school attachment, involvement, commitment and self-perception	Inborn abilities of pupils
School level	School safety and discipline, school climate and culture, extracurricular activities	School size and location, school budget, teacher salaries, class size
Teacher level	Teaching abilities, interpersonal skills, commitment, motivation and job satisfaction level	Basic education, previous experience

Source: compiled by the author

In the next subchapter, the school administration's role in school academic performance will be discussed. On the one hand, what could the school administration do to take advantage of factors positively influencing school performance, and on the other hand, what could be done to reduce the impact of factors that may negatively influence the school's academic performance.

1.2. The role of the school administration in school academic performance

Organisational leaders give direction to their organisation and perform a guiding role that impacts organisational performance. In a similar way, school leadership is considered a key determinant of a school's performance (Mulford *et al*, 2008; Gibbs, Slate, 2003). Harris *et al* (2003) conclude that research findings from different countries have revealed the powerful impact of leadership on processes related to school performance and improvement. Furthermore, Huber (2004) summarized results from Great Britain, US and Netherlands that indicate that it is proven that leadership is a central factor in the quality of a school and that more successful schools possess competent school leaders. So it is important to analyse what kind of school leadership supports school academic performance. Also, the wider context applicable in every type of organisation is given when needed in order to understand school level phenomena.

School leadership has some unique characteristics. Childress *et al* (2006) suggest that school leaders should not apply the same methods as business managers because schools have to serve all customers (pupils) regardless of their interest in academic performance. Also, different stakeholders (e.g. pupils, parents and teachers) may have different interests and this makes school leadership even more difficult. Therefore, there is a need to adapt both business and non-profit sector strategies and create a unique approach to leadership in the school context. The Harvard Business School and Harvard Graduate School of Education launched the Public Education Leadership Project (PELP) in 2003. The PELP team worked to identify effective leadership and management practices for urban public schools in the US, and PELP partnered schools gained noticeable advantages by applying the knowledge gained. Therefore, it is reasonable to elaborate school specific leadership practices.

Cranston (2002) brings out some changes in the roles and skills of school principals, claiming that leadership through visionary, attitudinal and cultural change has become more important in recent decades. Due to the increasing diversity and complexity of their work, principals need more interpersonal skills for communication, collaboration, negotiation, conflict management and so on. These skills are crucial for school leaders to do their work effectively (Wilmore, 2002; Hallinger, Heck 1998; Gurr *et al*, 2005). As in the business world, school principals also handled more administrative and management tasks before, but now there is a greater need to focus on the implementation of leadership qualities (Neil *et al*, 2001). There are many theories about leadership styles and their implementation. These will not be discussed any further in this dissertation. But in the school context generally, more participative and team-work oriented leadership styles are considered most suitable (Huber, 2004; Griffith, 2003; Gibbs, Slate, 2003). There is a need for schools to consider the needs and suggestions of stakeholders more. Although, there is no single style of leadership appropriate for all schools (Hallinger *et al*, 1996) because certain principal behaviours may have different effects in different organisations. Therefore, principals need to find their own style to suit their school.

In terms of academic performance, the role of school leadership is also widely discussed in the literature (e.g. Leithwood, 2005; Gurr *et al*, 2005; Huber, 2004; Gibbs, Slate, 2003; Neil *et al*, 2001; Leithwood, Jantzi, 1999 etc.). Sometimes the direct effect of the school leadership on a school's academic performance is highlighted, but often the indirect effect is emphasised. Moreover, DeMaeyer *et al* (2007) doubt that direct effect models are an appropriate way to analyse leadership effects on school performance, and many empirical results confirm that view. For example, Griffith (2004) has found that school leadership was indirectly related to pupil achievement mediated through personnel job satisfaction. Hallinger *et al* (1996) have found that school principals have an indirect effect on pupil academic performance mediated through actions that shape the school climate. Ogbonna and Harris (2000) show that leadership is correlated to performance indirectly mediated through organisational culture. Furthermore, Hallinger and Heck (1998) have collected data about studies

looking at the principal's contribution to pupil academic performance. The results indicate that very few studies (only 6 from 22) showed any direct impact from the principals on the academic performance of their pupils, whereas most of the indirect models (13 from 19) showed a significant impact on the pupils' academic performance.

In short, empirical studies show that the behaviour of the school administration usually has an indirect influence on academic performance. Leadership practices contribute to those outcomes desired by the schools, but the contribution is almost always mediated by other people, events and organisational factors. The author has listed the most discussed mediating factors between school leaders and their impact on pupil academic performance from the research literature⁵:

- creating the vision, mission and goals for school;
- involving stakeholders in decision-making, encouraging communication and cooperation between the school administration and the teachers, between teachers, between teachers and pupils, between pupils, between parents and the school;
- offering training and development opportunities for teachers, pupils and parents
- increasing commitment, motivation and satisfaction with school;
- creating a suitable internal environment for teaching and learning which is safe, more; disciplined and pupil friendly, has a good spirit, reputation and traditions and a favourable organisational culture⁶.

In what follows, these five areas will be analysed in more detail. In particular, it is discussed how creating a clear vision, mission and goals for schools may help achieve higher academic performance, how participating and cooperating with stakeholders may contribute to academic performance and so on.

Vision, mission and goal setting

One role of the school administration is to create a clear understanding about organisational goals, mission and vision for all organisational members and parents (Pashiardis, 2000). Well-articulated goals and mission and a clear vision about the future are the most emphasised characteristics of an effective school leader in the literature (e.g. Leithwood, 2005; Gurr *et al*, 2005; Schechter, 2004; Griffith, 2004; DiPaola *et al*, 2004; Griffith, 2003; Harris *et al*, 2003; Leithwood, Jantzi, 1999; Hallinger, Heck, 1998; Brown, Taylor, 1996). For example, Wilmore (2002) states that before schools can plan curriculum, instruction, school processes and so on, there has to be a clear vision about what direction all stakeholders must take. Wilmore also says that mission and vision are often viewed as “soft” issues and therefore not seen as important for actual management but this is not so. If pupils, teachers, parents and the school administration

⁵ In the literature more often discussed mediating factors are in front part of the list.

⁶ Organisational culture specifics will be discussed in subchapter 1.3.

do not know what the vision, mission and goals of the school are, they do not know what needs to be done. Therefore, the task of the school administration is to initiate the creation of a vision, mission and goals for the school and to communicate these to all stakeholders. According to Wilmore (2002) all school activities, whether curricular, extracurricular or pertaining to professional development, should be aligned with achieving these goals.

The school vision, mission and goals must be accepted and shared among organisational members and also by parents (Gurr *et al*, 2005). Hallinger and Heck (1998) and Goldring and Pasternak (1994) have found that better performing schools had greater staff consensus about educational goals than less performing schools. Leithwood and Jantzi (1999) state that the purposes and goals of the school need to be meaningful, useful and relevant to organisational members. In short, the role of the school administration is to create the goals, mission and vision so that everyone knows where the organisation is going and what everyone in the organisation has to do.

Involving stakeholders in decision-making, and encouraging communication and cooperation

The problem is that stakeholders rarely agree on the goals and mission and vision of the school; they might have different interests. Therefore, the task of the school leader is to bring all stakeholders together to achieve a consensus. One way to do that is to involve all stakeholders in decision-making. This is also a thoroughly discussed area in the literature on school leadership (e.g. Leithwood, 2005; Mulford *et al*, 2004; Huber, 2004; Griffith, 2003; Harris *et al*, 2003; Mulford *et al*, 2001; Ogbonna, Harris, 2000). It is proposed that involvement in decision-making improves people's understanding of the issues involved for those who must carry out the decisions. When they understand why they have to do something its easier to handle. Furthermore, people are more committed to actions where they have been involved, and that people are less competitive and more collaborative when they are working toward joint goals. When stakeholders make decisions together, the social commitment to one another is greater and thus increases their commitment to the decision. Also, several people deciding together make better decisions than one person alone. Akin and Hopelain (1986) argue that people are more receptive (or at least less resistant) to activities that they participate in deciding on. Bogler and Somech (2004) argue that teachers who participated in decision-making were more enthusiastic about their work and were more likely to stay to work in the school. Park (2005) says that teachers who participated in decision-making were more engaged with their work.

In the school context, involving teachers is quite wide spread. Involving parents needs more attention. Pupil involvement does not seem self-evident to all school leaders. Schechter (2004) summarizes this idea as follows (p. 175): "When compared to the business sector, schools' "customers" (pupils) are significantly voiceless and lack influence. Their strength to act and demand

improvement regarding school practices is quite limited. This external lack of demands for change from “customers” contributes to teachers’ “lazy” attitude as regards doubting ongoing practices. However, we must also consider the dramatic change in the parental role, from merely accepting schoolwork to critically judging it, based on increased consumer orientation.” So it is important to involve parents and also pupils in decision-making in school matters. The study by Mulford *et al* (2001) showed that pupils and parents are the less involved groups concerning school decisions (see table 5).

Table 5. Principals’ and teachers’ perception of involvement in decision making in schools (%)

	Principals’ perceptions about stakeholder involvement				Teachers’ perceptions about stakeholder involvement			
	High	Moderate	Low	None	High	Moderate	Low	None
Principal	94.4	5.6	0.0	0.0	94.9	5.1	0.0	0.0
Assistant principal	88.9	11.1	0.0	0.0	81.6	17.9	0.5	0.0
Advanced skills teachers	66.7	33.3	0.0	0.0	33.2	57.5	9.3	0.0
Other teachers	23.5	64.7	11.8	0.0	5.3	37.8	52.1	4.8
Non-teaching personnel	5.9	35.3	47.1	11.7	0.5	13.7	51.6	34.2
Pupils	11.1	22.2	61.1	5.6	0.0	15.7	69.9	14.4
Parents	16.7	22.2	61.1	0.0	2.6	21.7	62.7	13.0

Compiled by the author, source: Mulford *et al* (2001)

If we compare the opinions of school principals and teachers, we can see that principals think that participation levels among various stakeholders is higher than the teachers think. These results indicate that the school administration may see things in the organisation more optimistically compared to other stakeholders. So it is reasonable to ask the opinion of the stakeholders and involve them in the decision-making.

Another question in the study by Mulford *et al* (2001) was whether the decision-making is characterised by collaborative, cooperative and consultative processes. One hundred percent of the principals agreed with the mentioned statements — 61.4 percent of form teachers agreed with this statement, 15.2 percent were unsure and 23.4 percent disagreed. So, teachers are more critical in this matter too, and there is a need to make decision-making a more collaborative, cooperative and consultative process. Hallinger and Heck (1998) propose that more collaborative decision-making was associated with higher

achieving schools. Leithwood (1994) suggests that where collaboration is used in decision-making, school performance was better. Mulford *et al* (2004) argue that: “It was found that where decision-making is perceived by teachers as collegial, collaborative, co-operative and consultative and providing adequate opportunities for participation, it will be more likely to lead to positive pupil perceptions about their school and teachers, as well as perceptions about relationships and their own performance, than where decision-making is more top-down, executive or does not foster widespread involvement.” (p. 93) Therefore, not only is the participation of various stakeholders in decision making important, but this participation should also be with collaborative. In the following some characteristics of participative leaders and non-participative leaders are listed.

Participative leaders, for example, are characterised as follows (Ogbonna, Harris, 2000):

- before making decisions, school leader considers what stakeholders have to say;
- before taking action school leader consults stakeholders;
- when faced with a problem, school leader consults stakeholders;
- school leader asks stakeholders for their suggestions;
- school leader listens to stakeholders advice on which assignments should be pursued.

On the other hand, non-participative leaders are characterised as follows (Mulford *et al*, 2004):

- the overall management style could be described as “top-down” decision-making;
- the values of the organisational members and the goals of school leaders are often in conflict;
- the decision-making processes are slow and cumbersome;
- the school management unduly restricts the ability of individual teachers to determine teaching practices and methods.

Besides decision-making, collaboration in other areas is also stressed in school leadership studies. Erb (2006) compares schools to sports teams. The trainer can recruit top players, but the team may never win. The problem here is that the trainer is not capable of making the players work as a team. An analogous situation exists in schools. Erb (2006, p. 7) says: “Successful schools are much more than the result of hiring highly qualified teachers and letting them function in isolation in their separate classrooms”. This is where cooperation, communication and relationships between school stakeholders come in.

The communication, cooperation and relationships in schools involve many parts. There are many forms of communication: verbal and/or written; upward and downward and horizontal; formal or informal and so on, and all these forms of communication should contribute to the function of the organisation. Most important in the author’s opinion are communication and relationships between the school administration and teachers; between teachers; teachers and pupils;

between pupils; and between parents and the school. DiPaola *et al* (2004) state that if relationships improve, things get better. If they remain the same or get worse, ground is lost. Thus, effective school leaders should value stakeholder relationships. Effective leaders increase the “social capital” of their schools (Coleman, 1988) as stakeholders work together for the academic benefit of the pupils (DiPaola *et al*, 2004; Wasley *et al*, 1997). The role of the principal in establishing effective communication between various stakeholders is crucial.

For effective communication and relationships, it is necessary to understand the groups involved. As long as each group is determined to hold onto its own perspectives without thinking about how the other group feels, it will be difficult to develop respectful collaborative relationships. The principal as facilitator must give voice to all stakeholders, identify common values, and resolve conflict while building a team, its unity and its vision (Wilmore, 2002). Given the nature of the work, some conflict, frustration and inadvertent miscommunication are inevitable. Effective principals possess the interpersonal skills and disposition needed to deal with conflict, solve problems amicably and repair trust through informal and formal processes that promote the success of pupils (Tschannen-Moran, Hoy, 2004; Deal, Peterson, 1999). These opinions indicate that it is important for school administrations to clarify the stakeholders’ needs, interests and opinions and prevent conflicts among them. The stakeholder group that probably needs the most attention here is teachers.

The school administration’s task is to coordinate relationships between teachers, which in Schechter’s (2004) opinion are especially challenging to manage because teachers work separately and they depend on their colleagues in daily activities less compared to some other professions. Moreover, schools are not structured for dialogue and teamwork, which deprive teachers of opportunities to initiate collective thinking and both formal and informal processes. Consequently, when teachers’ work is conducted far away from peers, it contributes to a self-segregation and lack of motivation to doubt school practices. In contrast, interdependent collegiality stimulates collaborative practices, which, in turn, enhances the teachers’ perceived need to question their current practices, thereby fostering pedagogical innovation (Schechter, 2004). Krečič and Grmek (2008) stress that cooperation between teachers is very important for their professional development. They also emphasise that in schools it is important to create a more cooperative internal environment and a less individualist one. Individualist tendencies make communication between organisational members difficult, and as a result, for example, teachers spend little time during a working day discussing work in the classroom with other teachers. Because of the lack of collaboration and professional dialogue, teachers remain on their own with their experience and may not see all the opportunities for solving every day dilemmas and difficulties in schoolwork. Teachers learn only from their own mistakes, and can end up building on the basis of incorrect assumptions. This is especially unfavourable for teachers who are starting their teaching career because they may be rather insecure about what to do. On the contrary, cooperating with other teachers helps them check, change and adjust

their own personal and professional beliefs, views, expectations, ideas, deployment and treatment of experience with other teachers (Krečič, Grmek, 2008). These opinions indicate that the school administration needs to create opportunities for teachers to cooperate more. For example, to plan their activities together, discuss problems together etc. Also, various outside school events may be favourable for creating better relationships between teachers.

In a similar way, good relationships between teachers and pupils are important because when pupils experience a sense of belonging at school and supportive relationships with teachers, they are motivated to participate actively and appropriately in the learning process — they work harder in the classroom, accept teacher direction and criticism, cope better with stress etc (Ridley *et al*, 2000; Anderman, Anderman, 1999; Wentzel, 1999; Birch, Ladd, 1997). In particular, the quality of relationships with teachers in the early grades has implications for future academic performance (Meehan *et al*, 2003; Pianta *et al*, 1995; Howes *et al*, 1994). Therefore, the role of the school administration is to promote good relationships between pupils and teachers. For example, to offer special training for teachers and pupils to help develop better relationship skills when needed, organise special outside school events etc.

When analysing the role that relationships between pupils play in school academic performance, we can say that it has been found that higher achieving schools have more positive pupil relationships (Shann, 1999). For example, pupils get along with each other, help each other, make friends with pupils who are new to the school and there are no unfriendly cliques. In lower achieving schools the relationships between pupils are not good. For instance, pupils bully other pupils, fight with other pupils and tease pupils who get good grades. There are also many pupils with behavioural problems, e.g. pupils who steal, destroy school property, use illegal drugs, alcohol, tobacco etc. These results show how important pupils' relationships with each other are and that the school administration should support these relationships.

The importance of involving parents in school life has been discussed in the previous subchapter. So the home-school relationship is an important area of school leadership and good cooperation between parents and school helps to advance the academic performance of schools. Sometimes there are divergent opinions about home-school relationships. DePlanty *et al* (2007) conclude that many parents are excluded from the most common forms of communication with their children's school. On the one hand, more than one third of all US parents did not have a conversation with a teacher during the school year, and most parents reported that they had never been involved in deep or frequent discussions with teachers about their children's progress. On the other hand, 95 percent of teachers interviewed said that they communicated with parents. This is a major discrepancy between the experience of the teacher and that of the parents. Epstein and Becker (1982) reported that teachers think involving parents is extremely important, but time constraints limit their time to deal with parents. Therefore, the role of the school administration is to value relationships between parents and school and find time and strategies for that.

Training and development

One could think that the main purpose of school leaders is to promote pupil learning, but they should promote adult learning as well. Teachers should get courses to improve their teaching skills, but skills in communication, co-operation, conflict management, problem solving, time management and so on are important for teachers and also for parents and pupils (Leithwood, 2005; Huber, 2004; Harris *et al*, 2003; Gibbs, Slate, 2003; Griffith, 2003; Brown, Taylor, 1996; Arnn, Mangieri, 1988). More skilled stakeholders can better contribute to achieving the goals of the school.

As discussed in the previous subchapter, extracurricular activities are an important area of pupil academic performance. Therefore, the school administration needs to offer proper opportunities for extracurricular activities. Mulford *et al* (2004) conducted a study in Australia and among other questions they asked pupils about how often they participate in certain extracurricular activities. The results showed that pupils most often participate in sporting activities and in school camps and excursions. There were fewer participants in music, bands or orchestras, dance, drama, school plays and theatre. On the one hand, we could say that sport is the most popular extracurricular activity, and one should offer more opportunities to do sports. But on the other hand, maybe pupils participate in sports because there are less of the other more favourable options. So, the school administration needs to find out what kind of activities are attractive and useful for their school pupils and offer such activities.

Commitment, motivation and job satisfaction

As discussed in the previous subchapter, organisational commitment, motivation and job satisfaction are areas that contribute noticeably to organisational performance (e.g. school academic performance) due to increased effort offered by organisational members. Therefore, the school administration needs to pay attention to these areas. A critical aspect of this matter of commitment is represented by new organisational members. Therefore, efficient socialization programmes should be implemented.

Organisational socialization has usually been defined as the process of adjusting expectations, adapting to the environment and performing new roles. It is the process by which an individual comes to appreciate the values, abilities, expected behaviours, and social knowledge essential for assuming a new organisational role, participating as an organisational member, and assimilating into an organisation. (Ostroff, Kozlowski, 1992) Liu and Ramsey (2008) suggest that the school administration needs to provide support to new teachers and help them wade through the initial years of their teaching career. After new teachers persist through the early stressful years, they become more competent and more satisfied. Therefore, on-going evaluation and feedback from other teachers about their teaching is all very important. New teachers should also be invited to participate in decision-making on school matters because then they become

an active citizen among other school stakeholders. Also, cooperation with experienced teachers is a good way to socialize new teachers.

In terms of motivational issues, the main question is whether organisational members especially teachers could be motivated by increasing their salary or not. Sharma and Jyoti (2006) suggest that intrinsic factors play a significant role in motivating individuals to enter the teaching profession because they enjoy teaching and want to work with young people. Very few teachers enter the profession because of external rewards such as salary, benefits or prestige. However, while intrinsic forces may motivate people to become teachers, extrinsic conditions can influence their behaviour as well (e.g. leaving the school or the teaching profession altogether). On the contrary, Liu and Ramsey (2008) in their research compared teachers who left school compared to teachers who stayed in school. The results showed that compared to teacher leavers, teacher stayers were happier about the school administration, pupil interaction and professional development. Teacher leavers and teacher stayers did not differ substantially in other aspects of job satisfaction including compensation. This again indicates that salary may not be the only reason for teacher attrition. Simply providing monetary incentives may not be the most effective way to turn the tide of teacher attrition. The major dissatisfaction among leavers lay in their relationship with the school administration. This suggests that teachers are most likely to move to a different school when they are unhappy with their current school administration. This information stresses even more the importance of the school leadership. As there are few opportunities to offer higher salaries for teachers one should concentrate more on intrinsic rewards. As discussed in the previous subchapter, the role of teacher salary in pupil academic performance is also controversial.

From the perspective of job satisfaction many studies have been made. Usually, the following areas have been found to be important for teacher job satisfaction (DeNobile, McCormick, 2008):

- supervision (support and recognition received, from the principal);
- colleagues (personal and professional aspects of working with other organisational members);
- relationship with the principal (how principals related to organisational members generally);
- working conditions (aspects of the work internal environment such as comfort and physical surroundings);
- work itself (intrinsically satisfying aspects of the job such as interest and opportunities to help pupils);
- responsibility for work (level of autonomy and accountability for one's own work);
- job variety (scope for originality or innovation at work and job variation);
- feedback (given by other staff members and the principal);
- relationships with the pupils.

As we can see in this list there are many areas that may contribute to job satisfaction among teachers and consequently influence academic performance in the school. In a similar way, the satisfaction of other stakeholders in school life must also be considered. One important element that influences stakeholder satisfaction with the school is the school's internal environment, the specifics of which will be discussed in the following sections.

A school's internal environment

In terms of issues related to the school's internal environment, one of the most important matters for school leaders is to provide a safe and orderly school internal environment that supports teaching and learning (Nettles, Herrington, 2007; van der Westhuizen *et al*, 2008). For example, Kitsantas *et al* (2004) measured school safety with the following statements: 1) items being stolen from lockers or desks; 2) money or other things being taken by force or threat; 3) any incidents of bullying, and 4) any pupils or teachers being attacked or involved in fights. Fairness of the disciplinary code were measured as follows: 1) everyone knows what the school rules are; 2) school rules are fair; 3) the punishment for breaking school rules is the same no matter who you are; 4) the school rules are strictly enforced; 5) if a school rule is broken, pupils know what kind of punishment will follow.

Researchers have identified several factors of a safe and orderly internal environment that can be affected by principal behaviour, including: 1) the setting and communication of behavioural standards, 2) implementing effective processes to ensure that behavioural policies are applied consistently for all pupils, 3) assuring that discipline is used consistently and fairly and 4) dispersing the responsibility for discipline throughout the school, among others (Nettles, Herrington, 2007; Scheurich, 1998; Leitner, 1994; Marcoulides, Heck, 1993). Effective discipline in the school, including elements such as respect toward the educator, regular attendance at school and punctuality are important for schools (van der Westhuizen *et al*, 2008). Although research suggests that hard discipline works towards reducing misbehaviour and vandalism, such discipline actually often promotes these problems. When pupils are being punished or suspended they are not learning (Osher, Fleischman, 2005). The role of the school administration is to offer fair discipline and create a safe school atmosphere because this enables pupils and teachers to concentrate on their work and show better academic results.

The school internal environment should also be pupil friendly. Gurr *et al* (2005) summarized some important values of school leaders concerning pupils. These are: every child is important; every child can succeed; every child has unrealised potential and schools should focus on what was in the best interests of the children. Karpicke and Murphy (1996) add that the value "all pupils **can** learn" at some point must become "all pupils **do** learn". Hull (1980) suggests that pupils should be treated with respect, fairness and honesty. These values should be communicated to other stakeholders too. When pupils are respected

and valued in the school they have higher self-esteem, which has been proven to contribute to the academic performance of pupils. Pupils may also feel more attached and involved in school life then, which is also favourable for good learning results as discussed in the previous subchapter.

Creating a good spirit, traditions and a positive reputation for a school is also one of the responsibilities of the school leader (Wilmore, 2002). It is important that all stakeholders could be proud of their school. This could also contribute to their desire to work towards organisational goals. School spirit is even proposed as a preventative for behavioural and disciplinary problems because, for example, poor attendance is often a symptom of a problem of the spirit of the school. It is certain that pupils who feel good about their school will attend classes (Hull, 1980). An important part of the school internal environment is also its organisational culture, which can influence the school's academic performance. The specifics of organisational culture will be discussed in subchapter 1.3.

Gewirtz (1998) conducted a qualitative study to find out what distinguishes academically high and low performing schools. One chosen school, the John Ruskin School, is high performing in the national league tables of examination results in the US, and the other school, Beatrice Webb, is positioned near the bottom of the examination league tables. Table 6 summarizes the main differences between these high and low performing schools. We can see that the high performing school is highly regarded, extremely popular and able to attract talented, dynamic and committed teachers compared to the low performing school. There are also better relationships between stakeholders at the high performing school, as well as more parent contribution and a healthier internal environment than the low performing school, and more attention is paid to extra-curricular activities and non-academic performance at the high performing school.

Therefore, this study by Gewirtz (1998) is a good example of how important the non-academic areas of school life such as creating good relationships between stakeholders, offering development opportunities for stakeholders and creating a suitable internal environment are for academic performance. The school with the higher academic performance was better in all non-academic areas analysed compared to the academically low-performing school.

As we have seen there are numerous opportunities for school administrations to positively influence school academic performance. School leaders can influence parental support and involvement (which increases pupil academic performance as discussed in the previous subchapter) via involving them in decision-making concerning school development and goals, improving communication and cooperation between parents and school, enabling development opportunities for parents etc.

Table 6. Comparison of high and low performing schools

Characterization of the school	High performing school — John Ruskin School	Low performing school — Beatrice Webb School
Reputation within the local community	Highly regarded	Poor
Popularity	Extremely popular	Very few pupils choose to go there
Attractiveness for teachers	Is able to attract talented, dynamic and committed teachers	It is much harder to attract good teachers
Leadership	Builds and develops a team approach, there is a clear vision and common expectations	No team approach, no clear vision, lack of planning and target-setting, no agreement about expectations
Internal environment	Little violence and pupil conflict, behaviour problems don't get in the way	Violent and disruptive pupils
Relationships between management and personnel	Morale is relatively healthy and serious conflict between personnel and management does not arise. The school aims to provide an internal environment in which its members can contribute and achieve.	Poor relations between management and personnel, lack of agreement between personnel and management, unsatisfied with management
Parents contribution	Invests in good relations with parents. Active parent association and annual meetings for parents	Less parent input. No parent association, very few parents ever attend annual meetings.
Non-academic performance of pupils	It is concerned with the development of the whole person, with learning through personal interest and commitment	Little attention to non-academic outcomes
Extra-curricular activities	Many	Few
Teachers methods	Teachers work hard to create harmonious relationships in lessons and to provide lessons that contain an interesting variety of activities, which largely sustain the interests of pupils. Lessons are well planned with clear objectives and explanations.	Poor teaching quality. Too many teachers have low expectations of the pupils and weak techniques of assessment. In some subjects the teaching is flawed by poor subject knowledge, the use of unsuitable methods and the lack of clear aims to lessons.

Compiled by the author, source: Gewirtz, 1998

Additionally, school leaders can decrease possible negative peer influences on pupil learning by offering extracurricular activities to improve non-academic skills among pupils and increase self esteem (which are favourable for good academic results), create a suitable internal environment for teaching and learning (which avoids disciplinary problems and violence acts etc.), involve pupils in school matters because greater attachment, involvement and commitment to school have been proven to positively affect pupil academic performance. Likewise, pupil individual level, school level and teacher level factors influencing pupil academic success can be influenced by school administrations.

So in the author's opinion, the school administration has opportunities to influence the school's academic performance. Whether the administration acknowledges these opportunities depends on their attitudes and subsequent behaviour. An attitude is a disposition to respond favourably or unfavourably to an object, person, institution or event (Ajzen, 2005, p. 3). Attitudes can be positive, negative or neutral and an individual can have thousands of them. Different individuals can have different attitudes about the same object. For example, some leaders may have positive attitudes about involving employees in decision-making and some may have negative attitudes about that. Firstly, attitudes determine how the administration behave and which leadership practices they implement; and secondly, leaders' attitudes and behaviour also have an impact on the attitudes and behaviour of the teachers, pupils etc. (Griffith, 2004; Gibbs, Slate, 2003; Harris, Crane, 2002; Neil *et al*, 2001). For school leaders it is a challenge to accept that when the high academic performance of a school is the goal then not only are pupils and teachers responsible for that, but the school leaders also have a substantial role. The following quote by DiPaola *et al* (2004) illustrates this well (p. 3): "Principals' attitudes, values, beliefs and personal characteristics inspire people to accomplish organisational goals and if pupil achievement improves over time it is, in large measure, because key stakeholders share the leader's vision about these goals". Therefore, it is proposed that when we find out what kind of attitudes school leaders have towards school performance criteria, we could make some assumptions about their behaviour and the consequences for schools' academic performance.

In the following, the logic behind the setting of hypothesis 1 is explained and illustrated in figure 4. The figure reflects the path what was crossed in order to arrive at this hypothesis. Firstly, the factors influencing school academic performance were determined and two types of factors were differentiated from this perspective (pupil background and school background characteristics). Secondly, the factors that can to a large extent be influenced by the school administration were distinguished and further analysis is based on these. Thirdly, the opportunities the school administration has to influence these factors were discussed, and finally, the role of the attitudes of the school administration and their behavioural choices was clarified.

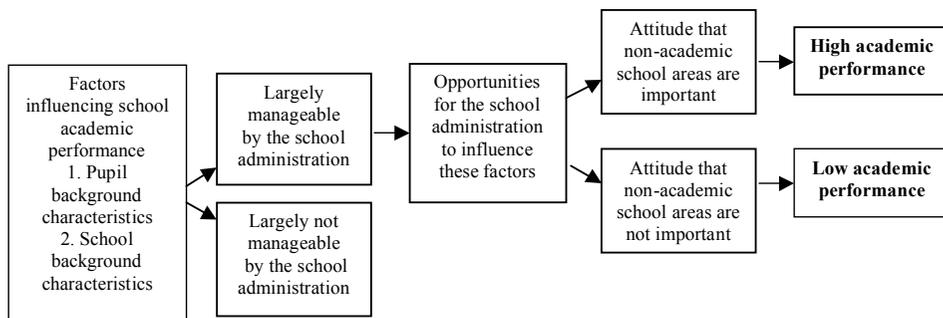


Figure 4. Rationale for setting hypothesis 1: the potential impact of administration attitudes on academic performance
Source: compiled by the author

As discussed in this subchapter, the school administration can influence school academic performance through setting clear and shared goals, mission and vision; involving stakeholders in decision-making, encouraging cooperation and communication between them; offering training and development opportunities for stakeholders; increasing their commitment, motivation and job satisfaction and creating a suitable internal environment for teaching and learning. Therefore, the role of the school administration is not only to advance the academic curriculum, but also to deal with the mentioned non-academic areas. Concentrating more on non-academic areas could improve the academic performance of schools. The hypothesis set is as follows:

Hypothesis 1:

In schools where the school administration has an attitude that school performance depends on the non-academic factors of the school, the academic performance is higher.

Since organisational culture is one of the most important mediating factors between leaders and organisational performance, organisational culture and the way it influences organisational performance will be discussed in the next subchapter.

I.3. Organisational culture and its impact on organisational performance

Organisational culture⁷ is a phenomenon that is considered to influence many areas of organisational life, among others also organisational performance. This subchapter presents a more precise overview of organisational culture and in particular whether and how organisational culture influences organisational performance. Relationships between organisational culture and organisational performance in general and also in the school context are clarified.

Despite similarities in occupations and professions, processes and structure and so on, the same types of organisations are nevertheless different (Keyton, 2005). Researchers argue that one reason for that is organisational culture. Organisational culture is to the organisation what personality is to the individual (Wells *et al*, 2007; Kane-Urrabazo, 2006; van der Post, 1998; Karpicke, Murphy, 1996). Ankrah and Langford (2005) say that, for example, new members in an organisation consciously or unconsciously soon come to sense the particular culture of an organisation just as they would get to know another person. Moreover, organisational culture will also be taught consciously or unconsciously to new organisational members.

Over the last decades many researchers have been attempting to define organisational culture and explain its essence. The most influential of these are for example E. H. Schein, L. Smircich, T. Peters and R. Waterman, T. Deal and A. Kennedy, J. Kotter and J. Heskett, M. Alvesson, H. M. Trice and J. M. Beyer, W. Ouchi, etc. Although the term “organisational culture” is widely used by researchers, managers and the public in general; unfortunately, there is still little agreement about how to define organisational culture, and therefore, it is a rather controversial area of research as sometimes the term is understood differently. In spite of that, organisational culture is a popular topic and its impact on many organisational fields is still studied.

Organisational culture is often described as: “The way we do things around here” (used for example by Deal, Kennedy, 1983; Schneider, 2000; Goldring, 2002; Martins, Terblance, 2003; Smith, 2003; Øgaard *et al*, 2005; Keyton, 2005; Holbeche, 2005 etc.). In the school context, Rodrigues (2008) has defined organisational culture as follows: “School culture is what schools do and how they do it” (p. 4). Another popular definition is that organisational culture is the social “glue” that helps hold the organisation together by providing appropriate standards for what employees should say or do (used for example by Wilson, Firestone, 1987; Bass, Avalio, 1993; Smith, 2003; Ankrah, Langford, 2005; Balthazard *et al*, 2006 etc.). These are rather general ways to explain the essence of organisational culture. There are many more complex and thorough definitions. However, these will not be extensively discussed in the present dissertation.

⁷ Additionally, firm’s culture, corporate culture and culture are used instead of organisational culture in the literature.

Many definitions of organisational culture often have something in common. One common aspect is that many authors refer to shared meanings or understandings when defining organisational culture. However, there is not always agreement about what exactly is shared. Most often authors indicate that values must be shared. Also the sharing of norms, beliefs, assumptions, attitudes, practices, rituals, symbols, myths etc is highlighted. Another prevalent point upon which some agree about organisational culture is that organisational culture influences the behaviour of organisational members and this often subconsciously. The author of this dissertation defines organisational culture as follows: organisational culture is a pattern of shared (often subconscious) attitudes, beliefs and values that provide organisational members norms for behaviour in the organisation. In the following, the concepts used in this definition of organisational culture will be explained.

The shared attitudes, beliefs, values and norms develop through the interaction of organisational members. These are not simply the addition of, for example, individual attitudes. Moreover, shared attitudes may be different to a particular individual's attitudes. Attitudes are defined as "dispositions to respond favourably or unfavourably to an object, person, institution or event" (Ajzen, 2005, p. 3) as also discussed in the previous subchapter. It was also mentioned that attitudes can be positive, negative or neutral. It is also proposed that the shared attitudes among organisational members influence their behaviour. For example, when there is a shared negative attitude toward being late to work then the majority of organisational members try to behave accordingly. Closely related to these shared attitudes are also shared beliefs.

Beliefs are basic assumptions about the world and how it works (Sathe, 1983). Belief is a strong feeling that something is true or real. Shared beliefs are considered to also influence the shared attitudes and behaviour of organisational members. For example, when organisational members share the belief that "when we are friendly to the customers then they are more likely to come back" then the organisational members have a positive attitude towards friendly colleagues and also try to behave in a friendly manner. But the shared values of organisational members are also important here.

A value is a "broad tendency to prefer certain states of affairs over others" (Hofstede, 2001, p. 5). Values are the basic assumptions about what people consider to be important, good or bad, right or wrong (Hodgetts, Altman, 1979). Values that are often associated with work and organisations include honesty, prestige, ambition, creativity, respect, tolerance etc. (Keyton, 2005). Values that are shared among organisational members also influence the shared attitudes, shared beliefs and the behaviour of organisational members. When honesty is valued by organisational members (at least by the majority of organisational members) then they have a negative attitude towards dishonest colleagues and they do not believe that dishonest colleagues are good work partners. As discussed so far, shared attitudes, beliefs and values influence the behaviour of organisational members, but shared norms are also relevant here.

Norms are standards of expected behaviour (Sathe, 1983). Shared norms indicate what behaviours are desired and allowed in an organisation. For example, that all organisational members should be on time, should be friendly to all customers, should dress conservatively etc. Shared beliefs, attitudes and values are the basis for developing norms. For example, when organisational members value honest behaviour then there is social pressure to act honestly. Norms are in some form like a bridge between beliefs, attitudes, values and behaviour. It is generally assumed that individuals act according to their attitudes, beliefs and values, but sometimes it is not possible due to the norms in the organisation. For example, an organisational member could have a negative attitude toward an unpleasant customer, but he or she must be polite anyway.

The definition of organisational culture is illustrated in figure 5. Shared attitudes influence behavioural norms among organisational members. In a similar way, shared beliefs influence shared attitudes and behavioural norms among organisational members etc. In short, the core of organisational culture is shared attitudes, shared beliefs and shared values with shared norms and common behavioural patterns.

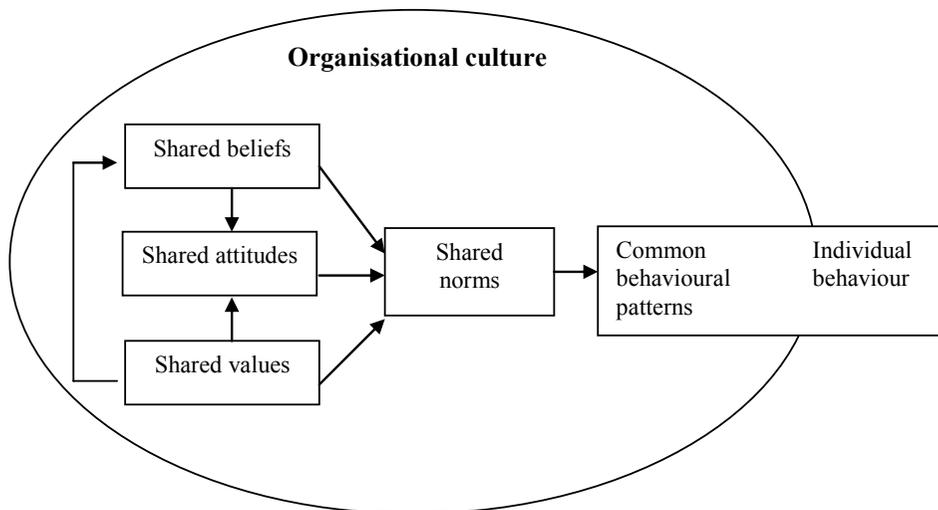


Figure 5. Illustration of the definition of organisational culture
Source: compiled by the author

The previous discussion indicates that organisational culture is socially constructed and different groups create a different culture. Also, that organisational culture cannot exist independently of the organisational members who create it, nor is organisational culture a result of the actions of one organisational member (Alvesson, Sveningsson, 2008; Keyton, 2005; Shearer *et al*, 2001; Hofstede *et al*, 1990 etc). Organisational culture is learned by members and taught to new

members as the correct way to perceive, think and feel (Ankrah, Langford, 2005; Schein, 1985). As a result every organisation's culture is different — what works for one organisation may not work for another (Holbeche, 2005). In short, every organisation has its own special organisational culture created collectively by its members, and organisational culture provides guidelines for the behaviour of its members. The following will discuss the results of empirical studies about the relationships between organisational culture and performance.

In the beginning of the 1980s, many influential researchers (e.g. Deal, Kennedy, 1982; Peters, Waterman, 1982; Wilkins, Ouchi, 1983; Schein, 1985; Kotter, Heskett, 1992 etc.) started a compelling discussion about whether and how organisational culture could contribute to the performance of an organisation. This debate continues today. To begin with, standpoints that support the opinion that organisational culture has an impact on organisational performance will be discussed. After that critical views in this matter will be presented.

Some authors are of the opinion that organisational culture exerts a powerful effect on the performance of an organisation (for example, Pfeffer, Veiga, 1999; Juechter *et al*, 1998; Kotter, Heskett, 1992 etc.). They think that this influence may be even greater than all the factors that have been discussed most often in the organisational and business literature — strategy, organisational structure, management systems, financial analysis tools, leadership etc. Goldring (2002) analysed the school context and the impact of organisational culture on pupil academic performance and concludes: “The culture of a school is more powerful than any formal aspect of leadership. School leaders aware of a school culture's influence may be able to work more effectively together for the pupils.” (p. 33) According to these opinions organisational culture is a phenomenon that opens new perspectives in the area of performance, and so further analysis of how organisational culture influences performance is appropriate.

Over the past 15 years, there have been many attempts to empirically prove the connection between organisational culture and performance. The author has collected and summarised 23 of the most influential of them in table 7. This table is compiled in order to systematize the results and is organized as follows. The first column presents the author(s) and the year their studies were published, while the second column presents the main sample characteristics (e.g. sample size, industry and country are important here). This information gives a general picture of the scope of studies linking organisational culture and performance.

The relationships between organisational culture and performance may also depend on industry or other characteristics of the sample. We can see that studies have been made using a wide range of datasets from many countries: the US, the UK, France, Germany, Norway, Greece, Slovenia, Russia, Japan, China, Hong Kong, Israel, Turkey, Malaysia and New Zealand compared to studies of school performance which have tended to be conducted exclusively in the US and UK. Many industries are also represented: manufacturing, finance, insurance, retail, high-tech, publishing, education and so on. This shows that

analysing relationships between organisational culture and performance is popular in many countries and also in a wide range of organisation types.

The third column summarizes the performance measurement principles used in the studies — a lot of performance indicators have been used. Generally they can be divided into: 1) financial indicators and 2) non-financial indicators. The results show that organisational culture has had an impact on many financial indicators such as return on assets, return on investment, return on equity, return on sales, profit, sales growth, market share, sales volume etc. But some authors have also analysed how the organisational culture influenced non-financial performance areas like employee satisfaction, customer satisfaction etc. Some authors use both criteria. Consequently, the studies analysed here show that organisational culture may influence the financial performance of organisations and also the non-financial performance. In the school context, pupil academic performance is used as a performance criterion. More precise results about schools are presented further on.

The fourth column of table 7 presents the principles for measuring organisational culture in the empirical studies analysed. The most popular method is to distinguish some types of organisational culture (used in 17 studies of 23), another quite popular option is to analyse the strength of the organisational culture and its impact on organisational performance, and different layers of organisational culture are also sometimes distinguished. These methods allow different aspects of organisational culture to be emphasized.

The final column in table 7 presents the statistical methods used to find the relationships between organisational culture and performance and also the gathered results. The statistical method is important to specify because sometimes this influences the interpretation of the results. We see that in the studies analysed a correlation analysis is predominantly used for data analysis, but regression analysis is also a popular method. The correlation analysis makes it possible to find out how strongly organisational culture is correlated with performance. The problem here is that correlation is a two-sided phenomenon and we cannot exactly say whether organisational culture influences performance or performance influences organisational culture.

Regression analysis makes it possible to find out how the independent variable (organisational culture) is influencing the dependent variable (performance). This method provides a better overview of how organisational culture could influence performance. Now a more detailed overview of the gathered results about relationships between organisational culture and performance will be discussed. Firstly, the results about all types of organisations are presented then the available evidence about school specifics is brought forward.

Table 7. Studies analysing relationships between organisational culture and performance

Author(s)	Sample	Performance measurement	Organisational culture measurement	Statistical method(s) Relationships between organisational culture and performance
Gordon, DiTomaso, 1992	11 insurance companies, 850 respondents	Growth in assets, total premiums	Organisational culture strength: 8 culture dimensions: clarity of strategy/shared goals, systematic decision making, integration/ communication, innovation/ risk-taking, accountability, action orientation, fairness of rewards, development and promotion from within	<i>Correlation analysis</i> Strong culture (measured as consistency of survey responses) increases performance
Kotter, Heskett, 1992	207 US firms from 22 different US industries	Firm's average return on investment, net income growth, change in share price	Questionnaire about strength of organisational culture (answered only managers)	<i>Correlation analysis</i> Positive correlation between strength of organisational culture and financial performance (but it is modest)
Denison, Mishra, 1995	764 respondents from manufacturing, business services, finance, insurance, retail and wholesale industries in US	Return on assets, reported sales growth; respondents' opinions about sales growth, profit, quality, employee satisfaction, overall performance	Developed 4 traits of organisational culture: involvement, consistency, adaptability, mission (see appendix 1)	<i>Correlation analysis</i> All four types are positively correlated to quality, employee satisfaction, overall performance, ROA. Adaptability, mission increase sales growth. Consistency, mission increase profit
Corbett, Rastrick, 2000	New Zealand manufacturing Organisations	Defective materials, total defects, warranty claims, cost of quality	Organisational Culture Inventory (OCI): constructive culture, passive culture, aggressive culture (see appendix 6)	<i>Correlation analysis</i> Constructive culture decreases amount of total defects, warranty claims. Passive and aggressive culture increases warranty claims
Homburg, Pflesser, 2000	173 managers from Germany (5 industries)	Return on sales	Assumptions, espoused values, artefacts (Schein) (see appendix 7)	<i>Regression analysis</i> Market-oriented culture influences financial performance indirectly through market performance

Author(s)	Sample	Performance measurement	Organisational culture measurement	Statistical method(s) Relationships between organisational culture and performance
Ogbonna, Harris, 2000	342 respondents from UK medium- and large sized multi industry firms	Customer satisfaction, sales growth, market share, sales volume, competitive advantage	Competing values framework: Innovative, competitive, bureaucratic, community (adapted from Desphande <i>et al</i> , 1993; Quinn, 1988) (see appendix 2)	<i>Regression analysis</i> Innovative and competitive cultures have positive impact on performance
Rashid <i>et al</i> , 2003	202 Malaysian companies listed in the Kuala Lumpur Stock Exchange	Return on assets (ROA), return on investment (ROI), and the liquidity ratio	Competing values framework: competitive, entrepreneurial, bureaucratic, consensual (Desphande, Farley, 1999) (see appendix 2)	<i>MANOVA</i> All types of organisational culture positively influenced ROA and ROI but not liquidity ratio
Fey, Denison, 2003	179 managers from foreign firms operating in Russia.	Managers' opinions about sales growth, profitability, quality, employee satisfaction, market share	4 organisational culture traits: involvement, consistency, adaptability, mission (Denison, Mishra, 1995) (see appendix 1)	<i>Correlation analysis</i> All four types have positive impact on performance
Griffith, 2003	117 US elementary schools	Pupils academic achievement	Competing Values Framework (Quinn, Rohrbaugh, 1983)	<i>Path analysis</i> Three organisational culture types contributed to the academic performance of schools indirectly mediated through: 1) Organisational members job satisfaction (human relation type) ; 2) parent-school relationship (open system type); 3) safe, order, discipline (Internal control process type)
Mallak <i>et al</i> , 2003	432 hospital employees in US	Job satisfaction, patient satisfaction, comparative patient satisfaction etc.	Competing values framework: cooperative teamwork, open system, stable hierarchy, rational firm (adopted from Quinn, 1988). They measured culture strength which refers to the extent of agreement with statements concerning the organisation's culture. (see appendix 3)	<i>Correlation analysis</i> Culture strength is positively correlated to performance

Author(s)	Sample	Performance measurement	Organisational culture measurement	Statistical method(s)/Relationships between organisational culture and performance
Dwyer <i>et al.</i> , 2003	177 senior bank human resource managers	Productivity, return on equity	Competing values framework: two subscales clan and adhocracy (Cameron, Freeman, 1991; Cameron, Quinn, 1999) (see appendix 2)	<i>Regression analysis</i> No statistically significant relationship
Desphande, Farley, 2004	Business to business firms from Japan, US, France, England, Germany	Self reported data about profit, sales growth	Competing values framework: competitive, entrepreneurial, bureaucratic, consensual (Cameron, Freeman, 1991; Quinn, 1988; Quinn, Rohrbaugh, 1983) (see appendix 2)	<i>Regression analysis</i> Consensual culture decreases performance, competitive culture increases performance
Nahm <i>et al.</i> , 2004	224 managers from US manufacturing firms with over 100 employees	Managers' opinions about sales growth, ROI, market share gain, overall competitive position relative to competitors	Underlying assumptions, espoused values, artefacts (Schein, 1992) (see appendix 7)	<i>Correlation analysis</i> Organisational culture has indirect influence on performance mediated through manufacturing practices
Chan <i>et al.</i> , 2004	49 managers from Hong Kong organisations with over 100 employees)	Managers' opinions about product or service quality, profitability, employee relations, etc compared to competitors	5 organisational culture traits: involvement, consistency, adaptability, mission, member conformity (adopted from Denison, Mishra, 1995) (see appendix 1)	<i>Correlation analysis, regression analysis</i> Involvement, consistency, adaptability and mission are positively correlated to performance
Berson <i>et al.</i> , 2005	26 high and low tech organisations from Israel	Sales growth and turnover	3 organisational culture types: innovative/entrepreneurial, bureaucratic, supportive (Wallach, 1983) (see appendix 4)	<i>Correlation analysis</i> Entrepreneurial and bureaucratic increase sales growth. Bureaucratic and supportive decrease turnover.
Øgaard <i>et al.</i> , 2005	57 Norwegian fast food managers	Last year's profit, additional sales, cleaning of the premises	Competing values framework: clan, hierarchy, market, ad hoc (Cameron, Freeman, 1991) (see appendix 2)	<i>Correlation analysis</i> No statistically significant relationship

Author(s)	Sample	Performance measurement	Organisational culture measurement	Statistical method(s) Relationships between organisational culture and performance
van der Westuizen <i>et al</i> , 2005	341 South African secondary schools	Pupil academic achievement	Tangible elements (e.g. verbal, behavioural and visual manifestations and intangible elements (beliefs, assumptions etc) of organisational culture	<i>Interviews and observations</i> Tangible and intangible elements of school culture were valued more in high-performing schools
Gruenert, 2005	81 US schools	Pupil academic achievement	Collaborative culture with six factors (collaborative leadership, teacher collaboration, professional development, unity of purpose, collegial support, learning partnership)	<i>Correlation analysis</i> All six factors of collaborative organisational culture positively influenced pupil academic performance
Xenikou, Simosi, 2006	293 employees from large financial organisation in Greece	Sale of insurance products, new loans, number of savings accounts etc	3 organisational culture types: 1) humanistic; 2) achievement (two subscales of the OC Inventory (Cooke, Lafferty, 1989)); 3) adaptive (subscale of the Denison, Mishra (1995) method) (see appendix 5)	<i>Regression analysis</i> Achievement orientation increases and adaptive orientation decreases performance directly
Balthazard <i>et al</i> , 2006	60,900 individuals from US	Self reported information about respondent's firm's quality of products/services, commitment to customer service, adaptability, turnover, quality of workplace	Organisational Culture Inventory (OCI): constructive culture, passive culture, aggressive culture (see appendix 6)	<i>Correlation analysis</i> Constructive culture is positively correlated with performance, passive and aggressive culture negatively
Chow, Liu, 2007	132 organisations from electronic and communication facilities, computer and software Industries in China	Respondents' opinions about productivity, research and development capability, products and services quality and market share	3 organisational culture types: bureaucratic, sharing and competitive (adopted from Wallach, 1983) (see appendix 4)	<i>Regression analysis</i> Competitive has positive impact on performance

Author(s)	Sample	Performance measurement	Organisational culture measurement	Statistical method(s) Relationships between organisational culture and performance
Škerlavaj <i>et al</i> , 2007	203 managers from Slovenian companies employing more than 50 people	ROA, value added per employee; 12 employee view variables (e.g. employee satisfaction, trust among employees); 4 customer view variables (e.g. customer complaints); 1 supplier view variable	Competing values framework: group culture, developmental culture, hierarchical culture, rational culture framework (Denison, Spreitzer, 1991; McDermott, Stock, 1999) (see appendix 3)	<i>Structural equation modelling</i> Organisational culture types have a positive direct impact on all three types of subjective performance indicators. The effect on financial performance is indirect mediated through employee perspective performance
Yilmaz, Ergun, 2008	1176 respondents from 134 manufacturing firms in Turkey (more than 50 employees)	Managers' opinions about sales growth, market share growth, return on assets, quality improvements, new product development capability, employee satisfaction, overall firm performance	4 organisational culture traits: involvement, consistency, adaptability, mission (Denison, Mishra, 1995) (see appendix 1)	<i>Correlation analysis</i> All culture types are positively correlated to all performance measures

Source: compiled by the author

The research results show that organisational performance is influenced by various types of organisational culture. Some types of organisational culture have a favourable impact on performance and some not. Although the types of frameworks of organisational culture used by various authors are quite different. These are not further discussed in this dissertation. Only a brief description of the types of organisational culture used in the studies analysed is offered in appendixes 1, 2, 3, 4, 5 and 6.

In some studies all distinguished types of organisational culture influenced organisational performance. For example, Rashid *et al* (2003) and Denison, Mishra (1995) found a connection with return on assets, Rashid *et al* (2003) a connection with return on investments. Škerlavaj *et al* (2007) found that all types of culture have an indirect influence on return on assets and value added per employee mediated through employee perspective on performance. All types of organisational culture also positively influenced the following rather subjective performance indicators:

- employee satisfaction (Yilmas, Ergun, 2008; Škerlavaj *et al*, 2007; Fey, Denison, 2003; Denison, Mishra, 1995);
- customer satisfaction and supplier satisfaction (Škerlavaj *et al*, 2007);
- respondents' opinions about sales growth (Yilmas, Ergun, 2008; Fey, Denison, 2003);
- respondents' opinions about profitability (Chow, Liu, 2007; Chan *et al*, 2004; Fey, Denison, 2003);
- respondents' opinions about employee relations (Chan *et al*, 2004);
- respondents' opinions about product and service quality (Chow, Liu, 2007; Chan *et al*, 2004); market share (Yilmas, Ergun, 2008; Chow, Liu, 2007) and
- respondents' opinions about new product development capability (Yilmas, Ergun, 2008).

Sometimes only one or two types of organisational culture had a favourable impact on organisational performance. This is mostly the case in studies that used some financial indicators for measuring performance. The results show that externally oriented types of organisational culture are in favour when high financial performance is required. For example, externally oriented types of organisational culture positively influence sales growth (Berson *et al*, 2005; Ogbonna, Harris, 2000; Denison, Mishra, 1995); market share (Ogbonna, Harris, 2000); sales volume (Ogbonna, Harris, 2000); profit (Desphande, Farley, 2004) and sales of insurance products, new loans and volume of savings (Xenikou, Simosi, 2006).

More constructive types of organisational culture also positively influenced performance (Corbett, Rastrick, 2000; Balthazard *et al*, 2006). So for higher performance in the organisation, organisational cultures characterised by achievement, self-actualisation, humanistic encouragement and affiliation is important according to the framework by Cooke and Lafferty (1989) (see also appendix 6). The last three of these four culture characteristics require more people oriented behaviours. All four characteristics are directed toward the fulfilment of higher-order needs. Consequently this kind of combination is the

most favourable for organisational performance. On the contrary, passive and aggressive types of organisational culture were not favourable for organisational performance.

Only a few studies showed that none of the types of organisational culture were connected to performance. For example, Mallak *et al* (2003) and Dwyer *et al* (2003) did not find any statistically significant relationship with return on equity and productivity. Øgaard *et al* (2005) did not find any statistically significant relationship with last year's profit, additional sales or cleaning of the premises.

These studies show that organisational performance often depends on what type of organisational culture prevails in the organisation. Logically, the results depend on how the performance is measured — different organisations have different goals and the methods for analysing organisational culture were also very different. Generally, both financial and non-financial performance could be influenced by type of organisational culture. For example, more constructive styles are preferable for performance. When financial performance is considered important more externally oriented types of organisational culture are favourable.

Studies analysing how strength of organisational culture may influence organisational performance generally show that strong culture characterised with widely shared and supported values among organisational members (e.g. Sørensen, 2002; Sathe, 1983) supports performance more. For example, Mallak *et al* (2003) found that culture strength (measured as the extent of agreement with statements concerning the organisation's culture) is positively correlated with job satisfaction and customer satisfaction. Gordon and DiTomaso (1992) found that strong culture (measured as consistency of survey responses) increases growth in assets and total insurance premiums. Kotter and Heskett (1992) indicate that firms with a strong culture (organisational members share a set of relatively consistent values and methods of doing business) had greater average levels of return on investment, net income growth and change in share price, but this relationship is modest. Burt and his co-authors (1994) reanalyzed Kotter and Heskett's data and found that the effect of the strength of the corporate culture was dependent on market context, with the performance benefit of strong cultures being enhanced in highly competitive markets. They reasoned that when firms in an industry are highly constrained by the structure of their markets, differences in organisational performance are more likely to be due to differences in the efficiency of organisational routines.

To summarise the results of the studies conducted about the strength of organisational culture and its influence on organisational performance, we can say that organisational culture contributes to the performance of an organisation when the values among organisational members are widely shared. Although, one should emphasise that not only is strongly held beliefs and values important, but also behaving according to them (Sathe, 1983). You could share the values of other organisational members, but your behaviour may not reflect that.

Distinguishing different layers of organisational culture was used to analyse the connection between organisational culture and performance in two cases. Homburg and Pflesser (2000) and Nahm *et al* (2004) distinguished underlying artefacts, espoused values and underlying assumptions to measure organisational culture in their study (see appendix 7); although, in both studies only indirect effects of organisational culture on performance have been determined. In the study by Homburg and Pflesser (2000), organisational culture has an impact on organisational performance measured using return on sales, but this is mediated through market oriented behaviours. Nahm *et al* (2004) found that organisational culture estimations are related to managers' opinions about sales growth, return on investments, market share gain and overall competitive position relative to competitors, but this is mediated through manufacturing practices.

According to table 7, we see that the results of empirical research show that in most studies organisational culture influenced performance. As mentioned before the interpretation of these results depends on what statistical method is used to measure the relationships between organisational culture and performance. According to this logic, the 23 studies were grouped depending on whether the relationship between the concepts found in the study was one-sided or two-sided. Whether organisational culture influences performance directly or indirectly, mediated through some other specified variable was also taken into account. Altogether five different possibilities were found to characterize the relationships between organisational culture and performance (see figure 6): 1) direct and one-sided influence; 2) direct and two-sided influence; 3) indirect influence mediated through some other variable; 4) both direct and indirect influence; 5) no relationship between organisational culture and performance.

Direct relationships between organisational culture and performance were found in 17 out of 23 studies. In six of them organisational culture influences performance, but in eleven of them organisational performance could also influence organisational culture. Thus, in these studies the relationships between organisational culture and performance are two-sided. Kotter and Heskett (1992) and Saffold (1988) explain that, for example, strong cultures cause strong performance, yet the reverse is known to occur too — strong performance can help to create strong cultures. Alvesson (2002) is of the same opinion and argues that it is possible that success brings about a common set of beliefs and values. Consequently, organisational culture then becomes both cause and effect and it is hard to tell what influences what.

In three studies only indirect connections between organisational culture and performance were found because relationships between these two concepts were mediated through some other variable. In one of the 23 studies, both indirect and direct relationships between organisational culture and performance were found. Therefore, in only two studies no relationship between organisational culture and performance was found. The following three available studies of how organisational culture influences academic performance in schools will be presented.

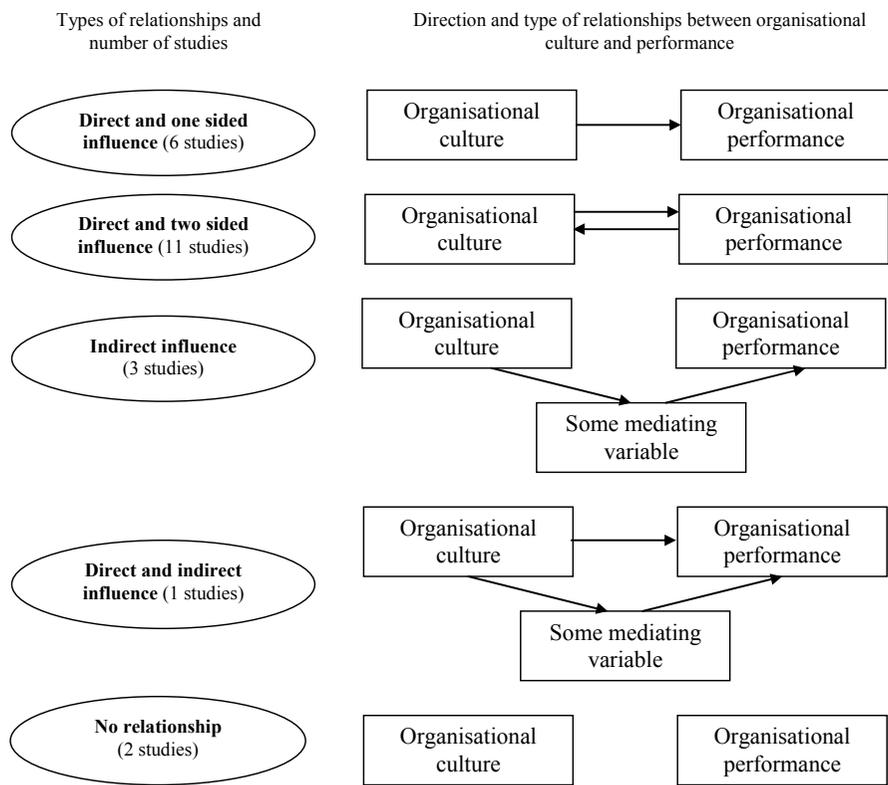


Figure 6. Different types of relationships between organisational culture and performance in 23 analysed empirical studies
Source: compiled by the author

Griffith (2003) has analysed 117 US elementary schools. Organisational culture was measured using a Competing Values Framework, which distinguishes four types of organisational culture. His results showed that some types of organisational culture are related to pupil academic performance, but indirectly mediated through job satisfaction among school members, personnel-parent relationships and pupil reports of safety, order and discipline (see table 7).

Two authors, van der Westhuizen *et al* (2005) and Gruenert (2005), claim that a relationship between organisational culture and pupil academic performance was not found when they conducted their research. The author of this dissertation agrees that a direct relationship between organisational culture and pupil academic performance was not found, but in Griffith's (2003) study, an indirect relationship is ascertained.

Van der Westhuizen *et al* (2005) have conducted observations and interviews with principals, teachers and pupils in 341 South African secondary schools and found that tangible and intangible elements of the school culture are given more attention in well-performing schools in contrast to poorly per-

forming schools. Performance was measured using 12th grade national examination results. Tangible elements considered included verbal manifestations (e.g. language, stories, rules etc.); behaviour manifestations (e.g. rituals, ceremonies, traditions, discipline etc.) and visual manifestations (e.g. symbols, school uniform etc.). Intangible elements included beliefs, assumptions, values, norms etc. For example, valuing discipline, respect and pride was more emphasised in highly performing schools.

Van der Westhuizen and colleagues found with qualitative research methods that favourable organisational culture influenced positively pupil academic performance. A quantitative attempt to find relationships between organisational culture and pupil academic performance was made by Gruenert (2005) in his study. He analysed 81 US schools in 2003 and found correlations between collaborative school cultures and pupil academic performance in mathematics and language arts. A more collaborative organisational culture is preferable for school academic performance according to his results. Gruenert (2005) argues that linking organisational culture and pupil performance may allow principals to refocus their energies on more human aspects of school leadership. A collaborative organisational culture had six factors in the Gruenert (2005) study. These are:

- collaborative leadership (e.g. leaders value teachers' ideas, leaders take time to praise teachers that perform well, teachers are involved in the decision-making process, leaders in our school facilitate teachers working together etc.);
- teacher collaboration (e.g. teachers spend considerable time planning together, teachers work together to develop and evaluate programs and projects, teaching practice disagreements are voiced openly and discussed etc.);
- professional development (e.g. teachers regularly seek ideas from seminars, colleagues, and conferences, professional development is valued by the school, school improvement is valued etc.);
- unity of purpose (e.g. teachers support the mission of the school, teachers understand the mission of the school, the school mission statement reflects the values of the community etc.);
- collegial support (e.g. teachers trust each other, teachers are willing to help out whenever there is a problem, teachers work cooperatively in groups etc.);
- learning partnership (e.g. teachers and parents have common expectations for pupil performance, teachers and parents communicate frequently about pupil performance etc.).

According to these three studies in the school context, we can say that for better academic performance in schools the organisational culture should support the development of teachers and exhibit efficient cooperation between teachers, between teachers and the administration and between the home and school. Also, shared goals, verbal manifestations, behavioural manifestations and visual manifestations are relevant here.

Empirical research has shown quite clearly that organisational culture may influence organisational performance. But there are some views that refute that. Some authors think that organisational culture cannot be linked simply to organisational results, oversimplification is a widespread problem in studies analysing the relationship between organisational culture and performance (Alvesson, 2002; Saffold, 1988). Sometimes researchers assume that there is a single, unified culture in organisations, but multiple subcultures appear to be the rule, unified cultures the exception (Saffold, 1988). Ogbonna and Harris (2000) agree with this opinion and explain that treating organisational culture as a unified concept reduces its value as an analytic tool. Also, the nature of the industry, the size of the organisation, environmental issues and so on must also be considered (Saffold, 1988). Therefore, a more sophisticated understanding of the connection between culture and organisational outcomes must be developed.

It is commonly assumed that widely shared and strongly held values and beliefs have positive consequences for an organisation as discussed earlier. But there is also the possibility that these shared meanings do not coincide with organisational goals and the management's ideas (Lee, Yu, 2004). For example, sticking to existing values can block organisations from making changes that are needed to adapt to new situations (Holbeche, 2005). Kilmann *et al* (1985, p. 4) argue that "a culture has a positive impact on an organisation when it points behaviour in the right direction [...]. Alternatively, a culture has a negative impact when it points behaviour in the wrong direction." Therefore, it must be considered that a strong organisational culture may not always contribute to organisational performance. Moreover it may become a serious hindrance to achieving the desired goals.

Sometimes it could well be that some particular cultural feature may affect different performance-related organisational processes in different directions. The development of shared meanings may, for example, have a positive effect on organisational control, but at the same time create conformism and reduce the organisation's capacity to learn and change (Saffold, 1988). Hofstede *et al* (1990) also say that a particular cultural feature may be an asset for one purpose and a liability for another depending on the situation. In addition, Saffold (1988) argues that a sample of high performing organisations might share many common traits, but with each organisation benefiting from those traits in a different manner. What is more, it is possible that a sample of low-performing organisations might share many of the same traits that characterise a sample of high-performing organisations, yet they might not possess these traits in performance-boosting configurations (Saffold, 1988). This means that we cannot say what kind of organisational culture should exist for good performance in every organisation because different organisations operate differently under different conditions. What is a benefit for one could be a shortcoming for another.

Despite these justified problems many researchers and practitioners appreciate organisational culture as a valuable asset for an organisation. In the following, some ideas are presented about how single organisational behaviour

issues are influenced by organisational culture. For example, how organisational culture can influence job satisfaction (Chang, Lee, 2007; Lund, 2003) or cooperation (Chatman, Barsade, 1995) or communication (Keyton, 2005; Schall, 1983) or commitment (Lok, Crawford, 1999; Lahiry, 1994) etc. The results of various studies are summarized here. It is presumed that organisational culture improves goal alignment and control, organisational commitment, communication, cooperation, socialisation, decision-making, motivation and job satisfaction among organisational members and consequently increases organisational performance. Individual and organisational level phenomena interact here.

Schneider (2000, p. 6) argues that “no management idea, no matter how good, will work in practice if it does not fit the culture. An organisation can have the most superb strategy, but if its culture is not aligned with and supportive of that strategy, the strategy will either stall or fail.” As discussed in the previous subchapter, a clear and ever-present sense of purpose is important for an organisation (incl. vision and mission). It is assumed that organisational culture is a phenomenon that enhances goal alignment between the organisation and its members (Yilmaz, Ergun, 2008; Chang, Lee, 2007; Sørensen, 2002; Burt *et al*, 1994). Moreover, organisational culture helps to set guidelines and rules for how to behave in order to achieve goals (Holbeche, 2005; Sørensen, 2002). Martins, Terblance (2003) report that shared values “ensure that everyone in the organisation is on the same track” (p. 65). Saffold (1988) argues that common cultural elements integrate members, creating a sense of solidarity and shared purpose. Furthermore, organisational culture reduces an employee’s uncertainty about expected behaviour (Smith, 2003), and that helps work better towards achieving goals. Shared values and beliefs give employees guidelines and decrease the anxiety of dealing with an unpredictable and uncertain environment (Krečič, Grmek, 2008; Sørensen, 2002). In addition, organisational culture decreases employee uncertainty about the risk involved in taking one action or another, so employees can respond more quickly (Burt *et al*, 1994) and concentrate better on what needs to be done. In short, shared attitudes, beliefs, values and norms, which are the core of organisational culture, provide organisational members guidelines for behaviour and also help to achieve goal alignment. When organisational members share the goals they can exert a better effort towards achieving these goals and this enhances performance.

Organisational culture is seen as an informal control mechanism in the organisation and coordinates employee efforts (Whetstone, 2005; Sørensen, 2002; Burt *et al*, 1994). Culture regulates behaviour implicitly and most effectively (Saffold, 1988). It can control perceptual and emotional processes that are beyond the reach of standard control systems (Saffold, 1988). Organisational culture provides the necessary structure and controls without having to rely on a stifling formal bureaucracy that can dampen motivation and innovation (Kotter, Heskett, 1992). Broad consensus and endorsement of organisational values and norms facilitates social control within the organisation. When there is broad agreement that certain behaviours are more appropriate than others, violations of behavioural norms may be detected and corrected faster.

Corrective actions are more likely to come from other employees, regardless of their place in the formal hierarchy (Sørensen, 2002). It is argued that widely shared and strongly held values enable management to predict employee reactions to certain strategic options thereby minimizing the scope for undesired consequences (Juechter *et al*, 1998). Organisational culture provides an unwritten set of informal norms that inform what actions are appropriate in most situations (Deal, Kennedy, 1982). Therefore, organisational culture means not only shared meanings and behaving according to these. There is also social pressure so that everyone in the organisation should act accordingly. In particular, new organisational members are taught how to behave, but also organisational members that do not share the attitudes, values and beliefs of the majority are pressured into changing.

Organisational culture also facilitates the decision-making process because shared beliefs and values provide organisational members a consistent set of basic assumptions and preferences. This leads to a more efficient decision-making process, because there are fewer disagreements about which premises should prevail (Sathe, 1983). Both formal and informal decisions made by a group translate the values of a group into actions (Goldring, 2002). Quick and consistent decision-making enables work to be carried out more efficiently.

Another area linking organisational culture with performance is communication (Ankrah, Langford, 2005; Goldring, 2002). In an ideal situation, communication permeates every aspect of school life so that parents, pupils, school administration, teachers and other school members share information of any kind that would help them achieve the goals of the school (Pashiardis, 2000). Members of each of these groups occupy distinct positions and are expected to behave in certain ways. The expected role of these groups and the norms ascribed to them vary. Clearly, the relationships between the many people in schools are varied and complex. Only after those relationships are understood and generally accepted can the school organisation function effectively (Günbayi, 2007). “Miscommunication is common in organisations. Even in two-person, face-to-face communication there is a danger of misunderstanding the other person’s meaning. Organisational culture reduces the dangers of miscommunication in two ways. First, there is no need to communicate items about which shared beliefs and values exist — certain things go without saying. Second, such sharing provides guidelines and cues to help the receiver interpret messages. The beliefs and values about what to communicate, and how openly to communicate, are crucial” (Sathe, 1983, p. 10). Additionally, researchers argue that organisational culture increases the quality of cooperation (Goldring, 2002; Sørensen, 2002; Burt *et al*, 1994; Sathe, 1983) and consequently performance (Pashiardis, 2000). Qualities that facilitate communication and cooperation are a valuable asset for the organisational culture of the organisation. When interpersonal relationships are good it helps achieve organisational goals.

Next, it is proposed that organisational culture increases organisational commitment (e.g. Wells *et al*, 2007; Silverthorne, 2004; Lund, 2003; Martins, Terblance, 2003; Ritchie, 2000; Lok, Crawford, 1999; Kotter, Heskett, 1992

etc.) because if organisational members accept and share organisational goals and values, their behaviour will be more in accordance with organisational goals and values, and they will be willing to exert greater effort for the organisation (Øgaard *et al*, 2005; Shaw, Reyes, 1992; Kotter, Heskett, 1992). When individuals accept the values and beliefs of the organisation's culture as their own, they become true believers in what the organisation is attempting to accomplish (Burello, Reizug, 1993). As discussed earlier, more committed organisational members exert more effort towards achieving organisational goals and this is favourable for the performance of an organisation.

Organisational culture also helps the socialization process of new employees (Ankrah, Langford, 2005; Martins, Terblance, 2003; Burt *et al*, 1994; Kotter, Heskett, 1992; Saffold, 1988). By joining an organisation, individuals must learn the attitudes, values, beliefs and behaviours of the organisational culture that they are joining, and co-worker support is crucial in this (Taormina, 2000). Silverthorne (2004) discussed that through the socialization process, individuals come to appreciate the values, expected behaviours and social knowledge that are essential for effective organisational behaviour. Since the organisational culture serves many purposes including establishing the norms for employee behaviour, it has a direct impact on how well a new member fits into the organisation. When new organisational members adapt well and are accepted into the organisation, they can offer their contribution to achieving organisational goals more easily and it is less probable that they will leave.

Organisational culture also improves the motivation of organisational members (Ankrah, Langford, 2005; Sørensen, 2002; Burt *et al*, 1994) because shared values and behaviours make people feel good about working for the organisation and that makes people strive harder (Kotter, Heskett, 1992). Holmes and Marsden, (1996, p. 26) discuss the idea that "organisational culture impacts significantly organisational member's behaviour and motivations and, ultimately, that organisation's financial performance". Employees who feel pride in being associated with an organisation they or others perceive in a positive light exert greater effort for these organisations (Burello, Reizug, 1993). Sørensen (2002) explains that widely shared values can enhance employee motivation and consequently performance because they perceive that their actions are freely chosen (Sørensen, 2002). For example, Van der Westhuizen *et al* (2005) argue that organisational culture not only increases pupil motivation to learn but also teacher motivation to teach. Therefore, it is reasonable to note the value of the idea that organisational culture enhances motivation because as we know better motivated organisational members exert more effort towards the organisation's goals.

There is much evidence that organisational culture also contributes to job satisfaction of organisational members (see for example Silverthorne, 2004; Lund, 2003; Tzeng *et al*, 2002). Chang and Lee (2007) emphasise that job satisfaction could be influenced by objective characteristics of the organisation, but subjective sensibility and explanations of these characteristics also affect job satisfaction. This means that for some organisational members the circum-

stances in the organisation seem favourable and job satisfaction is high, but others perceive the situation differently and job satisfaction is low. One important factor here is the personality of the organisational member, and this is more closely analysed in subsection 1.4.2. Evidence shows that job satisfaction for organisational members is higher when the organisational culture values people-orientation and supports organisational members (Tzeng *et al*, 2002; Pool, 2000). Stolp (1996) argues that teacher job satisfaction is higher when the values and norms in the organisation are widely shared. In the opinion of Chang and Lee (2007), whenever the individual's demands are congruent with the organisational culture this will result in the highest job satisfaction. For example, the individuals with high autonomy and high achievement motives will result in higher satisfaction under an organisational culture with loose supervision and emphasis on rewarding achievement. This opinion supports the previous argument that individual differences have an affect on whether organisational culture increases or decreases job satisfaction.

Organisational behaviour issues influenced by organisational culture are summarized in figure 7. It is a reflection of the ideal circumstances in the organisation assuming that organisational culture has a positive effect on all these issues. In an ideal case, when school members have a clear and widely shared goal then they can all contribute effectively to the achievement of this goal. When the school administration and the teachers are committed to their work they are willing to exert more effort. More motivated teachers unquestionably work better. Higher job satisfaction also leads to better work. Widely shared values among the school personnel help to speed up decision-making because there are less disagreements over many matters. When communication and cooperation between school members is efficient then all can benefit from this and performance can improve as well. When school members have a strong opinion about which behaviours are acceptable then the informal control mechanism helps to hold on to these acceptable behaviours and thereby improve performance. Again, this is an idealistic view of how organisational culture could influence performance. In real life it is unlikely that all these ideal circumstances occur. But this ideal picture is drawn to clarify what aspects of organisational behaviour may be influenced by organisational culture and consequently lead to better performance.

These nine issues connected to organisational culture can be broadly divided into two categories in the author's opinion:

- 1) how well organisational members strive towards organisational goals or tasks (how consistent they are with organisational goals; how committed they are, how motivated they are, how satisfied they are with their job) and
- 2) how well do interpersonal relationships support achieving organisational goals or tasks.

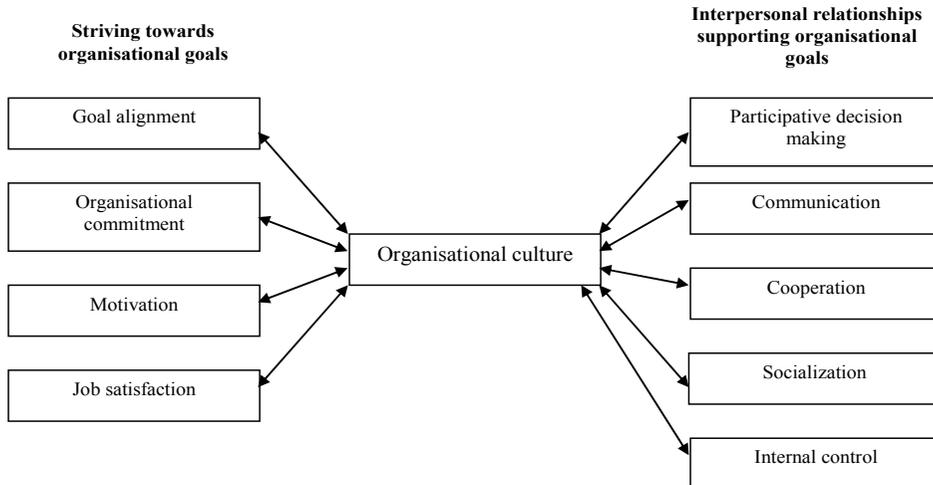


Figure 7. Organisational behaviour issues influenced by organisational culture
 Source: compiled by the author

Figure 8 presents the rationale for setting hypothesis 2. It reflects the steps made to arrive at this hypothesis. Firstly, the empirical evidence about the relationships between organisational culture and performance were analysed. It was found that organisational culture influences the performance of various types of organisations including schools. Secondly, how organisational culture could support organisational performance was discussed. Various aspects of the research into organisational behaviour were considered. Finally, task and relationship orientations of organisational culture were distinguished.

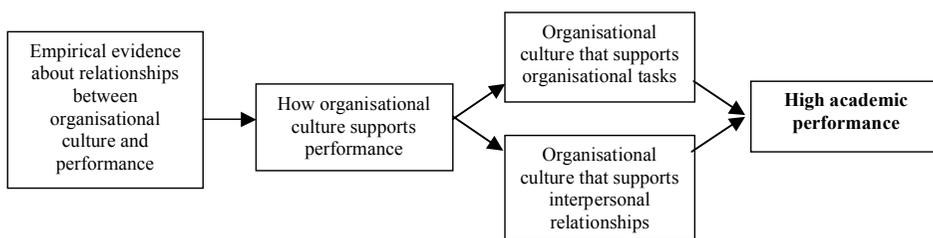


Figure 8. Rationale for setting hypothesis 2: the potential impact of organisational culture on the academic performance of schools
 Source: compiled by the author

Following this logic hypothesis 2 is set:

Hypothesis 2:

In schools where organisational members support organisational tasks and interpersonal relationships orientations of organisational culture, the academic performance is higher.

Assuming that organisational culture influences organisational performance, in order to take advantage of this one must know how to create and maintain organisational culture. Organisational culture is a result of the interactions of all organisational members, but managers have a guiding role. Therefore, in the next subsection of the dissertation whether and how managers can influence organisational culture will be discussed.

I.4. Organisational culture mediating relationships between individual characteristics and performance

I.4.1. Opportunities for leaders to influence performance mediated through organisational culture

As discussed in previous chapters organisational culture is a phenomenon that may influence organisational performance, and also that organisational culture could mediate relationships between the behaviour of organisational leaders and organisational performance. Although, organisational culture is created by all organisational members it is argued that organisational leaders have a leading role — they can direct the creation and maintenance of organisational culture and any changes to it (Kavanagh, Ashkanasy, 2006; Balthazard *et al*, 2006; Holbeche, 2005; DiPaola *et al*, 2004; Alvesson, 2002; Schein, 1992; Wilson, Firestone, 1987; Schein, 1985). Moreover, Schein (1985) indicates that the only thing of real importance that leaders do is to create and manage organisational culture. Balthazard *et al* (2006) and Schneider (2000) argue that leaders create the organisational culture whether consciously or unconsciously. Therefore, in the following how organisational leaders can influence organisational culture and consequently achieve higher performance in their organisation will be discussed. To begin with, the available evidence in general (applicable in every type of organisation) is presented then the discussion of the school context follows.

Bass and Avalio (1993) indicate that there is a constant interplay between organisational culture and leadership. Leaders create mechanisms for the development of the culture and the reinforcement of norms and behaviours expressed within the boundaries of the culture. Cultural norms arise and change because of what leaders focus their attention on, how leaders react to problems, resolve crises, reward and punish followers, the behaviours they role model and whom they attract to their organisations. A similar opinion is also held by

Whetstone (2005), who stresses the same aspects as Bass and Ayalo (1993). Also Holbeche's (2005) opinion is quite similar, but she also stresses that cultural norms develop due to the teaching and coaching activities offered by leaders. Also in Alvesson's (2002) opinion, leaders can influence organisational culture via training and socialization programmes that signal desired values and beliefs. On the one hand, organisational members who support the favoured organisational culture stay in the organisation and are acknowledged. On the other hand, individuals who are perceived as not being "right" are replaced. In short, organisational leaders influence organisational culture with their choices and behaviour. Favourable attitudes, beliefs, values and behaviour from organisational members are rewarded by the leader and unfavourable prevented or punished.

The effect of organisational leaders on organisational culture can be either positive or negative (Holbeche, 2005; Wright *et al*, 1992), for example, by sending signals for achievement oriented and self-actualisation behaviours and thereby creating and reinforcing a constructive culture, or by sending signals for confrontational and competitive behaviours and reinforcing an aggressive culture (Balthazard *et al*, 2006). However, it is claimed that ethical leaders promote the right values and practices and discourage pressures towards the wrong practices (Whetstone, 2005). Therefore, leaders have to analyse and check their behaviour constantly because the choices of leaders affect the behaviour of organisational members and the consequences can be positive, but also negative.

As discussed in subchapter 1.2, there are many empirical studies that have found that the behaviour of organisational leaders influences organisational performance. Also, empirical results about the influence of organisational culture on organisational performance were discussed in subchapter 1.3. Moreover, as discussed in this subchapter there are many theoretical arguments that there should also be a relationship between leader behaviour and organisational culture, but only very few empirical results are available. The main interest in this dissertation is how these three mentioned concepts: leadership, organisational culture and organisational performance affect each other simultaneously. Only three studies dealing with this theme were found. These are introduced here in chronological order.

Wilderom and van den Berg (1998) studied 58 Dutch banks in the years 1995–1996. They found that leadership, organisational culture and performance are all related (see figure 9). The transformational leadership style characterised by setting a clear vision, caring about organisational members, and inspiring, empowering and motivating them decreases the gap between the preferred and the perceived organisational culture. This means that organisational members are more in accordance with the organisational culture. This type of organisational culture contributes to organisational performance as found in the study by Wilderom and van den Berg (1998). This type of leadership also increases organisational performance. In short, leadership influences performance directly and also indirectly mediated through organisational culture.

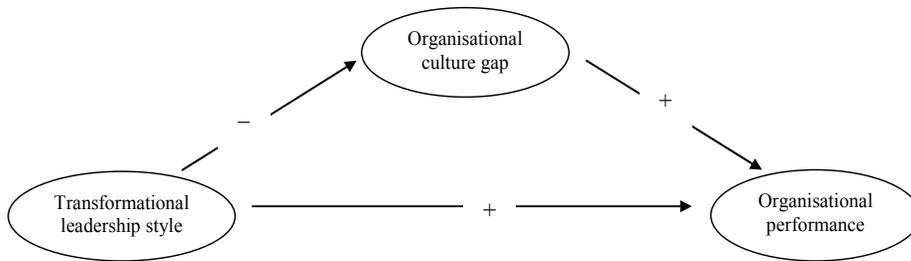


Figure 9. Relationships between leadership style, organisational culture and organisational performance in the study by Wilderom and van den Berg (1998)
Source: compiled by the author

Ogbonna and Harris (2000) conducted a study of medium and large multi industry firms with 342 respondents in the UK. They found that leadership influences organisational performance only indirectly mediated through organisational culture (see figure 10). Supportive leadership characterised by looking out for the personal welfare of organisational members, treating all organisational members as equals and making the work more pleasant contributes to organisational culture, which increases organisational performance. Participative leadership characterised by consulting with organisational members, asking for their suggestions, involving them in decision-making and so on, supports organisational culture, which increases organisational performance. On the contrary, instrumental leadership did not contribute to organisational culture or to organisational performance. The instrumental leadership style means that the organisational leader not only explains the way tasks should be carried out, but he or she decides what shall be done and how. In short, leadership styles and organisational performance were not directly related, but indirectly mediated through organisational culture.

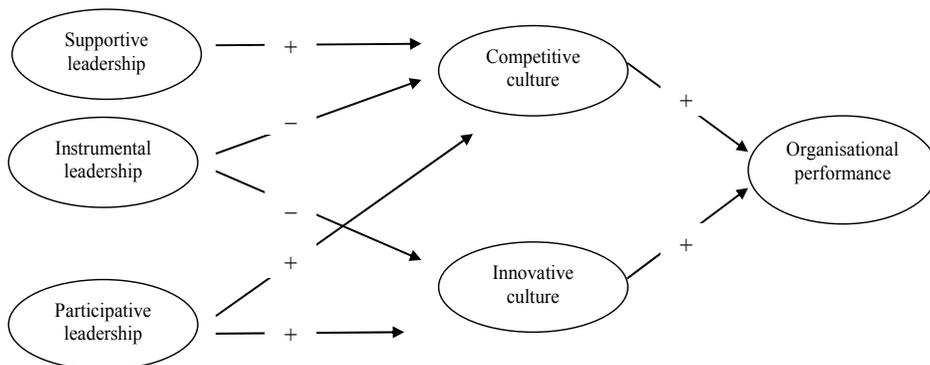


Figure 10. Relationships between leadership style, organisational culture and organisational performance in the study by Ogbonna and Harris (2000)
Source: compiled by the author

Xenikou and Simosi (2006) performed a study in a large financial organisation in Greece, 293 employees participated. They also found that leadership style and organisational performance are related indirectly as mediated through organisational culture (see figure 11). Transformational leadership characterised by visioning, inspiring, empowering and motivating organisational members contributed to organisational culture, which increased financial performance.



Figure 11. Relationships between leadership style, organisational culture and organisational performance in the study by Xenikou, Simosi (2006)
Source: compiled by the author

Only one out of the three studies discussed showed a direct relationship between leadership and performance, but all studies showed that leadership can contribute to organisational performance indirectly through organisational culture. More participative, supportive and transformational leadership styles are favourable for improving organisational performance.

Suppose organisational leaders know what kind of organisational culture supports performance and are willing to change the existing organisational culture in a more favourable direction. It is clear that organisational culture is quite stable, but never static (Kavanagh, Ashkanasy, 2006; Kotter, Heskett, 1992). Changing environments, new challenges and so on, can lead to new ways of doing things. Culture can change and is changing all the time. Organisational members working within a human system can and do produce change simply by interacting (Holbeche, 2005). As discussed earlier, all organisational members including organisational leaders create organisational culture and thus also change organisational culture (Kavanagh, Ashkanasy, 2006). But the question is whether the organisational culture can be changed intentionally by the leaders, and if yes then exactly how can organisational culture be changed.

Organisational culture and its impact on various areas in the functioning of the organisation has been a much-discussed topic in research literature over the past twenty years. At the same time there is no consensus about whether organisational culture can be intentionally changed by the organisational leaders or not. Alvesson and Sveningsson (2008) in their summary, suggest that three positions can be broadly identified on the manageability of organisational culture. One is that organisational culture, at least under certain conditions and with the use of sufficient skills and resources, can be changed by organisational leaders. A second is that changing organisational culture is very difficult. Still, change takes place and leaders are one resourceful group exercising influence.

A third view emphasises that culture is beyond control and thus cannot be changed by the leaders.

In this dissertation it will be presumed that organisational culture can to certain extent be changed by organisational leaders in cooperation with other stakeholders. For change to succeed, the new direction has to be reflected in the behaviours and attitudes, values and beliefs of all concerned. Generally, it is believed that organisational culture is very hard to change. Smith (2003) reports that only 32 percent of North American and European companies reported success in changing the organisational culture. Keyton (2005) argues that change cannot be forced on the organisational culture because cultures are symbolically constructed. Cultural change is more complex than simply changing a procedure or laying a management tool across all organisational practices. Values and norms cannot be dictated. Holbeche (2005) adds that to achieve a significant organisational culture change may take several years.

The strength of the existing organisational culture has been seen as a significant barrier to changing organisational culture. When shared attitudes, beliefs, values and behaviours have already been developed then organisational members tend to hold on to these shared meanings. Individual and group resistance to cultural change is a logical and understandable mechanism (Harris, Crane, 2002). Therefore, organisational members may not follow such management driven intentional changes to organisational culture. This means that managers are not in complete control of the culture (Kavanagh, Ashkanasy, 2006; Keyton, 2005). There must be a consensus between managers and other organisational members about changes in the organisation.

Additionally, different stakeholders may have different views of the efforts to change to the organisational culture. For example, Harris *et al* (2003) show that from the owners' perspective, the programme to change the culture was successful, apparently leading to improved financial performance and indicating support for some form of culture-performance link. Similarly head office managers viewed the change as favourable because a range of tangible and intangible efficiencies were improved. However, lower down the hierarchy store managers and shop floor workers experienced de-motivation, reduced job satisfaction etc. Kotter and Heskett (1992) argue that the good intentions of leaders with regard to changing organisational culture may also end with undesirable even contrary results because changes are not only disruptive to organisational processes and procedures, they are also disruptive to individual members of the organisation. In their view, any form of change will cause shifts or tensions within the organisation's culture at some level. Holbeche (2005) suggests that many managers have found from bitter experience that attempts to manage organisational culture can result in frustration and confusion. Therefore, change to organisational culture should be conducted very carefully and as with other changes in the organisation, organisational members must be involved in decision-making and planning. When organisational members are involved and agree with the changes in the organisation they accept these changes.

Another important aspect of organisational culture is that not only do organisational leaders influence organisational culture, but organisational culture may also influence the behaviour of the leaders too (Holbeche, 2005; Alvesson, 2002; Sarros *et al*, 2002; Bass, Avalor, 1993; Wright *et al*, 1992). As leadership is normally not carried out from a socio-cultural point zero, but always takes place in the context of already developed patterns of meaning — those of the leader and those of others — there is always a strong element of the cultural determination of leadership. Most leadership is culture-driven in the sense that shared beliefs and norms inform the manager how to act (Alvesson, 2002). Bass and Avalor (1993) provide the following example (p. 113): “A strong organisational culture, with values and internal guides for more autonomy at lower levels, can prevent top management from increasing its personal power at the expense of middle-level management. On a more specific level, the culture can affect how decisions are made with respect to such areas as recruitment, selection, and placement within the organisation.” Although, Sarros *et al* (2002) in their study have found that organisational culture influences leadership practices quite little.

In short, it is claimed that organisational culture change is complicated and takes a long time, but there are also cases where cultural changes succeed quite rapidly and bring desirable results. Two positive examples in the school context will be introduced here.

Example of a successful change in organisational culture in schools – case 1

The first case is introduced by Reavis *et al* (1999). Their study (in the US in the years 1995–1997) was about a historically low-performing school, where only 38 percent of pupils passed state mandated achievement tests. A new principal started changing the organisational culture through 1) rewarding heroes and heroines, 2) implementing new rites and rituals, 3) telling stories and 4) creating new symbols for the school inspired from the framework of Trice and Beyer. For example, awards for excellent teachers and pupils were given, successful sport and drama teams were acknowledged etc. Also, new school rites and rituals were developed. For instance, the following activities concerning state mandated tests were applied:

- special parties were held for those who make the test in the current year;
- special help from pupils who passed the test last year was offered to pupils who should make the test in the current year to encourage them and give them tips about how to prepare;
- when some scored low in pre-tests special motivational training was offered to prevent them from giving up;
- on the day of the test every pupil got a bag of cookies that instead of being store-brought were homemade with the pupil’s name on it from the principal who wanted each pupil to feel special and important.

Additionally, the new principal encouraged everyone to tell success stories about themselves and/or others, for example, about successful pupils, about teachers who gave special help to pupils and so on. The principal told stories

about himself too. For instance, how he had to take an algebra test two times before he could pass it and how he was discouraged from going to college by the school counsellor, but that his family had encouraged and supported him. Finally, in the area of school symbols, the new principal created a new mascot that was on the front line at all sports events.

At the end of his first year, 87 percent of the pupils passed the state mandated test, and at the end of the second year, 93 percent. So, the academic performance of pupils increased noticeably. But not just that, extracurricular activities such as drama and sports achieved recognition for the first time. Pupils began to aspire to future education beyond secondary school. Reavis *et al* (1999) argue: “The principal was successful in bringing about rapid, deep organisational culture change by importing a set of beliefs, values and practices. In the process, he was able to tap the deep motives of the teachers and pupils and provide organisational culture that would enable them to satisfy those motives. Not only did pupil academic performance improve in state mandated tests, but the improvement was broad-based including improvements in inter-school competitions, pupil perception of personal efficacy, and pupil recognition that the learning they were expected to do had utility beyond school.” (p. 201) The results of this case showed that by changing the organisational culture the school principal influenced school performance. In this case pupil test results were an academic performance criterion.

Example of a successful change in organisational culture in schools – case 2

The second case of a successful change to organisational culture is published by Eilers and Camacho (2007), who analysed small urban school located in a low-income neighbourhood in the years 2003–2004 in the US. The academic test scores were below state and national average. At the beginning of the study, only 21 percent of pupils exceeded the required level in the reading test and only 23 percent exceeded the required level in the maths test. The state requires that the percentage of pupils who score above the required level should be between 50–55 percent. The new principal described the school he entered as resistant to learning and resistant to collaboration. Support given from previous principal was weak.

The new principal started changes in the school via changes to the organisational culture. He wanted to encourage cooperation between teachers, focus on pupils needs and show more participative and collaborative leadership. He also wanted change the attitude: “Well, it’s the kids, it’s not me” (a teacher). In the opinion of the new principal this attitude was not acceptable. He wanted to raise expectations for all pupils and for all organisational members and what they can do. The new principal wanted the school personnel to work well together, and for teachers to use time together to discuss teaching and learning. The first steps the new principal made were to:

- arrange a two day workshop on team building which was conducted by an outside consulting group;

- arrange three follow-up workshops throughout the school year with an emphasis on stress reduction, conflict resolution etc.;
- implement grade-level teaming among the teachers by creating shared teacher preparation time;
- send teachers on visits to other schools that are known for their productive teaching communities.

After two years, the pupil test scores on state assessment improved significantly — 47 percent of pupils exceeded the required level in reading and 51 percent in maths. These results are now on the state average. Eilers and Camacho (2007) argue: “In the two-year period in which this case study was conducted, evidence emerged showing a change in school culture that was linked to changes in teacher professionalism, school collaboration and the use of evidence linked to classroom work. These qualities may have attributed to changes in pupil performance.” (p. 631) As in the first case, also in this second case the new school principal was successful in changing the organisational culture and as a result academic performance, and more particularly, pupil test results improved.

In these two cases about change in organisational culture, new principals were successful in improving pupil academic performance through changing organisational culture. The attitudes, beliefs, values and behaviours of school members were changed. In the first case organisational culture was changed more through acknowledging desirable behaviour. For example, through rewarding teachers and pupils who showed desirable attitudes and behaviour, telling stories about successful organisational members etc. In the second case the organisational culture was changed to encourage more collaboration between organisational members. Members were taught how to work in teams, how to solve conflicts etc. Inspiring examples from other schools with good cooperation levels were introduced. These two principals used slightly different ways to change the organisational culture, but the results were positive in both cases. This proves that there is not a single path for all organisations, every leader should find his or her own way.

So, it is claimed that organisational leaders can influence organisational culture, and that changing organisational culture is possible. As discussed in the previous subchapter, a central part of organisational culture includes shared attitudes, beliefs and values and these affect the behaviour of the members of the organisation. The organisational leader plays therefore an influential part because his or her attitudes, beliefs and values consciously or subconsciously influence their own behaviour and also the attitudes, beliefs, values and behaviours of organisational members. Wright *et al* (1992) argue that the set of beliefs and values held by organisational leaders give direction to their organisations. Kavanagh and Ashkanasy (2006) and Harris *et al* (2003) say that one role of the leader is to promote attitudes, values and norms that are needed for achieving organisational goals. Additionally, organisational goals are often based on the fundamental values and beliefs of the leader (Harris *et al*, 2003) and that leaders must set behavioural norms that are founded on these values

and beliefs (DiPaola *et al*, 2004). DiPaola *et al* (2004) and Shearer *et al* (2001) argue that the right values and beliefs in school leaders inspire people to accomplish school goals. Schein (1992) argues that as leaders communicate what they believe to be right and wrong, these personal beliefs become part of the organisation’s culture.

Organisational leaders should also respect the values and beliefs of other organisational members and listen to stakeholders’ suggestions, questions and concerns (DiPaola *et al*, 2004). Leaders should work towards shared values and beliefs (Gurr *et al*, 2005; DiPaola *et al*, 2004) and build consensus among stakeholders in this matter (Harris *et al*, 2003). Moreover, Holbeche (2005) argues that when there are cultural barriers to high performance then one reason for that is a lack of shared values.

Figure 12 illustrates the rationale for setting hypothesis 3. It reflects the path to arriving at this hypothesis. Firstly, empirical results about how organisational culture mediates the relationships between leader behaviour and organisational performance were analysed in the school context and in general. The results showed that more participative, supportive and transformational leadership styles are favourable for organisational performance mediated through organisational culture. Secondly, it was discussed whether and how organisational leaders could influence organisational culture. Organisational leaders with their choices and behaviour give direction to the culture of their organisation. The favourable behaviours of organisational members are thereby rewarded and unfavourable avoided. Thirdly, the role of the attitudes of organisational leaders through their behaviour and the creation of organisational culture was discussed. Finally, the kind of leader attitudes that could contribute to an organisational culture that supports performance were proposed — an organisational culture that supports organisational tasks and organisational culture that supports interpersonal relationships. As the object of this dissertation is schools, the school administration is viewed in the leaders role.

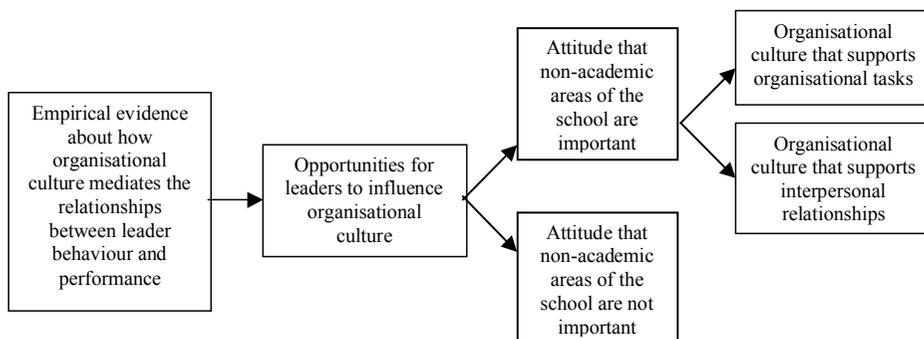


Figure 12. Rationale for setting hypothesis 3: the potential impact of the administration’s attitudes on estimations of organisational culture
Source: compiled by the author

As discussed in the previous subchapter (1.3), to achieve organisational goals and consequently show higher performance, it is important that organisational members support organisational tasks and also that interpersonal relationships support the achievement of these tasks. To achieve that, the school administration should pay attention to organisational members' needs and well-being through involving them in decision-making, improving communication and cooperation between them and creating an internal environment suitable for teaching and learning. Also, the commitment, motivation and job satisfaction of organisational members is important here. It is proposed that when the school administration concentrates more on these rather non-academic areas, this favours the creation of an organisational culture that supports organisational tasks and suitable interpersonal relationships. Thus, hypothesis 3 is as follows:

Hypothesis 3:

Organisational members support organisational tasks and interpersonal relationship orientations of organisational culture more in schools where the administration has an attitude that school performance depends on non-academic factors of the school.

All organisational members contribute to the development of organisational culture. Even an excellent leader does nothing alone if the organisational members do not share his or her values. Some individuals fit better in an organisation and its organisational culture than others. The personality traits of an individual are important aspects here. The specifics of personality traits in the work context will be discussed in the next subsection.

1.4.2. The role of personality traits in a performance supporting organisational culture

This subsection will discuss what kinds of personality traits are favourable for an organisational culture that supports performance. First of all it will analyse what role personality traits have according to the person-organisation fit. Three frameworks are thereby brought forward and compared. Secondly, it will introduce probably the most used method in previous studies, the Five Factor Model or Big Five for categorizing personality traits. Single dimensions of this model are characterized in the work context emphasizing those areas important for this dissertation's purposes.

In previous studies it is proposed that to improve the performance of an organisation the individuals must fit the organisation they work in. This is called person-organisational fit and is usually defined in terms of compatibility between individuals and organisations (Kristof, 1996). Compatibility, however, may be conceptualized in a variety of ways. Two distinctions have been raised that help clarify these multiple conceptualizations. The first distinction is between supplementary and complementary fit. A supplementary fit occurs

when an individual's characteristics are similar to those of other individuals in an organisation. A complementary fit occurs when an individual's characteristics add what is missing to the organisation (Kristof, 1996). A second perspective on person-organisation fit is offered by the needs-supplies and demands-abilities distinction. Accordance between needs-supplies occurs when what an organisation offers satisfies an individual's needs, desires or preferences; accordance between demands-abilities occurs when an individual has the abilities required to meet organisational demands (Kristof, 1996).

In figure 13, both distinctions of person-organisation fit are integrated. Supplementary fit is represented as the relationship between the fundamental characteristics of an organisation and a person. The organisation is thereby characterised for example by its culture, values, goals and norms. An individual can be characterised by his or her personality, values, goals, attitudes etc. In this subsection, the main focus is on the relationships between organisational culture and personality from this figure. On the one hand, the organisation demands time, effort, commitment and experience from an individual, and an individual may offer his or her time, effort, commitment and experience for the organisation. On the other hand, the organisation offers financial, physical and psychological supplies to individuals who may need them. Complementary fit occurs when an individual offers something to an organisation that is not yet represented in an organisation.

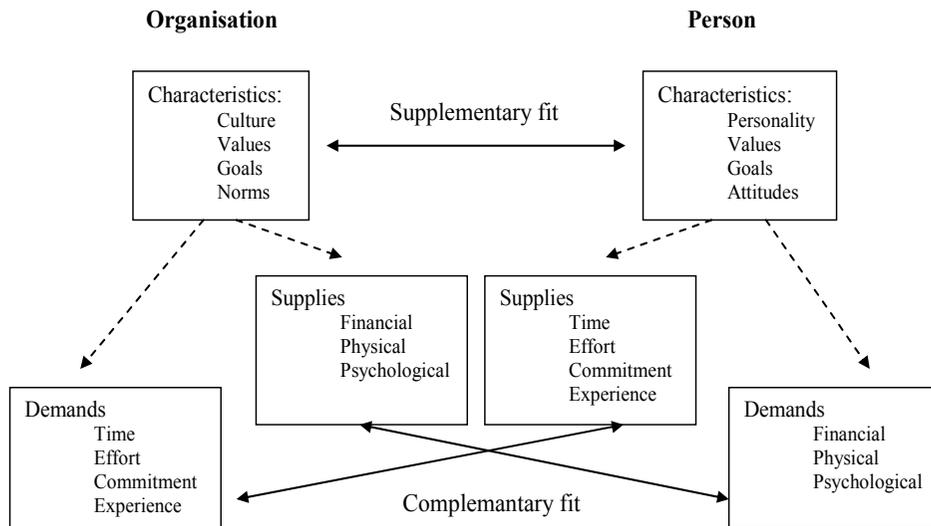


Figure 13. Person-organisational fit according to Kristof (1996)

Another perspective on the development of the person-organisation fit is offered by Schneider (1987). Schneider characterises the person-organisation fit using the ASA (*Attraction-Selection-Attrition*) model. He argues that individuals are attracted to organisations with characteristics that are similar to the individual's own characteristics. Individuals choose an organisation that corresponds to their needs, interests, preferences and personality (Lievens *et al*, 2001). Then organisations hire those applicants who have features that are needed for the organisation. Finally, those employees who do not fit the organisation leave themselves or they are fired.

The result of the ASA process is that the organisation consists of individuals who are somewhat similar and fit together (Schneider, 1987). When there are changes in the external environment, the organisation may find it difficult to get used to the changes. This is because of the fact that the organisation does not comprise individuals suitable for the new environment (Ostroff, 1993). Thus, the organisation should also actively engage in finding employees who fit a little less (they should share certain characteristics with the existing members, but some characteristics may be different).

Person-organisation fit issues are additionally discussed by Chatman (1991), who suggests that the person-organisation fit can be fostered by: 1) employee selection (to identify what people are involved in and thereafter decide how well they fit in the organisation), and 2) better adaptation (socialization). When we compare three different approaches we see that the similarity between the person-organisation fit theory developed by Kristof and the ASA model lays in the fact that Kristof's needs-supplies distinction is described in the ASA model at the first stage where people select an organisation that corresponds to their needs, interests, preferences and personality. The demands-abilities distinction is described by the second stage of the ASA model where organisations select suitable people from among those interested. The third stage of the ASA model, unsuitable people leaving, is not covered in Kristof's theory.

The first half of Chatman's (1991) theory is mentioned in Kristof's demand-abilities principle, because upon selection of personnel there is also an attempt to identify what the person is like and whether they fit in the given organisation. When comparing the potential for fitting the person and the organisation suggested by Chatman and the ASA model, it can be said that Chatman's personnel selection — that is, selection of the person suitable for the organisation — is the same as the second stage of the ASA model, while Chatman's socialisation process can be compared to the third stage of the ASA model — that is, if the socialisation process is successful, the person stays in the organisation, but if it is not, the person leaves. Thus, the ASA model is more thorough not only because of its first stage, where the importance of what kind of people take interest in the organisation is shown, but also because it takes into account the fact that if the socialisation process is not successful, the person leaves.

Thus, based on the theories of the person-organisation fit it can be said that better adaptation of people to the organisation must be ensured (training must

also be organised in order to bring out the desired characteristics in people) and choosing suitable personnel is also one of the options for shaping the culture of the organisation. The personnel must be selected in a manner that the individual would be interested in the job and suitable for the position. The organisation must also be satisfied with what the individual has to offer and eventually the individual must fit with other organisational members (in both supplementary and complementary ways).

So far, we have discussed the specifics of the person-organisation fit. One aspect that influences the person-organisation fit is the personality of the individual as also noted in figure 13. Personality is “an enduring characteristic that results in a pattern of predictable behaviour” (Black, James, 2008, p. 19). Every individual has his or her own unique personality. When a person is mostly rather modest and quiet we can assume that he or she reacts to various circumstances according to his or her personality. The outgoing and talkative person may react quite differently in the same circumstances. In other words, individuals can react differently to the same or similar environmental stimuli depending on their personality. Certain leadership styles, types of colleagues, organisational cultures and so on can be favourable to some of them not. Different reactions to the same or similar situations cause different behaviour. Sometimes this may lead to misinterpretations. For example, one team member is a modest and quiet person and other rather talkative and outgoing. In that case, the talkative person could think that the quiet person does not like him or her and consequently start to avoid the other person. This kind of misunderstanding can be avoided, when the talkative person knows and understands the personality of the quiet person and consequently he or she can react in a more appropriate way.

Spector *et al* (1995) found that there are three mechanisms that bind personality and the organisation: 1) personality may affect the individual's choice of job; 2) personality may influence selection of the individual to the position that they desire; 3) personality may influence behaviour and thus the working environment. For example, an individual who likes to communicate with others wants to apply for a job that enables much communication. But in addition, the job requires stress tolerance and for this reason he or she may not be chosen if their stress tolerance level is not acceptable. This example shows that some individual personality traits may be favourable for working in a certain organisation and some not. Every individual has his or her own unique personality with characteristic personality traits. But the same personality traits can be characteristic to many individuals. For instance, one individual is modest, quiet and rather stress tolerant and the other is talkative, outgoing and also stress tolerant. Good stress tolerance is a common personality trait in these two individuals. The following analysis concentrates only on the discussion of how certain personality traits are connected to work related areas.

Many studies have been made about how personality traits influence an individual's fit with a chosen job (Lievens *et al*, 2001; Adkins, Russell, 1994; Robertson, Kinder, 1993), vocation (Brody, Ehrlichman, 1998; Dakin, 1994; Barrick, Mount, 1991), workgroup (Kichuk, Wiesnen, 1997; Thoms *et al*, 1996)

or organisational culture (Judge, Cable, 1997; O'Reilly *et al*, 1991). Some personality traits are more suitable for certain jobs, vocations, working in groups and for creating a favourable organisational culture. The proposition is that people with different personality traits may perceive organisational culture in different ways and consequently, organisational members contribute to the organisation in different ways and to a different extent. Therefore, it must be clarified what personality traits are more favourable for a performance supporting organisational culture. But before doing that we will discuss how to measure personality traits and secondly, characterise personality traits in the work context.

There are thousands of personality traits that can be used to describe the personality of an individual, but it is reasonable to group these into some categories. Systematic attempts to find a good method for measuring and categorising personality traits began in the 1930s. More recently, R. Cattell, H. Eysenck, L. R. Goldberg, R. R. McCrae and P. T. Costa have become the main authorities in this field. The first two dominated the field of personality research for many years. The next three developed The Five Factor Model or the Big Five, which is very often used in personality studies. The main difference in the models made by different researchers lies in the number of factors describing personality. For instance, Eysenck has three, Cattell sixteen and Goldberg, McCrae and Costa, five factors for describing personality. There are many different methods for measuring personality traits, but this dissertation focuses on the approach taken by Costa and McCrae. According to this approach, personality is best characterised using five factors, including extroversion, agreeableness, conscientiousness, neuroticism and openness to experiences (Costa, McCrae, 1992).

There are different questionnaires with different numbers of questions for measuring the Big Five personality traits. In the following, the content of the Big Five personality factors are characterised according to the views of McCrae *et al* (2005) (see table 8). As we see each of the five basic personality dimensions has six specific traits. For example, characteristic to extraversion is warmth, gregariousness, assertiveness etc. In the following, the content of the Big Five personality dimensions is explained more thoroughly.

People with a high level of extroversion are characterised as very sociable individuals (Barrick, Mount, 1991). They are talkative (Barrick, Mount, 1991), kind, happy (Lee *et al*, 2000), friendly (Watson *et al*, 1992), attentive (Judge, Higgins, 1999) and like other people (Stevens, Arh, 2001). They have also more close friends compared to introverted people (Judge, Higgins, 1999) and they like to spend their spare time among other people (Judge, Cable, 1997). Therefore, they prefer working in groups (Kichuk, Wiesnen, 1997). Extroverted individuals are more successful in solving conflicts than introverted people, because they control their emotions better (Vakola *et al*, 2004) and experience less work-related stress (van der Berg, Feij, 2003).

Table 8. Scales and subscales of the big five personality factors

Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness to experiences
Warmth	Trust	Competence	Anxiety	Fantasy
Gregariousness	Straightforwardness	Orderliness	Anger	Aesthetics
Assertiveness	Altruism	Dutifulness	Depression	Feelings
Activity Level	Compliance	Achievement Striving	Self-Consciousness (-)	Actions
Excitement-Seeking	Modesty	Self-Discipline	Immoderation	Ideas
Positive emotions	Tender-Mindedness	Deliberation	Vulnerability	Values

Source: McCrae *et al* (2005)

Extroverts are active (Barrick, Mount, 1991), well-adapting, optimistic, enthusiastic (Watson *et al*, 1992) and adventurous (Judge, Higgins, 1999). It has been found that positive emotions dominate in extraverted people (Judge, Higgins, 1999; Church, 1994; Watson *et al*, 1992). In spite of being sociable, extroverts are quite ambitious, sometimes aggressive and dominant (Judge, Higgins, 1999).

Many surveys of the connections between extroversion and job satisfaction have been carried out. For example, Ilies and Judge (2003), Judge *et al* (2002a) and Nikolaou and Robertson (2001) have found that the more extroverted a person is, the higher their job satisfaction. However, Vakola *et al* (2004) and van der Berg and Feij (2003) did not find any connection between extroversion and job satisfaction.

It has been found with regard to extroverted people that in comparison with introverted people they are more successful at work. This is confirmed by research carried out by Barrick *et al* (2002), Judge and Higgins (1999), Barrick and Mount (1991) and Tett *et al* (1994). It has also been found that extroverted individuals are more motivated compared to introverted individuals (Judge *et al*, 2002b).

A high level of extroversion fosters group work. This has been found, for instance, by Kichuk and Wiesnen (1997), who studied the successfulness of product design teams based on the personality traits of their members, and by Thoms and his colleagues (1996) who studied groups who had to coordinate and manage their work on their own. In both cases the groups with a high concentration of extroverted people were more successful. Extraverted people also choose ways of spending their spare time so that they could be in the company of and communicate with other people (Emmons *et al*, 1986). For instance, they tend to like team rather than individual sports. Judge and Cable's (1997) results about connections between personality traits and organisational culture show that extroverted people prefer group work-oriented organisational cultures.

Agreeable people are characterised most by the desire to have a good relationship with others (Lievens *et al*, 2001; Judge, Higgins, 1999; Konovsky, Organ, 1996). They need harmonious relationships and they make quite an effort to achieve this (Konovsky, Organ, 1996). They are compassionate (Parnell, 1998), friendly (Lievens *et al*, 2001), tolerant, accommodating (Barrick, Mount, 1991) and generous (Judge, Higgins, 1999). They are willing to help others and expect others to do the same (Stevens, Arh, 2001).

Agreeable people like to cooperate with others (Stevens, Arh, 2001), refrain from conflicts (Judge, Cable, 1997), adapt well (Lievens *et al*, 2001) and control their negative emotions well (Graziano *et al*, 1996). They do not like to make decisions and they gladly leave this to others (Lievens *et al*, 2001). They are rather passive than active (Lievens *et al*, 2001).

As in the case of extroverted people, Judge and Higgins (1999) found that highly agreeable people are more successful at their job. It has also been found that agreeableness increases job satisfaction, for example, Konovsky and Organ

(1996), Matzler and Renzl (2007), Mount *et al* (2006) and Vakola *et al* (2004) reached this conclusion. However, Ilies and Judge (2003), Judge *et al* (2002a) and Nikolaou and Robertson (2001) found no connection between agreeableness and job satisfaction.

Like extroverted people, agreeable people also prefer jobs that allow for much communication and cooperation with other people (Barrick, Mount, 1991). Agreeableness also favours group work. This is also confirmed by research carried out by Thoms *et al* (1996) and Kichuk and Wiesner, (1997). The results gained by Judge and Cable (1997) show that agreeable people prefer group work-oriented and supportive organisational cultures. They do not like aggressive and rewards emphasising organisational cultures.

It has also been found that agreeableness supports relationships between people more than other personality traits because agreeable people are able to control their anger and other negative emotions the best (Graziano *et al*, 1996). They refrain from conflicts with others (Asendorpf, Wilpers, 1998), which is very important in working and communicating with other people.

Conscientious people are goal-oriented (Barrick, Mount, 1991). They are willing to work a lot and work hard. They are focused (Konovsky, Organ, 1996), well organised, disciplined (Lee *et al*, 2000), practical, reliable and follow the rules (Judge, Cable, 1997). They plan their activities very carefully (Barrick, Mount, 1991) and are very trustworthy (Behling, 1998). Conscientious individuals do not like to take risks and feel uncomfortable toward changes. They are careful (Judge, Cable, 1997). They prefer group work (Kichuk, Wiesner, 1997).

In comparison with extraversion and agreeableness, the results are quite similar for conscientiousness. It has been found that high conscientiousness increases job satisfaction (Ilies, Judge, 2003; Judge *et al*, 2002a; Mount *et al*, 2006; Nikolaou, Robertson, 2001; Judge, Higgins, 1999; Konovsky, Organ, 1996). Also, according to some surveys, highly conscientious people are more successful at their job than people whose conscientiousness is lower (Barrick *et al*, 2002; Robertson *et al*, 2000; Judge, Higgins, 1999; Parnell, 1998; Tett *et al*, 1994; Barrick, Mount, 1991). Brody and Ehrlichman (1998) add that managers hold highly conscientious people in high esteem because of their reasonableness and goal-orientation. They control their emotions well (Vakola *et al*, 2004) and are able to resolve conflicts (David *et al*, 1997).

A high level of conscientiousness supports the effectiveness of group work (Thoms *et al*, 1996) and conscientious people prefer group work-oriented organisational cultures, but they do not prefer innovative organisational cultures (Judge, Cable, 1997). Also, the existence of conscientiousness is very important regardless of the job (Barrick, Mount, 1991).

Neurotic people are often considered depressive (Barrick, Mount, 1991) and their stress tolerance is low (Watson *et al*, 1992; Ormel, Wohlfarth, 1991). It is thought that they are dominated by negative emotions such as anxiety and hostility (Church, 1994). They are vulnerable (Church, 1994), they have difficulty adapting (Judge, Cable, 1997) and are insecure (Barrick, Mount, 1991).

They find it difficult to make decisions (Lievens *et al*, 2001). They do not like changes and therefore feel psychological exhaustion (Judge, Cable, 1997).

If we compare neuroticism with the aforementioned personality traits of the Big Five, the situation is more or less the exact opposite. Judge and Higgins (1999) and Barrick and Mount (1991) have found that a high level of neuroticism does not support success at work. Magnus *et al* (1993) also show that a high level of neuroticism is related to experiencing negative events in life, which do not support success at work. Neurotic people are not very successful in resolving conflicts (Bono *et al*, 2002) and do not control their emotions (Vakola *et al*, 2004). Neurotic people are less happy with their job (Ilies, Judge, 2003; Matzler, Renzl, 2007; Judge *et al*, 2002a; Judge, Higgins, 1999; Mount *et al*, 2006; Nikolaou, Robertson, 2001), and they also experience more work-related stress (van der Berg, Feij, 2003). According to Costa *et al* (1995), highly neurotic people are less satisfied regardless of their job.

As found by Kichuk and Wiesnen (1997) and Thoms *et al* (1996), neuroticism does not support group work effectiveness. A high level of neuroticism is related to stress involving the family, friends, spending leisure time and work and human relationships (Bolger, Schilling, 1991). A low level of neuroticism is important in any job (Barrick, Mount, 1991).

Individuals characterised by openness to experiences are obviously open to new ideas and experiences (Lievens *et al*, 2001). They are very curious (Barrick, Mount, 1991), creative, have a broad field of view and original thoughts (Barrick, Mount, 1991). They are characterised by a slightly different way of thinking (Judge, Cable, 1997), autonomy (Judge, Higgins, 1999) and they want to be independent (Judge, Cable, 1997) and they like diversity (Stevens, Arh, 2001). Individuals characterised by openness to experiences are not afraid of conflicts and they are ready to resolve them in cooperation with others.

Research has not shown any connections between openness to experiences and job satisfaction (Vakola *et al*, 2004; Judge *et al*, 2002a; Mount *et al*, 2006; Ilies, Judge, 2003; Judge, Higgins, 1999) or this personality dimension has not been included in the analysis (Matzler, Renzl, 2007; van der Berg, Feij, 2003). Nikolaou and Robertson (2001) have found a weak negative relationship between job satisfaction and openness to experiences. No connection has been found between openness to experiences and success at work (Barrick *et al*, 2002; Barrick, Mount, 1991; Judge, Higgins, 1999). Likewise, no connection has been found between openness to experiences and success at group work (Kichuk, Wiesnen, 1997; Thoms *et al*, 1996) and controlling emotions (Vakola *et al*, 2004).

In the case of the first four personality dimensions of the Big Five, researchers mostly agree, but when it comes to openness to experiences, the results are quite controversial or no connections with work-related factors have been found. Parnell (1998) thinks that the reason for this is that the connection of some personality traits (incl. openness to experiences) and success at work depends on the characteristics of the job. Since individuals characterized by openness to experiences have a slightly different way of thinking, they want

constant development in their activities and they like to take more risks than others, not all occupations, jobs and organisations are suitable for them. For instance, individuals characterized by openness to experiences prefer international companies (Lievens *et al*, 2001). They also like jobs that demand constant development in their activity (Barrick, Mount, 1991) and want to participate in management and they like a job where they can assert themselves. According to Judge and Cable (1997), innovative and a non-aggressive organisational culture is suitable for individuals characterised by openness to experiences.

The dimensions of the Big Five and a brief description of them have been given in table 9 with regard to areas that are the most important from the point of view of this dissertation. We see that in the case of three personality traits (extroversion, agreeableness and conscientiousness) the results are positive from the point of view of the successful functioning of organisations including schools. This means that higher extroversion, agreeableness and conscientiousness levels in organisational members favour achieving their support for organisational goals and also achieving interpersonal relationships between organisational members that support the organisational goals. The organisational goal in our case is achieving higher academic performance in a school.

In order to ensure successful work in any organisation it is important that the people are emotionally stable and rather positively minded, adapt well to changes, communicate and cooperate with other members of the organisation, reasonably resolve any conflicts, be happy with their work and successful at their job. Presumably, people having such personality traits are more favourable for the organisation's culture. Considering the positive mindedness and satisfaction of extrovert, agreeable and conscientious people in the areas of the organisation we presume that they make the highest assessments of organisational culture task and relationship orientations.

In comparison with the previous, neuroticism is a rather negative factor from the point of view of the functioning of the organisation. This is especially true in the school context where work with children needs patience, positive attitudes, stress tolerance and so on, whereas neurotic people are rather negatively minded, do not control their emotions very well and are rather poor at communicating, cooperating and resolving conflicts. Neurotic people are not pleased with their work and they are not as successful at their job as less neurotic people. Therefore, we presume that neuroticism is not a factor favouring an efficient organisational culture in schools and, considering the rather negative mindedness and dissatisfaction of neurotic people, that their assessments of the task and relationship orientations of organisational culture are lower.

Table 9. Dimensions of the Big Five along with keywords characterising them in the work context

	Extroversion	Agreeableness	Conscientiousness	Neuroticism	Openness to experiences
Prevalent emotions	Positive, controls emotions well	Positive, controls emotions well	Controls emotions well	Negative, does not control emotions well	No connection
Adaptability	Adaptive	Adaptive	Does not like changes or risks, is careful	Difficult to adapt	Likes changes and risks, is creative
Successfulness at group work	Successful	Successful	Successful	Unsuccessful	No connection
Communicating with others	Friendly, sociable, happy, likes people, sometimes dominant	Always consents to everything, humble, generous, tolerant, caring, cooperative	Reliable, responsible	Hostile, vulnerable, worried, insecure	Thinks differently to others
Coping with conflicts	Successful	Successful	Successful	Unsuccessful	Does not avoid conflicts, cooperates
Job satisfaction	High	High	High	Low	No connection
Successfulness at work	High	High	High	Low	No connection

Source: compiled by the author based on the aforementioned collected information

In the author's opinion, the relationships between openness to experiences and estimations of task and relationship orientations of organisational culture in schools are not straightforward. Considering the creativity, original ideas and openness to new things among individuals characterised by openness to experiences, they are very suitable for working in schools. However, their preference for independence and diversity may become a problem, because the work in a school requires adherence to rules and consistency in order to perform routine work. In many studies no connection between openness to experiences and work related areas was found or the results were controversial. Therefore, it will be presumed that there is no connection between openness to experiences and assessments of organisational culture.

Figure 14 illustrates the rationale for setting hypothesis 4. Firstly, the specifics of person-organisation fit were discussed. It was argued that for higher organisational performance individuals with their characteristics should supplement other organisational members, in our case the school administration, teachers and support personnel, but complementary characteristics are also favourable. Additionally, it was discussed that the needs and supplies of individuals and organisations should be in accordance for good organisational performance. Secondly, the Big Five personality traits were characterised in work context settings with emphasis on characteristics needed in the school context. Finally, we discussed what personality traits are favourable for performance supporting organisational culture in schools and how; that is, for an organisational culture that supports organisational tasks and interpersonal relationships.

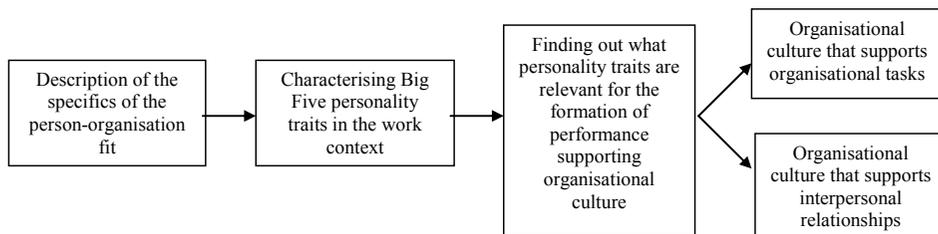


Figure 14. Rationale for setting hypothesis 4: the potential impact of personality traits on estimations of organisational culture
Source: compiled by the author

To sum up, the following hypothesis and sub-hypotheses about relationships between personality traits and organisational culture will be set (see also figure 15):

Hypothesis 4:

Extraversion, agreeableness, conscientiousness and neuroticism influence estimations of task and relationship orientations of organisational culture.

4a: *Organisational members with higher levels of **extroversion** give **higher** estimations to orientations of organisational culture;*

4b: *Organisational members with higher levels of **agreeableness** give **higher** estimations to orientations of organisational culture;*

4c: *Organisational members with higher levels of **conscientiousness** give **higher** estimations to orientations of organisational culture;*

4d: *Organisational members with higher levels of **neuroticism** give **lower** estimations to orientations of organisational culture;*

4e: *There is no relationship between **openness to experiences** and orientations of organisational culture.*

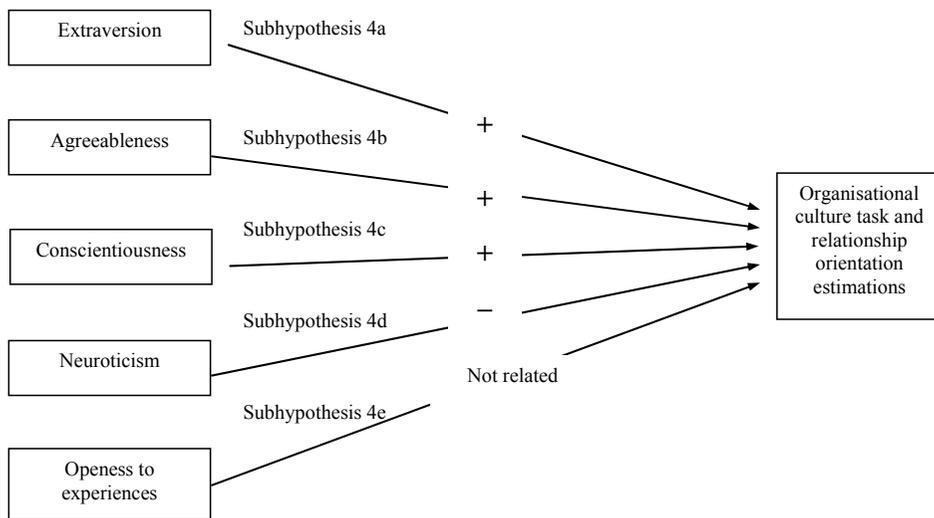


Figure 15. Sub hypotheses 4a to 4e: The potential impact of extraversion, agreeableness, conscientiousness, neuroticism and openness to experiences on estimations of organisational culture

“+” higher estimations

“-” lower estimations

Source: compiled by the author

When the school administration knows what personality traits are favourable for organisational cultures that support tasks and relationships, they can develop these traits via the school members (e.g. arrange special training). Personality specifics can be taken to account also through personnel selection and so on.

In the theoretical part of the dissertation, the factors influencing school academic performance were summarized, and those factors that can to a large

extent be influenced by the school administration were distinguished. The attitudes and behaviours of the school administration are considered to have an impact on school academic performance because these attitudes and behaviours also influence other stakeholders' attitudes and behaviours. The attitudes and behaviours of the school administration and other organisational members are supposed to also influence the organisational culture of the school, which it is presumed influences school academic performance. Also, the personality traits of school members are predicted to be important in the creation of an organisational culture that supports school academic performance. To test these statements four hypotheses were set. These will be tested in the second chapter of the dissertation.

2. RESEARCH INTO THE IMPACT OF ORGANISATIONAL AND INDIVIDUAL CHARACTERISTICS ON THE ACADEMIC PERFORMANCE OF ESTONIAN SCHOOLS

2.1. Research method

2.1.1. Sample

At the beginning of the 2005/2006 school year there were 613 general education schools in Estonia. In these schools studied 180 963 pupils, who were taught by 15 845 teachers. However, the amount of pupils is decreasing. The estimated number of pupils for 2010 is about 38 thousand less than in the 2005/2006 school year (Development plan..., 2009). About 40 percent of general education schools are secondary schools, also about 40 percent are basic education schools and about 20 percent are primary education schools. From all general education schools about 7–8 percent are schools for children with special needs who are taught in primary, basic and secondary education schools (Annus *et al*, 2005).

The national examination results are usually higher in elite schools as we can see in table 10, where the Estonian secondary school national examination results for 2005 are presented. We can see that using the example of four subjects: composition, English, mathematics and history, the county town schools and city schools have similar national examination results although being lower than the elite schools. The lowest results are in rural municipal or small town schools on the basis of these four subjects in 2005.

Table 10. Estonian secondary school national examination results in 2005

Subject	Elite schools		County town schools		City schools		Rural municipal or small town schools	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Composition	70.45	20.28	58.40	18.81	57.41	20.18	51.94	19.37
English	82.80	12.45	74.27	13.67	72.72	15.10	69.03	15.15
Mathematics	66.32	22.53	56.59	20.23	53.91	22.36	50.84	20.62
History	69.32	16.96	61.22	16.21	59.96	18.29	56.17	18.80

Notes: SD standard deviation

Author's calculations source: Homepage on the national..., 2009

For the empirical research, a sample of Estonian schools was formed, ensuring that schools of various sizes and locations were present in the sample. Only municipal or state-owned day schools that offered lessons in Estonian were

examined. To create a more homogeneous sample, elite schools⁸ and schools in the capital of Estonia, Tallinn⁹, were not included. For those counties with fewer schools all schools were invited to participate. For counties with many schools four large schools (over 800 pupils) and four small schools (less than 799 pupils) were chosen and asked to participate in the study. The margin of 800 was chosen because in previous studies this rate has been used to distinguish between smaller and larger schools (e.g. Borland, Howsen, 2003; Bradley, Taylor, 1998; Eberts, Schwartz, 1990) and thus the results can be compared with previous studies. Data was gathered in the years 2003 until 2006. Figure 16 presents the datasets used for hypotheses testing.

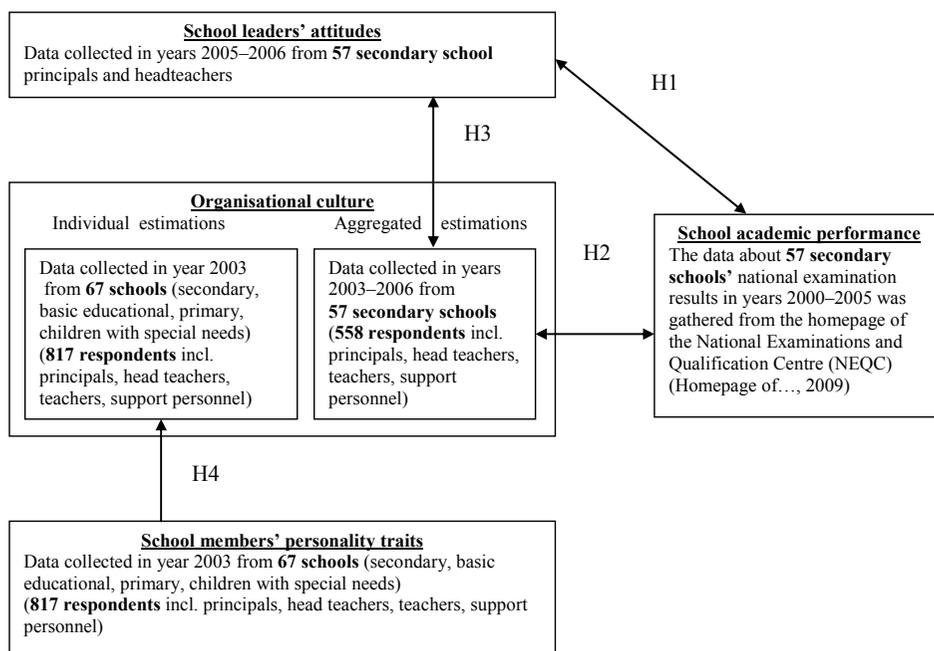


Figure 16. Datasets used for hypothesis testing

Notes: H1 – hypothesis 1; H2 – hypothesis 2; H3– hypothesis 3; H4 – hypothesis 4

Source: compiled by the author

To test hypotheses one¹⁰ and three¹¹ we need information about the attitudes of school leaders about school performance criteria. A study of attitudes among

⁸ The pupils in elite schools are preselected.

⁹ The Estonian capital city Tallinn is considerably different from other cities due to the amount of schools and pupils.

¹⁰ The hypothesis was formulated at the end of subchapter 1.2.

¹¹ The hypothesis was formulated at the end of subsection 1.4.1.

the administrations of Estonian secondary schools was conducted in 2005 and 2006. In the study, 57 secondary schools from 14 of the 15 Estonian counties participated. No schools from Hiiumaa County agreed to participate. From each school one respondent — principal or head teacher — completed the questionnaire. The response rate was 47.5 percent, which is quite high due to the contacts the author had in schools from a previous successful study in 2003. The sample represents 38 percent of the population — of all Estonian secondary schools (from municipal or state-owned secondary schools without special needs children and offering daytime lessons where the language of instruction was Estonian).

Principals represented 52.5 percent of the respondents and head teachers 47.5 percent. The average age of the participants was 49 years (Standard Deviation henceforth SD = 8.2). This result is in accordance with the age composition of Estonian school members' in general (Annus *et al*, 2005). Work experience in the current school was 17.9 years (SD = 11.2). In Estonia most school employees have more than 15 years work experience (Annus *et al*, 2005). Forty-five percent of the participants were male and 55 percent female.

Seventy-two percent of the schools that participated were from rural areas (from a rural municipality or small town) and 28 percent were from urban areas (from a city or county town). The average size of the schools in this sample is 528¹² pupils. Small schools (under 799 pupils) formed 75 percent and large schools (over 800 pupils), 25 percent of the sample. We see that mostly smaller schools and rural schools preferred to participate in the study. Most of the small schools are located in rural areas (88.4 percent), while the larger schools operate in urban centres (78.6 percent).

To test hypotheses two¹³ and three we need the organisational culture estimations of school members. The estimations of organisational culture at school level (aggregated individual) were collected in the years 2003 until 2006 from the same schools as the information about the leaders' attitudes. In addition to school administrators, teachers and support personnel (e.g. secretaries, psychologists, medical personnel, IT specialists, librarians, cooks, cleaners, caretakers etc) were also questioned. A total of 558 individuals agreed to participate in the study. School administrations represented 15 percent of the sample, teachers 63 percent, support personnel 7 percent and 15 percent of the respondents did not indicate their occupation. The participants ranged in age from 20 to 70. The average age of participants was 48 (SD = 12.5). Twenty one percent of the respondent school members were male and 76 percent female.

¹² In 2005/2006 there were 91,739 pupils in Estonian secondary schools that were municipal or state-owned schools offering daytime studies where the language of instruction was Estonian, and which do not take children with special needs (Undrits, 2006). The average number of pupils in the population is therefore 611 (91739 divided by 150).

¹³ The hypothesis was formulated at the end of subchapter 1.3.

Three percent of the respondents did not indicate their gender. According to school specifics, most of the participants are female teachers.

To testing hypotheses one and two we need information about national examination results in schools. The data were gathered from the National Examinations and Qualification Centre (NEQC) (Homepage of the National..., 2009). The exam results in mathematics, English, composition and history were considered for the comparison of 57 secondary schools. Further description of national examination results measurement is presented in subsection 2.1.3.

To test hypothesis four¹⁴ we need the information about personality traits of school members and their organisational culture estimations (individual level). The data was collected in 2003. Here, in addition to secondary schools, primary schools, basic education schools and schools for children with special needs have also participated. Similarly, only municipal or state-owned schools that offered daytime lessons in Estonian were examined. To create a more homogeneous sample, the elite schools and schools in the capital of Estonia, Tallinn, were not included.

All in all, 67 schools from 14 counties in Estonia participated in the study, which describes the personality traits of school members and individual estimations of organisational culture, including secondary schools (47.8 percent), basic education schools (40.3 percent), primary schools (6 percent) and schools for children with special needs (6 percent). This distribution of school types is in accordance with the school population in Estonia. Schools of various sizes and locations were presented in the sample. The average size of schools in this sample is 383 — according to information on the homepage of the Estonian Ministry of Education and Research for 2000/2001, there were on average 319 pupils, and in 2004/2005 there were on average 298 pupils in Estonian schools. Unfortunately, there was no data for 2003/2004. But in general we could say that the sample is comparable with the school population according to the average number of pupils in schools.

There were 23.9 percent large schools and 76.1 percent small schools — 74.6 percent of the schools that participated were from rural areas (from a rural municipality or small town) and 25.4 percent from urban areas (from a city or county town). The primary schools in this sample are usually located in rural areas (75 percent) and are rather small (on average 23 pupils). Also, basic education schools are mostly located in rural areas (88 percent) and are quite small (on average 104 pupils compared to the urban average of 475 pupils) in this sample. Seventy percent of secondary schools are located in rural areas. The secondary schools in rural areas are on average smaller (495 pupils) compared to urban secondary schools (951 pupils). On the contrary, the schools for children with special needs are placed mostly in urban areas (75 percent) and are approximately equally sized in both locations (on average 131 pupils in rural areas and on average 184 pupils in urban areas).

¹⁴ The hypothesis was formulated at the end of subsection 1.4.2.

All in all, 817 school members participated in the survey about personality traits of school members and about their individual estimations of organisational culture. The sample included representatives of school administrations (8.2 percent), teachers (57.2 percent) and support personnel (17.5 percent). About seventeen percent of respondents did not indicate their profession. Arising from school specifics, most of the respondents are female (83.6 percent). Male participants made up 12.6 percent and 3.8 percent of the respondent school members did not indicate their gender. Most of the participants have a higher education (67.8 percent) followed by a vocational secondary education (15.4 percent) and secondary (8.2 percent) education. Three percent of the respondent school members have a basic education and about five percent did not answer to that question. The average age of the participants was 44.6 years (SD 11.5), ranging from 20 to 72 years. Four age groups were made for the analysis:

- 1) below 36 (below the lower quartile);
- 2) 37–45 (between the lower quartile and the median);
- 3) 46–52 (between the median and the upper quartile);
- 4) over 53 (above the upper quartile).

To sum up, data about three areas was collected — firstly, the attitudes of school administrations; secondly, estimations of organisational culture (at school level and individual level) and thirdly, personality traits. The request to participate in the research was directed at school principals. To answer the questionnaires, four options were offered: 1) the questionnaires were sent via post and the completed questionnaires were also returned via post; 2) the questionnaires were answered via e-mail; 3) a combination of the previous two options; 4) the author of the dissertation arranged the questions in person.

2.1.2. Statistical methods

For statistical analysis, a factor analysis, mean comparison methods (t-test and Analysis of Variances (ANOVA)), correlation analysis and regression analysis are used. Figure 17 illustrates which method is used for which purposes. The p-value of 0.05 is used to evaluate null hypotheses in this dissertation.

The basic assumptions of parametric tests are as follows:

- interval data;
- independence of different participants;
- normally distributed data;
- homogeneity of variance.

The first two assumptions are tested only by common sense. To test the normal distribution, the QQ plot and histogram were used. The data in this dissertation are distributed approximately normally. The homogeneity of variances was tested using Levene's test. It tests the hypothesis that the variances in the groups are equal (i.e. the difference between the variances is zero). Therefore, if Levene's test is significant at 0.05 then we can conclude that the null hypothesis

is incorrect and that the variances are significantly different — therefore the assumption of homogeneity of variances has been violated. If, however, Levene’s test is non-significant (i.e. $p > 0.05$) then the variances are roughly equal and the assumption is tenable. Levene’s test is also suitable when the data are not perfectly normally distributed as is the case in this dissertation. Levene’s test results are non-significant in all cases in this dissertation and thus the t-test and ANOVA results are reliable. A stability of all solutions was also tested by dividing the data set into two groups. In the following the principles of each statistical method used are introduced more thoroughly.

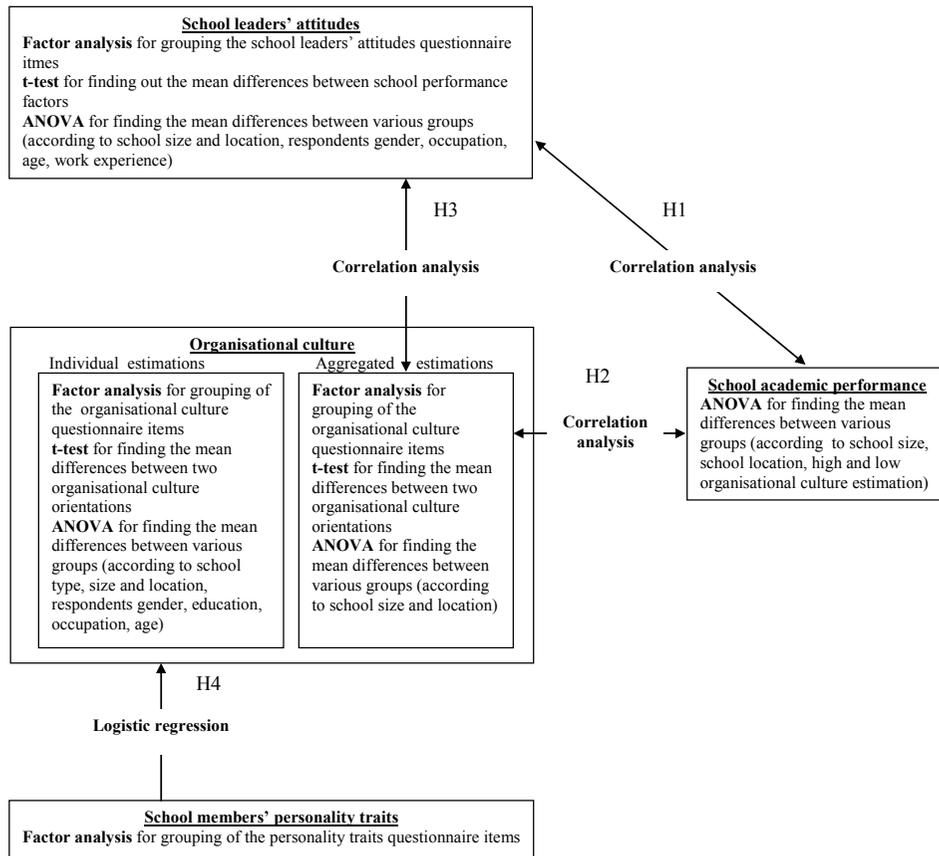


Figure 17. Statistical methods used for hypothesis testing

Notes: H1 – hypothesis 1; H2 – hypothesis 2; H3 – hypothesis 3; H4 – hypothesis 4

Source: compiled by the author

Factor analysis is a technique for identifying groups of variables. The purpose of factor analysis is to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called

factors. This method is very useful when some variables are highly correlated so these can be aggregated into one factor. As multicollinearity can be a problem in regression analysis the factor analysis can resolve this problem by combining variables that are collinear.

In this dissertation factor analysis is used to group the school leaders' attitudes questionnaire items, organisational culture questionnaire items and school members' personality traits questionnaire items. Further description of these methods is presented in subsection 2.1.3.

The stability of the factor solution was analysed using the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO). The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating that the factor analysis is likely to be inappropriate. A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. It is recommended that KMO values greater than 0.5 are barely acceptable. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Field, 2005).

The reliability of the scales gathered from the factor analysis is measured using Cronbach's alpha. Reliability means that the scale should consistently reflect the construct it is measuring. A Cronbach alpha over 0.7 is acceptable in social sciences (Ogbonna, Harris, 2000). Values substantially lower indicate an unreliable scale.

The mean differences are compared with two methods in this dissertation. Firstly, the **t-test** for finding out the mean differences between two organisational culture orientation estimations and between different school performance factors. Secondly, the **one-way ANOVA** is used for finding the mean differences between various groups in this dissertation. The one-way ANOVA is used to test for differences among two or more independent groups. Typically, however, the one-way ANOVA is used to test for differences among at least three groups, since the two-group case can be covered by a t-test. However, in this dissertation ANOVA is used in both two and more than two-group cases because it is easier to follow the results when one method is used. Moreover, in the case of two-groups the t-test and ANOVA give equivalent results. When more than two groups of independent variables is the case the LSD (Least Significant Difference) test is used to compare the groups. It is a so called post hoc procedure when pair wise comparisons are made.

Correlation analysis is used for finding whether there are relationships between certain variables, which kind of relationship this is (positive or negative) and how strong this relationship is. Usually the Pearson's correlation coefficient is calculated for such purposes, although this method requires that there is a linear relationship between variables and the data should also be normally distributed. As these assumptions are not fulfilled in this dissertation the alternative way is to calculate Spearman's correlation coefficient. This is a

non-parametric statistic and so can be used when the data have violated parametric assumptions such as non-normally distributed data.

Spearman's correlation coefficient's value ranges between +1 and -1. The coefficient +1 indicates that the two variables are perfectly positively correlated. Conversely, a coefficient of -1 indicates a perfect negative relationship. A coefficient of 0 indicates no relationship at all and so if one variable changes the other stays the same. Values ± 0.1 represent a small effect, ± 0.3 is a medium effect and ± 0.5 is a large effect (Field, 2005).

Regression analysis is a method for finding out how one or more independent variables influence a dependent variable, so we can find out which independent variables are significant, whether their influence on a dependent variable positive or negative and how strong the influence is. In this dissertation the logistic regression is used for these purposes, and more particularly for finding out how the personality traits influence organisational culture estimations. Both dependent and independent variables are defined as dichotomous variables (e.g. the variable consists of only two categories 0 and 1).

To find out whether the logistic model fits the data, Cox and Snell's R^2 and Nagelkerke's R^2 can be used. The values of R^2 range between 0 and 1. The higher R^2 value the better the model fits the data. For the same purposes Hosmer and Lemeshow's goodness of fit statistic can also be used. The statistic tests the hypothesis that the observed data are significantly different from the predicted values from the model. So the non-significant value of the test is preferable because we want the model not to differ significantly from the observed data. The classification table is used in this dissertation for indicating how well the model predicts group membership.

2.1.3. Measurement tools

School academic performance is measured using average national examination results in this study. Three questionnaires were used for gathering information about 1) school leaders' attitudes, 2) school members' organisational culture estimations and 3) school members' personality traits. A short overview of the measurement tools used for hypothesis testing is presented in figure 18. A further description of the measurement tools is introduced in the following sections.

The measurement of the attitudes of school administrations

In order to test hypotheses one and three a new questionnaire was compiled by the author for measuring the attitudes towards various performance criteria of school administrations. Subchapter 1.1 discussed the fact that some factors that have an impact on a school's academic performance can be influenced by the school administration and some not. The factors that can be influenced in the author's opinion were presented in table 4.

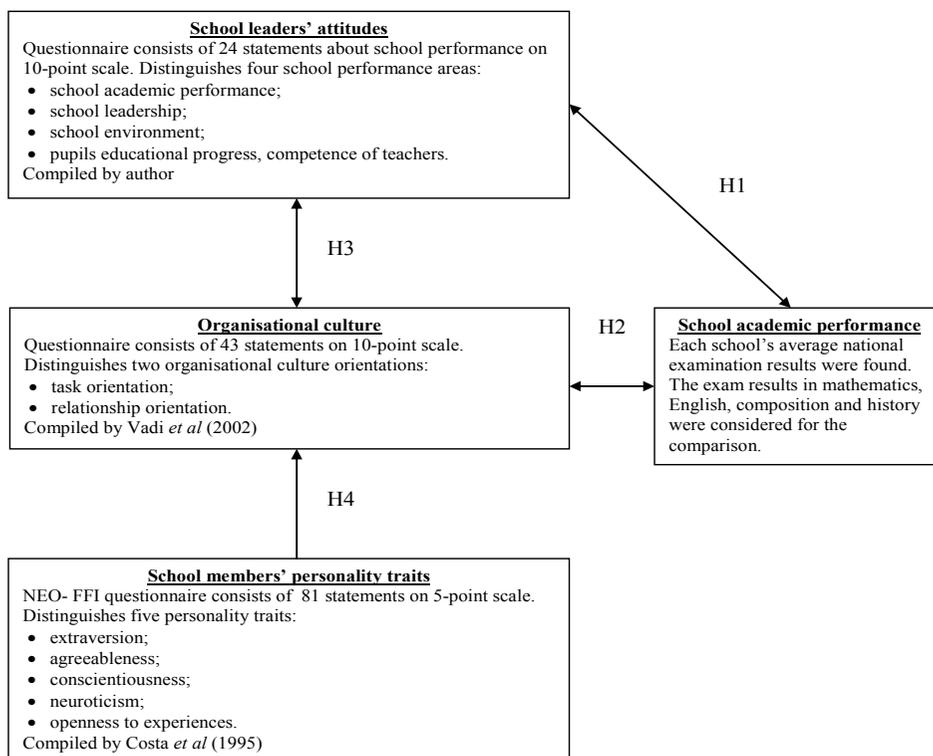


Figure 18. Questionnaires used for hypothesis testing

Notes: H1 – hypothesis 1; H2 – hypothesis 2; H3 – hypothesis 3; H4 – hypothesis 4

Source: compiled by the author

Subchapter 1.2 discussed propositions on how school administrations could influence manageable factors influencing school academic performance. For example, family investments, support and involvement can be increased by involving them in decision-making, improving communication between stakeholders, enabling development opportunities for parents and creating a good reputation, and a good spirit and traditions in the school. These suggestions can be summarised in the following list, which was also presented in chapter 1.2:

- creating a vision, mission and goals for schools;
- allowing stakeholders to participate in decision-making, encouraging communication and cooperation between school administration and teachers, between teachers, between teachers and pupils, between pupils, between parents and the school;
- offering training and development opportunities for teachers, pupils and parents;
- increasing commitment, motivation and satisfaction with school;

- creating a suitable internal environment for teaching and learning which is safe and more disciplined and pupil friendly, with a good spirit, reputation and traditions and has a favourable organisational culture.

The preliminary questionnaire was compiled according to this list. After that, an expert group was formed represented by the professor, the associate professor, an extraordinary researcher and the doctoral students from the University of Tartu, two officials from the Estonian Ministry of Education and Research and school principals who were asked to critically evaluate the initial concepts of the measurement tool. After multiple evaluations, the final version of the measurement tool was composed. This multistage process increased the validity of the construct.

The questionnaire consists of 24 potential performance indicators (see appendix 8). The respondents were asked to indicate their attitude towards the items on a 10-point scale ranging from ‘completely disagree’ (1 point) to ‘completely agree’ (10 points). The questionnaire consists of nine academic indicators such as pupil results in various contests, pupil results in final examinations, pupil results in national examinations, the number of pupils repeating a year and pupil dropout rates etc. Fifteen items characterise non-academic indicators:

- three items about stakeholders participating in decision making, encouraging communication and cooperation:
 - well coordinated communication between the management, teachers, pupils and parents;
 - parental participation in school life;
 - school personnel participating in decision making;
- seven items about training and development and job satisfaction:
 - pupils’ overall maturity (e.g. interpersonal and public speaking skills, cooperation, tolerance, etc.);
 - extra-curricular activities (activity clubs, etc.);
 - competence of teachers;
 - enabling training opportunities for teachers;
 - activity of teachers (participating in various projects etc.);
 - school personnel (incl. teachers) satisfaction with school life;
 - pupils success in further stages of life.
- four items about school environment:
 - pupil friendliness;
 - secure learning environment;
 - spirit and traditions of the school;
 - good reputation in the local community.
- one item about general management quality.

The questionnaire facilitates defining whether school administration values academic performance criteria or non-academic performance criteria more. When we know which kind of attitudes the school administration has, we can make some assumptions about their behaviour and the consequences.

The correlation analysis revealed that some statements are strongly correlated (see appendix 9) and thus, it is reasonable to integrate these variables together into a single group. A factor analysis was performed and the principal components method was chosen for factor extraction followed by factor rotation (Varimax method using Kaiser Normalization) — four factors were obtained based on analysis of the scree plot (see table 11).

Most of the academic performance factors are placed in factor one. Two academic performance factors — dropout rates and the number of pupils repeating a year — are in factor four along with competence of teachers. Most of the school leadership indicators are placed together in factor two. School environmental indicators and the satisfaction of school personnel are placed in factor three.

On the basis of the four-factor structure of 20 items, four subscales to measure attitudes towards performance criteria were developed:

- ‘pupils’ academic performance’ (**factor 1**);
- ‘school leadership’ (**factor 2**);
- ‘school environment’ (**factor 3**) and
- ‘pupils’ educational progress, competence of teachers’ (**factor 4**).

The reliability of the scales is quite high as the Cronbach alphas are over 0.7 (see table 11). The Kaiser-Meyer-Olkin (KMO) statistic is 0.7 which means that the factor solution is stable.

Measurement of organisational culture

In order to test hypotheses two, three and four the estimations of organisational culture in schools were measured using the method by Vadi *et al* (2002). They distinguish two orientations of organisational culture: task orientation and relationship orientation. Task orientation reflects the extent to which organisational members are willing to support their organisation and its goals. Organisational members should be valued, rewarded, and they should be proud of their organisation so that they are more willing to support their organisation.

Relationship orientation emphasises the importance of interpersonal relationships in the organisation. It is favourable for achieving the goals of an organisation where organisational members give each other support and assistance and also communicate effectively. The questionnaire consists of 43 statements (see appendix 10). The respondents were asked to indicate their attitude towards each statement or item on a 10-point scale ranging from “completely disagree” (1 point) to “completely agree” (10 points). On the basis of a factor analysis, two factors were identified that were called task and relationship orientations (Vadi *et al*, 2002). Both the task and the relationship factor consisted of 8 features.

Table 11. Results of the factor analysis

Items	Content of factors	Factor 1	Factor 2	Factor 3	Factor 4
Pupils' academic performance					
19	Pupils' results in various contests	0.84	0.00	-0.01	-0.00
18	Pupils' results in final examinations	0.83	0.15	0.16	0.01
20	Pupils' success in further stages of study (e.g. in secondary school, institutions of higher education)	0.81	0.11	-0.10	-0.00
22	Pupils' results in national examinations	0.80	0.00	-0.12	0.00
21	Number of excellent graduates	0.72	0.01	0.00	0.17
17	Pupils' grades for in-school examinations	0.66	0.01	0.21	0.18
School leadership					
14	Successful management	0.23	0.80	0.10	0.24
13	Parental participation in school life	-0.13	0.70	0.00	0.24
6	Pupils' overall maturity (e.g. interpersonal and public speaking skills, cooperation, tolerance, etc)	0.25	0.69	0.17	-0.18
15	Well-coordinated communication between management, teachers, pupils and parents.	0.16	0.67	0.23	0.22
7	Extra-curricular activities (activity clubs, etc.)	0.14	0.62	0.24	0.17
12	Participation by school personnel in decision-making	-0.18	0.59	0.28	0.00
School environment					
4	Pupil friendliness	-0.10	0.00	0.90	0.03
3	Secure learning environment	-0.10	0.00	0.90	0.13
11	School personnel (e.g. teachers) satisfaction with school life	0.19	0.26	0.70	0.26
2	Spirit and traditions of the school	0.22	0.28	0.58	0.13
1	Good reputation in the local community	0.19	0.28	0.56	0.00
Pupils' educational progress, competence of teachers					
23	Few pupils repeating a year	0.00	0.13	0.16	0.91
24	Few dropouts	0.00	0.17	0.13	0.85
8	Competence of teachers	0.27	0.31	0.11	0.51
Eigen value		6.61	3.52	1.69	1.52
Cumulative variance explained, %		33.06	50.66	59.09	66.67
Cronbach alphas		0.88	0.82	0.85	0.79

Note. N = 57. Loadings greater than 0.30 are boldfaced. The items are approximate translations from Estonian into English

Source: author's calculations on the basis of collected database

The representative statements in task orientation are, for example: in our organisation "people are proud of their organisation", "positive changes con-

stantly take place”, “people are rewarded for their good work”, and “people’s well-being is important” (see table 12). The characteristic statements for relationship orientation are, for example: in our organisation “people know one another”, “all important matters are discussed with each other”, “people help each other in job-related situations” and “in tough situations there is a strong feeling of togetherness” (Vadi *et al*, 2002). With respect to the given method, it is possible to establish the dominant orientation of organisational culture in the organisation, and also how content the organisational members are with certain aspects of the organisation.

Table 12. Orientations of organisational culture

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

Source: Vadi *et al*, 2002, p. 20

The reliability of the scales of orientations of organisational culture in this sample were also measured, the results being 0.79 for task orientation and 0.78 for relationship orientation which are acceptable in the social sciences. The KMO test statistic is 0.90 which shows that the factor solution is stable.

Both estimations for school level and individual level organisational culture were measured using this method. To find relationships between organisational culture and academic performance, and between organisational culture and administration attitudes, the average estimations of organisational culture for every school were calculated (school level). To calculate the relationships between personality traits and orientations of organisational culture, individual estimations were analysed (individual level).

Measurement of personality traits

For measuring the personality traits in order to test hypothesis four the *Five Factor Model* of personality was selected (Costa *et al*, 1995). This model has been successfully used in Estonia, and the NEO-FFI Questionnaire has been translated into Estonian. The abovementioned questionnaire consists of 81 questions and the answers can be given in a 5-point scale (from 0 – “completely disagree” to 4 – “completely agree”). The questionnaire cannot be published due to copyright requirements.

The values of the five personality traits are calculated on the basis of the responses. The calculation formula has been made in such a manner that in the case of each dimension the minimum result is 0 and the maximum result is 48. The scores obtained are called raw scores. In order to compare how much the results resemble the standard sample used in Estonia, additional calculations have to be made. If the sample in this paper and the standard sample are sufficiently similar, the results can be presented as T-scores of the standard sample, which are calculated on the basis of the raw test score, its standard deviation and the average standard sample. The standard sample currently includes the data of 1,050 people aged over 20. The T-scores provide results on a scale where 50 corresponds to the average of the standard sample. Thus, if the T-score is less than 50 points, the average of the surveyed sample is below the standard and if over 50, the result is higher than the average of the sample.

In terms of reliability, the Big Five scales were as follows: neuroticism 0.86, extraversion 0.84, openness to experiences 0.81, agreeableness 0.69 and conscientiousness 0.83. Thus, the reliability of the Big Five model scales in this sample is acceptable. The KMO test statistic is 0.86 which shows that the factor solution is stable.

Measurement of school academic performance

In order to test hypotheses one and two information about each school’s average national examination results was found. The data was gathered from the homepage of the National Examinations and Qualification Centre (NEQC) (Homepage of the National..., 2009). The exam results in mathematics, English, composition and history were considered for the comparison. The author emphasises three reasons for selecting the abovementioned subjects. First, these subjects are often considered when selecting students for university admission in Estonia. Second, these subjects have also been chosen in previous studies for measuring school performance (e.g. Machin *et al*, 2004; Ross, Lowther, 2003; Haque, Bell, 2001). The six-year (2000–2005) average for the abovementioned subjects for each school was calculated. The reason for doing this is to avoid occasional low or high results for specific schools. A longer period should prevent this. These four subjects are also quite frequently chosen by pupils when taking the national examinations in Estonia. Recently these preferences start to change. In 2000–2001 these four subjects were in the first four places (see table 13).

Table 13. The ranking of composition, English, mathematics and history exams in the popularity list of chosen subjects for the national examinations

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Composition	I	I	I	I	I	I	I	I	I
English	II								
Mathematics	III	IV	V						
History	IV	IV	V	IX	VIII	IX	IX	X	IX

Compiled by the author; source: Homepage of National..., 2009

From 2002 until 2006 composition, English and mathematics were still in the first three places but history had become less popular. In the two previous years, the mathematics exam has been chosen less for the national examinations.

2.2. Results

2.2.1. Administration attitudes and their connection with national examination results and estimations of organisational culture

In this subsection hypotheses one and three are tested (see respectively subchapter 1.2 and subsection 1.4.1). Firstly, the average estimations of the four factors about attitudes of school performance were calculated to find out which school performance factors are more valued by the school administration. The school administration gives statistically significantly higher estimations to non-academic performance measures in factors two (mean 8.7, SD = 0.9) and three (mean 8.7, SD = 1.2) compared to the academic performance measures in factor one (mean 8.1, SD = 1.1). There were no statistically significant mean differences between factors one and four, between two and three, two and four and between three and four according to the t-test.

The attitudes of administrations were also calculated depending on size and location of schools (see table 14). The ANOVA results showed that the attitudes are quite similar in all types of schools. The academic performance of pupils is the only factor that is statistically significantly more valued in large schools compared to small schools. The attitudes of administrations were also calculated according to the gender, occupation, age and work experience of respondents. The respective ANOVA results are presented in tables 15 and 16. According to gender and occupation there were no statistically significant differences in participants' opinions. This means that males and females and principals and head teachers have approximately the same opinion about school performance characteristics.

Table 14. Administration attitudes about school performance areas according to size and location of school

Factor	Mean (SD)		F-stat	p-value	Mean (SD)		F-stat	p-value
	Urban school	Rural school			Large school	Small school		
1	8.35 (0.79)	7.93 (1.22)	1.56	0.29	8.47 (0.72)	7.72 (1.27)	4.97	0.03*
2	8.88 (0.82)	8.67 (0.88)	0.12	0.73	8.75 (0.95)	8.67 (0.79)	0.09	0.76
3	8.85 (1.05)	8.58 (1.26)	0.42	0.52	8.93 (1.16)	8.44 (1.20)	1.75	0.19
4	8.41 (1.00)	8.71 (1.02)	0.15	0.80	8.69 (1.02)	8.58 (1.01)	0.05	0.99

Notes: SD – standard deviation

Factors: 1. pupils' academic performance, 2. school leadership, 3. school environment, 4. competence of teachers, pupils' educational progress 10-point scale

* statistically significant at the 0.05 level

Source: author's calculations on the basis of collected database

Table 15. Administration attitudes about school performance areas according to gender and occupation

Factor	Mean (SD)		F-stat	p-value	Mean (SD)		F-stat	p-value
	Female	Male			Principal	Head teacher		
1	8.12 (1.25)	7.98 (0.95)	0.15	0.70	8.14 (1.04)	7.96 (1.21)	0.25	0.62
2	8.80 (0.87)	8.59 (0.84)	0.56	0.46	8.60 (0.81)	8.82 (0.91)	0.61	0.44
3	8.75 (1.02)	8.54 (1.40)	0.30	0.59	8.46 (1.27)	8.88 (1.09)	1.28	0.26
4	8.38 (0.96)	8.11 (1.06)	0.70	0.41	8.33 (1.00)	8.18 (1.02)	0.24	0.63

Notes: SD – standard deviation

Factors: 1. pupils' academic performance, 2. school leadership, 3. school environment, 4. competence of teachers, pupils' educational progress 10-point scale

Source: author's calculations on the basis of collected database

Table 16. Administration attitudes about school performance areas according to age and work experience

Factor	Mean (SD)		F-stat	p-value	Mean (SD)		F-stat	p-value
	Age under average	Age over average			Work experience under average	Work experience over average		
1	7.69 (1.17)	8.51 (0.88)	6.04	0.02*	7.63 (1.26)	8.53 (0.77)	7.12	0.01*
2	8.58 (0.84)	8.86 (0.87)	1.11	0.30	8.46 (0.91)	8.93 (0.71)	3.08	0.09
3	8.25 (1.38)	9.17 (0.66)	6.75	0.01*	8.22 (1.42)	8.99 (0.85)	4.17	0.04*
4	8.02 (1.09)	8.56 (0.82)	3.02	0.09	7.93 (1.08)	8.53 (0.91)	3.54	0.07

Notes: SD – standard deviation

Factors: 1. pupils' academic performance, 2. school leadership, 3. school environment, 4. competence of teachers, pupils' educational progress 10-point scale

* statistically significant at the 0.05 level

Source: author's calculations on the basis of collected database

According to the age and work experience of the respondents there are statistically significant differences about pupil academic performance (factor 1) and the school environment (factor 3). Above average aged and more experienced respondents' value academic performance as a predictor of school performance more compared to below average aged and less experienced respondents. Above average aged and more experienced respondents see school environment as more of a predictor of school performance compared to below average aged and less experienced respondents. The correlation between age and work experience in each specific school is quite strong, namely $r = 0.62$. So older participants are also more experienced in specific schools.

Secondly, the average national examination results were calculated according to the size and location of the school. Compared to city and county town schools, the results in national examinations in rural municipality and small town schools are on average mostly lower (see figure 19). For example, the national examinations results within the six years in the four subjects calculated for this study showed the following results: on average 58.7 points in cities, on average 58.5 points in county towns and on average 52.3 points in rural municipalities and small towns.

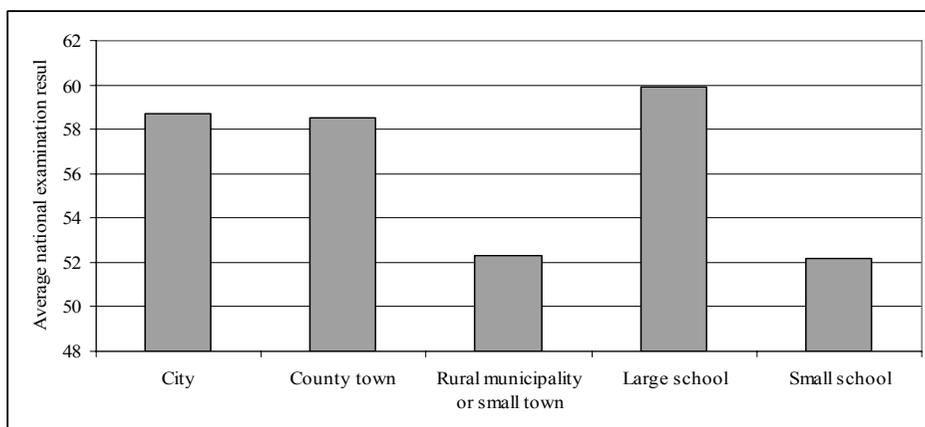


Figure 19. Average national examination results according to location and size of schools
Source: author's calculations on the basis of collected database

As the results of the first two groups do not differ significantly, but the results in rural municipalities and small towns are statistically significantly lower ($F = 20.10$, $p = 0.00$), two groups were formed in this sample on the basis of the location of secondary schools: firstly, city and county town schools (henceforth urban schools) and, secondly, rural municipal and small town schools (henceforth rural schools). Similarly as in Estonian schools in general we see that in this sample the urban schools get higher results in national examinations compared to rural schools (see table 17).

Table 17. Comparisons of national examination results and orientations of organisational culture depending on school location and size

	Mean (SD)		F-stat	p-value
	Urban school	Rural school		
National examination results	58.7 (3.80)	52.3 (4.50)	20.10	0.00*
Task orientation	6.67 (0.43)	6.65 (0.70)	0.01	0.93
Relationship orientation	7.00 (0.26)	7.05 (0.85)	0.02	0.88
	Mean (SD)		F-stat	p-value
	Large school	Small school		
National examination results	59.9 (2.52)	52.2 (4.33)	22.04	0.00*
Task orientation	6.62 (0.59)	6.68 (0.67)	0.05	0.83
Relationship orientation	6.99 (0.46)	7.07 (0.93)	0.08	0.78

Notes: SD – standard deviation

Orientations of organisational culture in 10-point scale

* statistically significant at the 0.05 level

Source: author's calculations on the basis of collected database

The comparison of the national examinations results with respect to the size of schools showed that in larger schools the public examination results are statistically significantly higher (on average 59.9 points) than in smaller schools (on average 52.2 points) ($F = 22.04$, $p = 0.00$) (see table 17 and figure 19).

Thirdly, the estimations of orientations of organisational culture were calculated for the 57 participating secondary schools. The average estimations in task orientation were 6.7 (SD = 0.6) and in relationship orientation 7.1 (SD = 0.7). We can see that in relationship orientation, estimations are higher (the difference is statistically significant ($t = -4.1$, $p = 0.00$)). The estimations of orientations of organisational culture depending on school size and location were also analysed. The results show that orientations of organisational culture are not statistically significantly different depending on these variables (see table 17).

Next, the results of correlations between the attitudes held by school administrations about performance criteria and national examination results are presented (see figure 20)¹⁵. The results show that the attitudes of school administrations about academic performance and national examination results are statistically significantly negatively correlated in large and urban schools. Therefore, when academic performance is highly valued in large and urban schools the national examination results are actually lower. Factor 2 (school leadership) and factor 3 (school environment) are positively correlated with national examination results in large schools and urban schools. In small schools and rural schools there is a positive correlation between factor 4 (competence of teachers, pupils' educational progress) and national examination results.

¹⁵ The corresponding correlation matrix is presented in the appendix 11.

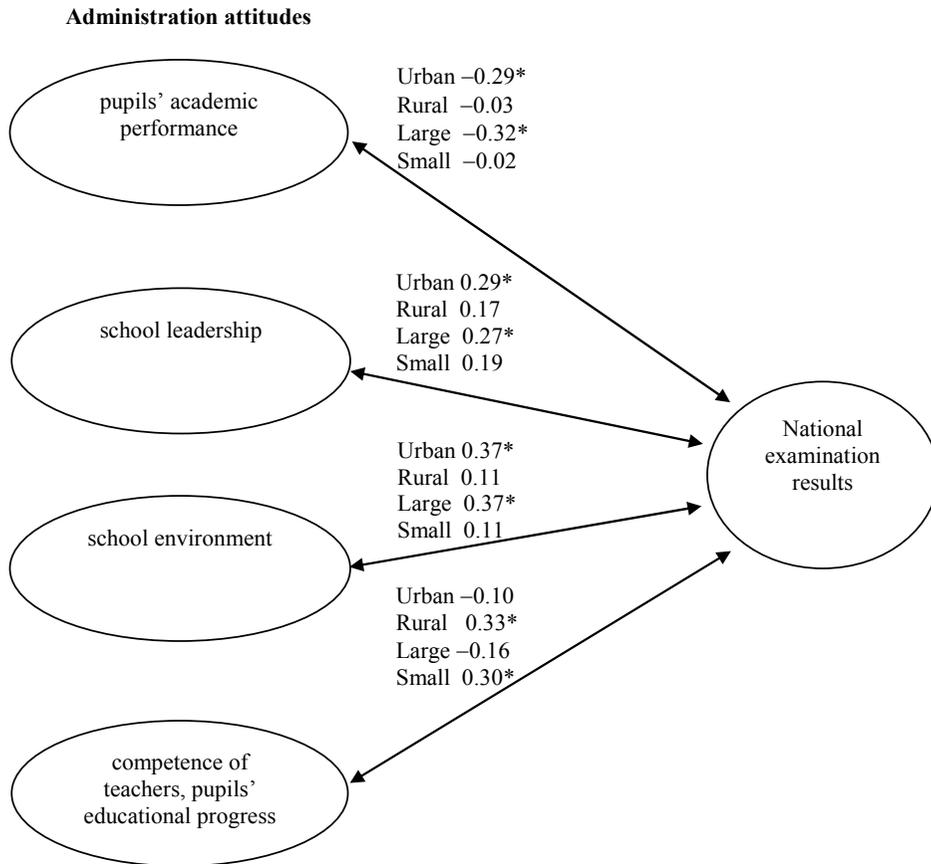


Figure 20. Correlations between attitudes about performance criteria and national examination results (with respect to the location and size of schools)

* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

Finally, the correlations between the attitudes held by school administrations about performance criteria and estimations of organisational culture in schools were calculated. The results about task orientation estimations are presented in figure 21¹⁶ and about relationship orientation in figure 22¹⁷. There is a negative correlation between attitudes about academic performance and estimations of task orientation of organisational culture in large and urban schools. This means that when the school administration values pupils' academic performance as a predictor of school performance in such types of schools their school members give lower estimations for task orientation of organisational culture. The same

¹⁶ The corresponding correlation matrix is presented in appendix 12.

¹⁷ The corresponding correlation matrix is presented in appendix 13.

is true for relationship orientation. Factor 1 and orientations of organisational culture are not correlated in rural and small schools.

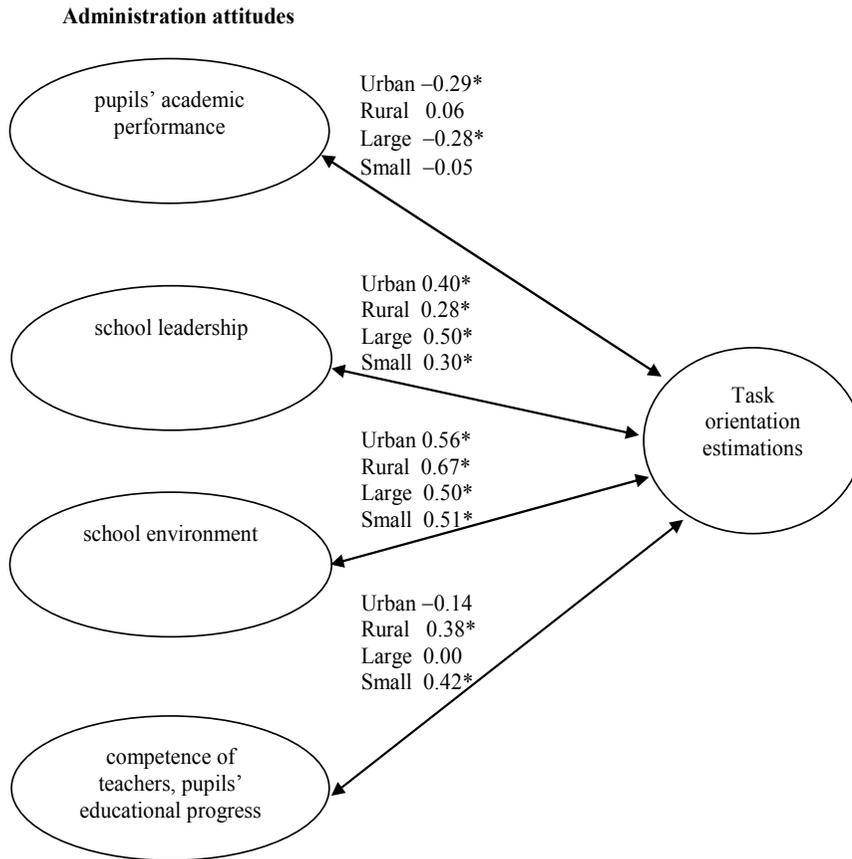


Figure 21. Correlation between administration attitudes and estimations of task orientation of organisational culture (with respect to the location and size of schools)

* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

There is a positive correlation between factor 2 (school leadership) and both orientations of organisational culture in all types of schools. When the school administration believes that school leadership is important for good school performance, the estimations of organisational culture in their school are higher compared to schools where these areas are less valued. Factor 3 (school environment) and estimations of both orientations of organisational culture are also positively correlated in all types of schools. When the school administration believes that the school environment is important for school performance then school members give higher estimations for organisational culture. Factor 4

(competence of teachers, pupils' educational progress) and estimations of organisational culture are positively correlated in rural and small schools, but not in large and urban schools.

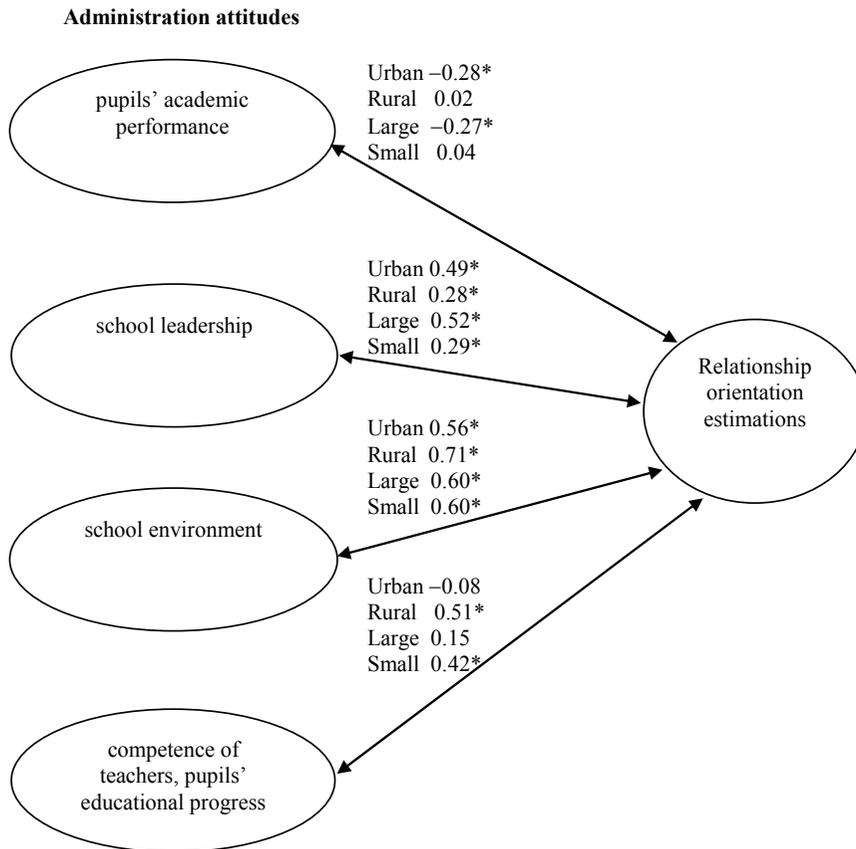


Figure 22. Correlation between administration attitudes and estimations of relationship orientations of organisational culture (with respect to the location and size of schools)
* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

To sum up, the attitudes of administrations are correlated with school national examination results and also with estimations of organisational culture in certain types of schools. The results for urban and large schools are different from the results for rural and small schools.

2.2.2. Relationships between organisational culture and national examination results

In this section hypothesis two¹⁸ will be tested. Firstly, correlations were found between estimations of organisational culture and national examination results in schools. This relationship was not statistically significant (in task orientation, $r = 0.25$, $p = 0.12$ and in relationship orientation, $r = 0.18$, $p = 0.25$). Therefore, secondly, the impact of other variables such as size and location of schools was tested in order to explore the connections between organisational culture and school academic performance.

The results of the correlation analysis are presented on figure 23¹⁹. The relationship between estimations of task orientation of organisational culture and national examination results in urban schools is significant ($r = 0.78$), whereas in rural schools this correlation ($r = 0.13$) is not significant. A statistically significant correlation also appears to exist between the relationship orientation estimations of organisational culture and the performance of urban schools ($r = 0.54$), but, in rural town schools no statistically significant relationship occurs. Therefore, in small schools and in rural schools the organisational culture is not statistically significantly correlated with national examination results. Whereas, in large schools and urban schools the higher the organisational culture estimation results, the higher the national examination results. Or the higher the national examination results, the higher the estimations of organisational culture in large and urban schools.

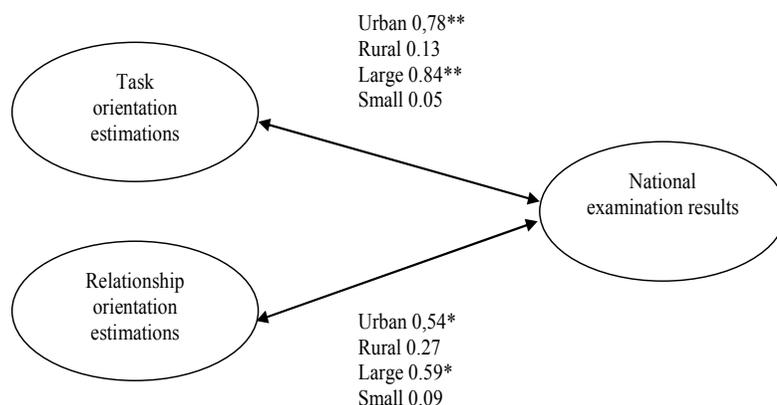


Figure 23. Correlations between orientations of organisational culture and national examination results (with respect to the location and size of schools)

** correlation is significant at the 0.01 level, * correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

¹⁸ Hypothesis two was formulated at the end of subchapter 1.3.

¹⁹ The corresponding correlation matrix is presented in appendix 14.

In the next step, schools with estimations of organisational culture that were below and above average were differentiated. Using the ANOVA method, the author evaluated whether there are differences between national examination results depending on whether a school has lower or higher average estimations of organisational culture compared to other schools. The results show that when the estimations of organisational culture are higher than average compared to other schools the national examination results are higher in urban and large schools (see table 18).

Table 18. National examination results of different types of schools vis-à-vis their estimations of organisational culture

Type of the school	Average national examination results with respect to estimations of organisational culture			
	Mean OC1 ¹ estimations ³ (SD)		F-stat	p-value
	High	Low		
Urban school	61.3 (1.7)	53.3 (2.1)	40.4	0.00*
Rural school	53.6 (5.4)	53.5 (3.0)	0.1	0.95
Large school	60.5 (3.2)	55.2 (5.1)	16.4	0.00*
Small school	53.3 (2.9)	53.1 (5.9)	0.1	0.88
	Mean OC2 ² estimations ³ (SD)		F-stat	p-value
	High	Low		
	Urban school	59.6 (4.1)	56.2 (2.5)	8.4
Rural school	53.6 (5.6)	53.8 (3.2)	0.1	0.91
Large school	61.6 (4.2)	57.5 (4.4)	9.6	0.03*
Small school	52.9 (5.9)	53.4 (2.9)	0.2	0.65

Notes: OC1¹ – task orientation, OC2² – relationship orientation, 3 – compared to other schools

SD – standard deviation

* significant at the 0.05 level

Source: author's calculations on the basis of collected database

For example, in urban schools, which have higher estimations for task orientation, the performance is on average 61.3, but when they have lower estimations for task orientation the performance is on average 53.3 (the difference is statistically significant, $F = 40.4$, $p = 0.00$). As for relationship orientations, then these differences are smaller because with higher estimations for relationship orientation the performance is 59.6, and with lower estimations the performance is 56.2 (the difference is statistically significant, $F = 8.4$, $p = 0.03$). These results are in accordance with the correlation analysis.

The ANOVA test did not identify any statistically significant differences between national examination results depending on orientations of organisational culture in rural and small schools as the correlation analysis also showed. These relationships between estimations of organisational culture and national

examination results are also illustrated in figure 24. Again, the national examination results in small and rural schools do not depend on whether the organisational culture estimations are high or low in the school as is the case in large and urban schools.

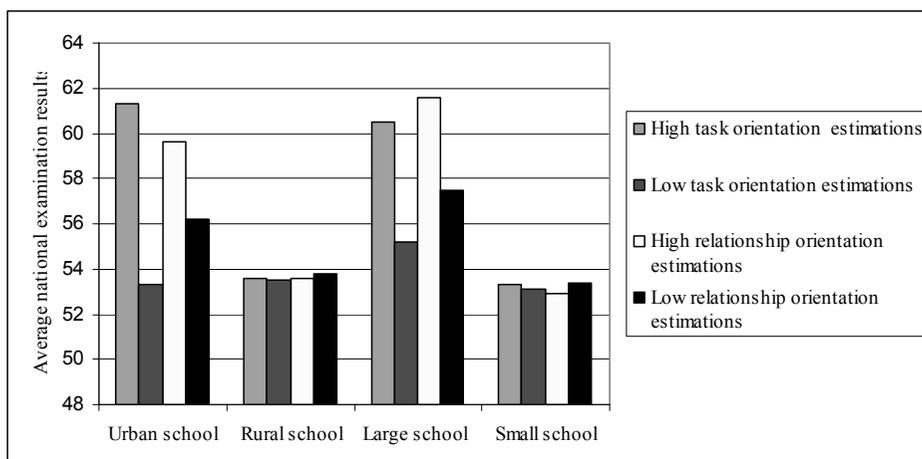


Figure 24. National examination results depending on whether the organisational culture estimations are low or high (with respect to the location and size of schools)
Source: author's calculations on the basis of collected database

To sum up this part of the analysis, we can say that organisational culture and national examination results are related in the case of urban schools and larger schools. In rural schools and smaller schools, organisational culture and national examination results are not statistically significantly related. This also proves the idea that the results with respect to the location and size of schools are quite similar because the location and size of schools are strongly inter-related in this sample ($r = 0.61$ (significant on level 0.01)).

2.2.3. The influence of the personality traits of school members on organisational culture estimations

In this section hypothesis four²⁰ will be tested. Firstly, the personality traits of school members were compared to the Estonian standard sample. It is acceptable if the congruence is equal to or above 0.95. Since in this work the congruence of all factors is above 0.95 it may be said that the sample is virtually identical to the standard sample. Thus, the data is reliable and may be compared

²⁰ Hypothesis four was formulated at the end of subsection 1.4.2.

with the average value of the standard. The use of T-scores for comparison is thus justified. Based on the sample of general education schools, the T-scores are as follows: neuroticism 47.2, extroversion 48.7, openness to experiences 48.1, agreeableness 53.9 and conscientiousness 54.5. The average of the standard sample is 50. As we can see, neuroticism, agreeableness and conscientiousness differ from the average of the standard sample the most. The school employees included in this sample are thus on average slightly less neurotic and slightly more agreeable and conscientious than the members of the standard sample.

Secondly, the average estimations of organisational culture were calculated. The results showed that the average estimations in task orientation of organisational culture were 6.7 (SD = 1.4) and in relationship orientation 7.1 (SD = 1.3). We can see that in the relationship orientation, estimations are higher (the difference is statistically significant ($t = -9.9$, $p = 0.00$)). The ANOVA results showed that there are no statistically significant differences between estimations of orientations of organisational culture depending on gender (see table 19), education (see table 20), school size and school location (see table 21). This means that females and males have approximately similar opinions about orientations of organisational culture. In a similar vein, individuals with different educational levels and also participants from rural and urban schools and large and small schools have similar opinions about orientations of organisational culture.

Table 19. Estimations of organisational culture according to gender of participants

Organisational culture orientations	Mean (SD)		F-stat	p-value
	Female	Male		
Task	6.70 (1.42)	6.89 (1.46)	1.51	0.22
Relationship	7.04 (1.30)	7.21 (1.26)	1.41	0.22

Notes: SD – standard deviation

10-point scale

Source: author's calculations on the basis of collected database

Table 20. Estimations of organisational culture according to educational level of participants

Organisational culture orientations	Mean (SD)				F-stat	p-value
	Education					
	Higher	Vocational secondary	Secondary	Basic		
Task	6.74 (1.37)	6.76 (1.56)	6.65 (1.41)	6.69 (1.93)	0.10	0.96
Relationship	7.08 (1.21)	7.16 (1.44)	7.06 (1.33)	6.69 (1.78)	0.90	0.43

Notes: SD – standard deviation

10-point scale

Source: author's calculations on the basis of collected database

Table 21. Estimations of organisational culture according to location and size of schools

Organisational culture orientations	Mean (SD)		F-stat	p-value
	Urban school	Rural school		
Task	6.74 (1.35)	6.67 (1.50)	0.57	0.45
Relationship	6.98 (1.20)	7.07 (1.37)	0.97	0.32
Organisational culture orientations	Mean (SD)		F-stat	p-value
	Large school	Small school		
Task	6.64 (1.41)	6.73 (1.45)	0.69	0.41
Relationship	6.92 (1.25)	7.09 (1.32)	0.30	0.79

Notes: SD – standard deviation

10-point scale

Source: author’s calculations on the basis of collected database

However, there are differences according to age (see table 22), occupation (see table 23) and school type (see table 24). The LSD test was conducted to obtain a more precise analysis of the differences between the groups. Participants over the age of 53 give higher estimations to organisational culture orientations compared to younger participants. There were no differences between the other age groups. Consequently, for further analysis two age groups are made: 1) organisational members 53 years and above and 2) 52 years and below.

In a similar vein, the school principals and head teachers give higher estimations to organisational culture orientations compared to teachers and support personnel. Estimations by teachers and support personnel were not statistically significantly different. Thus, for further analysis, two groups according to occupation were formed: 1) administration and 2) teachers, support personnel.

According to school type, members of primary schools give higher estimations to organisational culture orientations compared to secondary school, basic education school and special needs school participants. Other school types did not statistically significantly differ among each other. For further analysis two groups were formed: 1) primary school and 2) other school types.

Thirdly, a logistic regression is used to find how the personality of school members influences their estimations of organisational culture. A logistic regression is a type of regression analysis, where the dependent variable is a dummy variable (coded 0, 1). Therefore, the data must be transformed. For coding the dependent variables, the concept of the mean was used.

Table 22. Estimations of organisational culture according to age of participants

Organisational culture orientations	Mean (SD)				F-stat	p-value	Statistically significant differences between groups (LSD test results)
	Age						
	Under 36	37-45	46-52	Over 53			
Task	6.67 (1.33)	6.62 (1.40)	6.72 (1.43)	7.07 (1.47)	5.39	0.00*	Over 53 > Under 36 Over 53 > 37-45 Over 53 > 46-52
Relationship	6.70 (2.19)	6.93 (1.33)	7.03 (1.30)	7.38 (1.26)	4.81	0.00*	Over 53 > Under 36 Over 53 > 37-45 Over 53 > 46-52

Notes: SD – standard deviation
10-point scale

* significant at the 0.05 level

Source: author's calculations on the basis of collected database

Table 23. Estimations of organisational culture according to occupation of participants

Organisational culture orientations	Mean (SD)		F-stat	p-value	Statistically significant differences between groups (LSD test results)
	Administration	Teacher			
Task	7.27 (1.24)	6.73 (1.44)	5.14	0.00*	Administration > Teachers Administration > Support personnel
Relationship	7.56 (1.00)	7.11 (1.28)	5.39	0.00*	Administration > Teachers Administration > Support personnel

Notes: SD – standard deviation

10-point scale

* significant at the 0.05 level

Source: author's calculations on the basis of collected database

Table 24. Estimations of organisational culture according to school type

Organisational culture orientations	Mean (SD)				F-stat	p-value	Statistically significant differences between groups (LSD test results)
	School type						
	Secondary	Basic education	Primary	Special needs children			
Task	6.59 (1.34)	6.59 (1.55)	7.75 (1.06)	6.73 (1.45)	10.02	0.00*	Primary > Secondary Primary > Basic education Primary > Special needs children
Relationship	6.91 (1.20)	7.04 (1.42)	8.00 (0.94)	7.12 (1.31)	9.35	0.00*	Primary > Secondary Primary > Basic education Primary > Special needs children

Notes: SD – standard deviation

10-point scale

* significant at the 0.05 level

Source: author's calculations on the basis of collected database

Two different models were formed: one about task orientation of organisational culture and the other about relationship orientation of organisational culture.

The dependent variables were coded as follows:

- *model Y* — above average estimations for task orientation;
- *model Z* — above average estimations for relationship orientation.

The independent variables were extraversion, agreeableness, conscientiousness, neuroticism and openness to experience and also social-demographic variables like gender, age, education level, occupation, school location, school size and school type. For coding the personality traits, the concept of the mean was used. Values that were above the average were coded 1 and values that were below the average were coded 0. For coding the social-demographic variables the results of the LSD were also used. The dependent and independent variables are illustrated in figure 25.

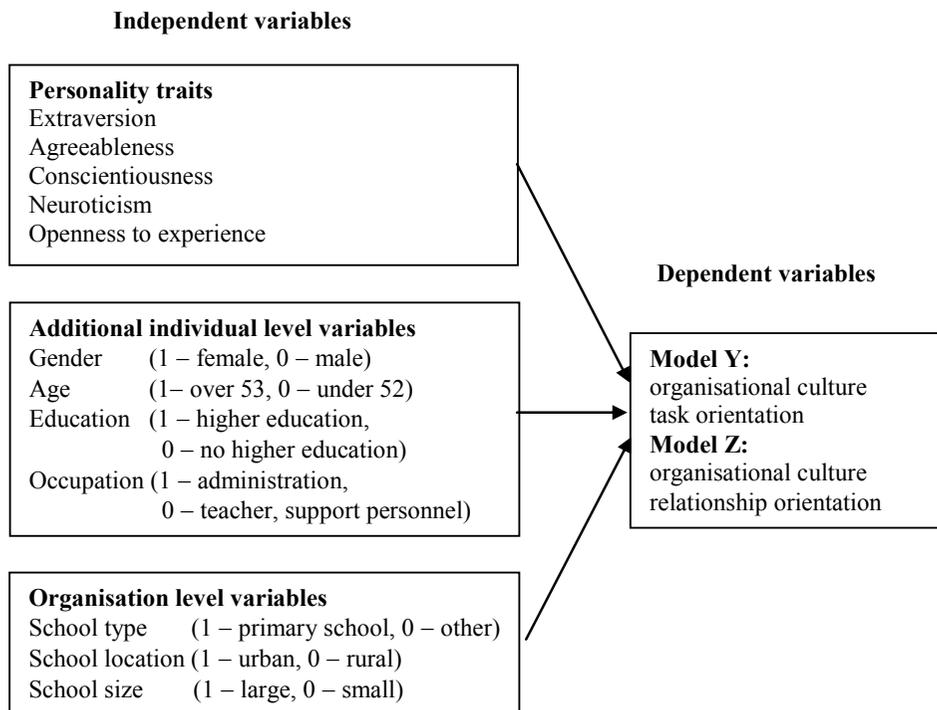


Figure 25. Dependent and independent variables for logistic regression
 Source: compiled by the author

By performing a logistic regression, at first all independent variables were included in the models. Then the variables that were not significant were removed. The acceptable significance level was 0.05.

After the removal of insignificant variables, the two models contained the same 6 independent variables: extraversion, agreeableness, neuroticism, age, occupation and school type (see table 25). Odd's ratios for extraversion are 1.57 and 1.42 respectively in the task and relationship orientation model. We can say that the degree of above average extraversion increases the probability of above-average estimations of organisational culture by about one and a half times. Approximately the same result is found for agreeableness, which increases the probability of above average estimations of organisational culture. On the contrary, neuroticism decreases the probability of above average estimations of organisational culture. From the personality measures conscientiousness and openness to experience are not significantly related to estimations of organisational culture.

Table 25. Independent variables influencing estimations of organisational culture and goodness of fit statistics

	Model Y (task orientation) Odd's ratios	Model Z (relationship orientation) Odd's ratios
Extraversion	1.57	1.42
Agreeableness	1.57	1.37
Neuroticism	0.68	0.70
Age	2.03	2.00
Occupation	2.00	1.66
School type	5.86	7.29
Hosmer and Lemenshow's statistic	0.59	0.73
Cox and Snell's R ²	0.09	0.08
Nagelkerke's R ²	0.12	0.10

Source: author's calculations on the basis of collected database

Age over 53 years increases the probability of above average estimations of organisational culture by about two times. Likewise, administrative occupation and working in primary school increases the probability of above average estimations compared to other occupations and other types of schools. From socio-demographic variables gender, education, school location and school size were not significant. The statistically significant results are summarized in figure 26.

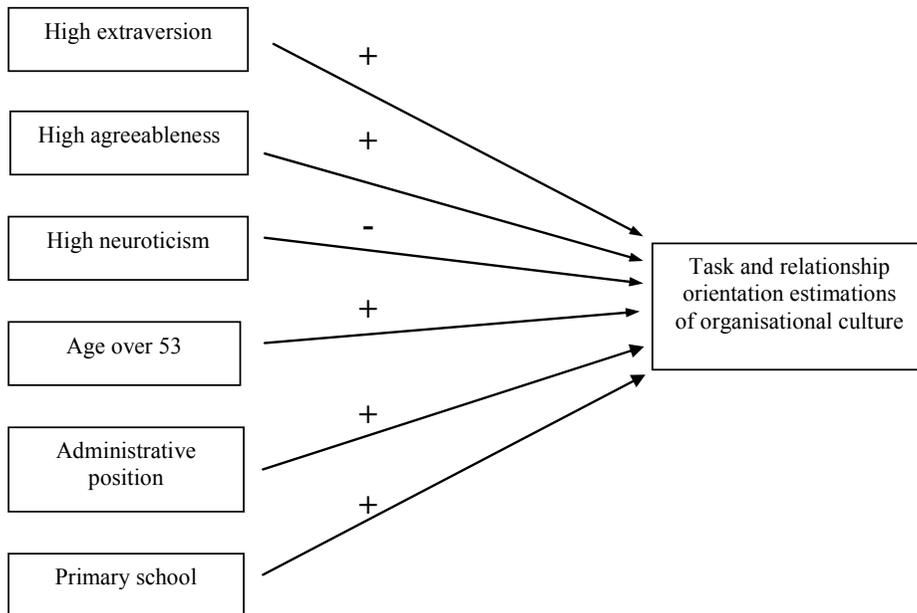


Figure 26. The impact of statistically significant independent variables on estimations of organisational culture
 “+” higher estimations
 “-” lower estimations
 Source: compiled by the author according to study results

Hosmer and Lemenshow’s goodness of fit statistics are 0.59 in model Y and 0.73 in model Z, which shows that the models fit the data. Cox and Snell’s R^2 is 0.09 in model Y and 0.08 in model Z. Nagelkerke’s R^2 are respectively 0.12 and 0.10. These are rather low explanation rates, which means that there are other, not analysed factors, which influence the estimations of organisational culture.

The success of the logistic regression can also be assessed by looking at the classification table showing correct classifications of the dichotomous dependent variables. The cut value chosen was 0.5. The results of the two models are shown in table 26. Model Y can predict the correct values in 62.1 percent of cases, model Z in 58.8 percent of cases. This means that the models explain approximately 50–60 percent of estimations of organisational culture. Therefore, other, not analysed factors, explain the remaining 40–50 percent of estimations of organisational culture. From the four methods, Hosmer and Lemenshow’s statistics and classification table showed rather good results, on the other hand, Cox and Snell’s R^2 and Nagelkerke’s R^2 showed rather low explanation rates.

Table 26. The percentage of correct classifications in different models

	Model Y (percent correct)	Model Z (percent correct)
Lower estimates	64.3	65.0
Higher estimates	60.1	52.8
All estimates	62.1	58.8

Source: author's calculations on the basis of collected database

To sum up this section we can say that some personality traits influence estimations of organisational culture and some not. More extraverted, agreeable and less neurotic individuals are more favourable to organisational performance because they are more positive about the organisational culture of an organisation.

2.3. Discussion

2.3.1. The direct and indirect relationship between school administration attitudes and academic performance in Estonian schools

The attitudes of the school administration have both a direct and an indirect influence (mediated through organisational culture) on academic performance in schools, but these relationships depend on school size and location. Thus, hypotheses one and three were partly supported by the research (see table 27).

In large schools and urban schools there is a negative relationship between attitudes about pupil academic performance and the national examination results. This means that in urban and large schools, where the administration believes that school performance is primarily expressed in terms of the pupils' results in various examinations and contests, the national examination results are actually lower and vice versa. As correlation is a two sided phenomenon, it could well be that the lower the results in national examinations the more the school administration emphasises the importance of pupil academic performance. This could lead to a situation where the school administration concentrates more and more on academic success, pressuring teachers and pupils to work harder and harder towards getting good grades, even though this may not bring the desired result. In the author's opinion, the school administration should not underestimate their own role in the success of the school, or hope that pupils and teachers assume most of the responsibility. Dealing with the "soft issues", such as the school environment and the satisfaction of the school members could be a more effective way of improving pupil national examination results.

Table 27. The relationship of school administration attitudes to academic performance and organisational culture in Estonian schools

Hypotheses	Results
<p>Hypothesis 1 In schools where the school administration has an attitude that school performance depends on the non-academic factors of the school, the academic performance is higher</p>	<p>Partly supported, because</p> <ul style="list-style-type: none"> • In large and urban schools where the school administration has an attitude that school performance depends on pupil academic performance, the national examination results are lower (factor 1) • In large and urban schools where the school administration has an attitude that school performance depends on the school leadership, the national examination results are higher (factor 2) • In large and urban schools where the school administration has an attitude that school performance depends on the school environment, the national examination results are higher (factor 3) • In small and rural schools where the school administration has an attitude that school performance depends on the competence of teachers and pupil educational progress, the national examination results are higher (factor 4)
<p>Hypothesis 3 Organisational members support organisational tasks and interpersonal relationship orientations of organisational culture more in schools where the administration has an attitude that school performance depends on non-academic factors of the school</p>	<p>Partly supported, because</p> <ul style="list-style-type: none"> • In large and urban schools where the school administration has an attitude that school performance depends on pupil academic performance, the estimations of task and relationship orientations of organisational culture are lower (factor 1) • In all types of schools where the school administration has an attitude that school performance depends on school leadership, the estimations of organisational culture for both orientations are higher (factor 2) • In all types of schools where the school administration has an attitude that school performance depends on school environment, the estimations of organisational culture for both orientations are higher (factor 3) • In small and urban schools where the school administration has an attitude that school performance depends on the competence of teachers and pupil educational progress, the estimations of organisational culture for both orientations are higher (factor 4)

Source: compiled by the author

The negative relationship between the attitudes held by the administration about pupil academic performance and average estimations of organisational culture in urban and large schools confirms this opinion. When the school administration values pupil academic performance highly, school members give lower estimates to organisational culture (e.g. support for organisational tasks and

relationships). In this case, teachers and support personnel feel that they are not appreciated enough compared to schools where the estimations of organisational culture are higher.

There is a positive relationship between attitudes about school leadership and the national examination results in large and urban schools in this study. This means that when the school administrations have an attitude that, for example, stakeholder relationships and participation in school life are important for good school performance, the national examination results are higher in these types of schools. Also, when school administrations value the pupils' overall maturity, their interpersonal and cooperation skills and extra-curricular activities, the academic achievement of pupils is better. Or the other way around, when national examination results are high, the school administrations must not be so concerned with this matter and make time and exert energy on valuing other areas. In the author's opinion, this provides an extra advantage to these schools because in this way they can improve their school academic performance even further.

Previous research shows that in schools where teachers are involved in decision-making and the interpersonal relationships between stakeholders are rewarding, pupil academic performance is higher. Also, concern about the well being of and training opportunities for organisational members are important for pupil academic performance (Griffith, 2003). Additionally, studies by Huber (1999) and Gibbs and Slate (2003) demonstrated that more participative and team-work oriented leadership styles positively influence pupil academic performance. In Gewirtz's (1998) study in academically high performing schools many extracurricular opportunities were offered and there was also more regard for the non-academic development of pupils than in academically low performing schools. So the results of this study are in accordance with previous studies in the case of large and urban schools, but not in case of small and rural schools.

As mentioned before, the attitudes of the school administration are also important when it comes to the estimations of organisational culture among organisational members. When the administration has an attitude that non-academic areas are important for school performance, the organisational members supported organisational tasks and relationships more in all types of schools. In other words, when the school administration believes that involving stakeholders in decision-making and establishing good communication between them are important for school performance, the organisational members give higher estimations for task and relationship orientations of organisational culture. Teachers and support personnel are, for example, more proud of their organisation, see more positive changes taking place, interpersonal relationships are perceived as being better etc.

The results of previous studies claim that more participative, supportive and transformational leadership styles are favourable to produce a more performance supporting organisational culture (e.g. Wilderom, van der Berg, 1998; Ogbonna, Harris, 2000; Xenikou, Simosi, 2006). When organisational leaders value, support and empower organisational members, this is reflected in the

perceptions of organisational culture. In the school context, Eilers and Camacho (2007) found that more cooperative, participative and positive example setting leadership created an organisational culture that supported academic performance. In the study by Reavis *et al* (1999), the school principal achieved an organisational culture that supported academic performance more by rewarding organisational members, creating traditions, organizing events and encouraging good interpersonal relationships. Therefore, the result of this study that the attitudes of the school administration and accordingly chosen behaviour influences organisational culture is in accordance with previous research in the case of large and urban schools, but not in the case of small and rural schools. Additionally, the relationships between the attitudes of the school administration and organisational culture could also be two-sided — for example, organisational culture may influence the behaviour of the organisational leaders (Holbeche, 2005; Alvesson, 2002; Sarros *et al*, 2002; Bass, AVALIO, 1993). As discussed in the theoretical part, the leadership is not implemented from a socio-cultural point zero (Alvesson, 2002). Therefore, we can also say that the higher estimations of organisational culture, the higher the school administration values its leadership role in large and urban schools.

Attitudes about the school environment showed a positive relationship with the national examination results in large and urban schools. A secure learning environment, pupil friendliness, a good reputation in the local community, good spirit and traditions in the school and school personnel being satisfied with school life were considered here. When the school administration values these areas, pupils perform better academically. Alternatively, the higher the national examination results, the more the school administration values elements of the school internal environment. If the school administration is not so concerned about exam performance, they can be more involved with environmental issues and this may lead to even higher school performance.

Earlier studies demonstrate that safety, order and discipline influence pupils' grades. When teachers and pupils perceived the school as being safe, orderly and well disciplined, the academic performance was higher (Griffith, 2003). Van der Westhuizen *et al* (2005) demonstrated in their research that academically high performing schools value discipline and traditions more. Additionally, schools that show higher job satisfaction rates were academically more successful in Griffith's (2003) study. Gewirtz's (1998) study indicates that academically high performing schools were highly regarded within the local community, were popular and had little violence, conflicts and problem behaviours. Also, other studies demonstrate similar results (e.g. van der Westhuizen *et al*, 2005; Kitsantas *et al*, 2004; Osher, Fleishman, 2005). Consequently, we can say that this study's results are in accordance with previous research in the case of large and urban schools, but not in the case of small and rural schools.

The attitudes of the school administration about the school internal environment (e.g. about the role of safety, reputation, spirit and traditions) are also connected to estimations of organisational culture among school members in all types of schools. This means that when principals and head teachers value the

internal school environment, the teachers and support personnel support organisational tasks and relationships more. The school environment and the school's organisational culture are strongly related areas. Therefore, this result is not surprising.

In small schools and rural schools there was no statistically significant correlation between the attitudes of the administration about academic performance, school leadership, school environment and national examination results. In the author's opinion, this could be because although school administrations in these types of schools may value aspects of the school environment and the contribution of stakeholders, this does not affect their pupils' national examination results. Attitudes about school performance criteria in small schools and rural schools were approximately as high as in large schools and urban schools, but the national examination results were not related to these attitudes. The author presumes that there are other factors that affect exam results more. These are, for example, the shortage of qualified teachers, low school budgets and family background.

It is often the case in Estonia that some of the necessary teaching positions in schools are not filled at all, or the work is done by teachers of other subjects (e.g. the history teacher gives lessons in mathematics) (see, for example, Kivine, 2004). In rural places there is little likelihood that there are many candidates for one position as is often the case in a larger city, and therefore the school administration has fewer options when choosing the proper candidates. This also affects the potential for specialization among teachers. In Estonia, school budgets depend on the number of pupils. Therefore, in small schools the budget is lower than in larger schools. Consequently, there is less money for additional courses, extracurricular activities etc. Parent income and educational level also sometimes influence pupil academic performance. In rural places income levels and educational levels are usually lower (Roscigno, Crowley, 2001). Sometimes even pupils themselves go to work. One Estonian school principal reported that 15–20 percent of the secondary level pupils in his school are working (Lõhmus, 2008). Another problem is that more talented and good pupils try to go to study into the city or county town school because they think that there are more opportunities to get a proper education (Kreizberg, 2005). The elite schools can pick their pupils from among many good candidates; the rural schools have to teach everyone. Therefore, rural schools are in a disadvantaged position in many ways.

In small schools and rural schools there was a positive connection between the attitudes of the administration about teacher competence and pupil educational progress and the national examination results. When the school administration views the competence of teachers and training opportunities for teachers as being important for school performance, the national examination results are higher. Also, when the school administration has an attitude that the good performance of a school depends on low numbers of pupils repeating and less dropping out, the academic achievement of the pupils is higher. Conversely, when national examination results are high, the competence of teachers

and pupil educational progress are seen as being important. In large schools and urban schools these areas (competence of teachers and pupil educational progress) were not significant. This result was expected because as discussed earlier the teacher shortage is a particular problem in rural areas and in smaller schools in Estonia. This affects academic performance (including dropout and repeating) noticeably.

There is also a positive relationship between the attitudes of the administration about teacher competence and pupil educational progress and estimations of organisational culture in small and rural schools. In the author's opinion this means that school members accept the administration's concern about these matters and feel appreciated, proud and more positive about their organisation compared to rural and small schools where the school administration does not value teacher competence and pupil educational progress so much. In large and urban schools there is no such correlation. In the author's opinion these areas are not so often on the agenda in these types of schools.

The attitudes of the school administration did partly depend on the age and work experience of the respondents in respect to school leadership and internal environment issues. Older respondents tend to especially value the academic performance of pupils as a predictor of school performance more compared to below average aged and less experienced respondents. Thus, older and more experienced school principals and head teachers need to change their attitudes about pupil academic success being essential for school performance. Conversely, above average aged and more experienced respondents valued the school environment more as a predictor of school performance compared to below average aged and less experienced respondents. Consequently, younger and less experienced school principals and head-teachers should pay more attention to environmental issues in school life.

To sum up, we can say that the attitudes of the school administration are important for the school's academic performance. Although, the relationship appears in rather large and urban schools it does not mean that small and rural school administrations should not pay attention to non-academic areas of school. School administration attitudes also influence estimations of organisational culture, and thus, the attitudes may also influence the school's academic results indirectly mediated through organisational culture. Especially positive results include the fact that in general school administrations give higher estimations to non-academic areas of performance and thus probably value these areas more compared to academic success criteria.

2.3.2. Connections between organisational culture and academic performance in Estonian schools

Organisational culture influences academic performance in Estonian schools, but this relationship occurs only in large and urban schools. Therefore, the second hypothesis was partly confirmed (see table 28). The national examination results for larger schools and urban schools are related to their estimations of the task orientation of organisational culture. In secondary schools where the personnel, for example, feel that people are proud of their organisation, employees are rewarded for their good work, positive changes take place constantly, the well-being of organisational members is important and so on, the academic performance is higher and vice versa. The correlation between relationship orientation and national examination results is also significant in large and urban schools, and therefore, in schools where the employees perceive that all important matters are discussed with others, people help each other with job-related problems, in tough situations there is a strong feeling of togetherness and so on, the academic performance is higher and vice versa. In a larger school it is difficult for people to effectively communicate with one another and regard all individuals, but when they succeed, then it can provide some in terms of advantage in academic performance related issues.

Table 28. The connection between organisational culture and academic performance in Estonian schools

Hypothesis 2	Result
In schools where organisational members support organisational task and interpersonal relationship orientations of organisational culture the academic performance is higher	Partly supported, because the higher the estimations organisational members give task and relationship orientations of organisational culture, the higher the national examination results in large and urban schools. But there is no relationship between estimations of organisational culture and the national examination results in small and rural schools.

Source: compiled by the author

As discussed in the theoretical part, organisational culture usually contributes to performance in many types of organisations. Often some types of organisational culture are distinguished in the research. Usually, there is also a type of organisational culture that is characterized by valuing interpersonal relationships. These are however referred to quite differently, for example, clan (Dwyer *et al*, 2003); cooperative teamwork (Mallak *et al*, 2003); consensual (Desphande, Farley, 2004); supportive (Berson *et al*, 2005); community (Ogbonna, Harris, 2000); group (Škerlavaj *et al*, 2007); sharing (Chow, Liu, 2007) etc. The results about how relationship oriented types of organisational

culture supports performance vary. In seven studies out of thirteen, relationship oriented organisational culture was favourable for organisational performance, but in five no relationship was found. Additionally, one study indicated that relationship oriented organisational culture did not support performance. In the author's opinion, the relevance of relationship oriented organisational culture depends on the type of organisation and the performance criterion of the organisation. In the school context, studies have suggested that relationship oriented organisational culture was favourable in most cases.

For example, Gruenert (2005) found that an organisational culture characterized by 1) teacher collaboration (e.g. teachers spend considerable time planning together, teachers work together to develop and evaluate programs and projects etc) and 2) collegial support (e.g. teachers trust each other, teachers are willing to help out whenever there is a problem, teachers work cooperatively in groups etc.) supports the academic performance of pupils. That kind of organisational culture is comparable with relationship orientation in this study. Griffith's (2003) research indicates that a human relationship focused organisational culture supports academic performance in pupils. This type is comparable with relationship orientation in this study because this type of organisational culture values interpersonal relationships, teamwork and cohesion (Dwyer *et al*, 2003). This proves that to produce higher academic performance in schools an organisational culture that supports interpersonal relationships is favourable. Therefore, the results of this study are in accordance with previous research for large and urban schools, but not for small and rural schools.

In the author's opinion, types of organisational culture that value the rational goals of an organisation are comparable with the task oriented organisational culture used in this study. However, different authors give different names to that type of organisational culture, for example, market (Dwyer *et al*, 2003; Øgaard *et al*, 2005); competitive (Desphande, Farley, 2004; Rashid *et al*, 2003; Ogbonna, Harris, 2000; Chow *et al*, 2007); rational firm (Mallak *et al*, 2003); rational culture (Škerlavaj *et al*, 2007); mission (Denison, Mishra, 1995; Fey, Denison, 2003; Yilmaz, Ergun, 2008; Xenikou, Simosi, 2006); achievement (Xenikou, Simosi, 2006) etc. In ten out of eleven studies it was found that types of organisational culture focused on rational goals positively influence organisational performance — only one study did not show a statistically significant relationship. Consequently, we can say that an organisational culture that focuses on rational goals in most cases supports organisational performance. In the school context, Gruenert's (2005) study showed that 1) unity of purpose (e.g. teachers support the mission of the school, teachers understand the mission of the school, the school mission statement reflects the values of the community etc.) and 2) learning partnership (e.g. teachers and parents have common expectations for pupil performance etc.) support academic performance in pupils. We can say that this kind of organisational culture supports organisational tasks as defined in this study. Thus, the results of this study are in accordance with previous research for large and urban schools but not small and rural schools.

In smaller schools and rural schools no significant relationship between orientations of organisational culture and academic performance was found. This implies that in these secondary schools, the average results of the national examinations do not depend on the estimations of organisational culture by school members. The circumstances are not very favourable for small and rural schools because the national examination results are usually lower in these types of schools compared to large and urban schools. However, estimations of organisational culture are at the same level compared to large and urban schools. This means that in smaller schools and rural schools organisational culture can be very strong and supportive, but there are other factors that influence the academic performance more. For example, the shortage of qualified teaching personnel, low budget and pupil family background as discussed earlier.

As mentioned before, estimations of organisational culture do not depend on the size and location of schools. In a similar way, these estimations do not depend on gender and the educational level of school members. This means that on average both males and females support organisational tasks and relationships equally. Additionally, estimations of organisational culture are valued at a similar level for school members with different educational backgrounds.

On the contrary, occupation, age and school type do influence estimations of organisational culture. Therefore, school principals and head teachers give higher estimations. They see the circumstances in the organisation more positively compared to teachers and support personnel. In their opinion they reward organisational members for their good work, positive changes take place, differences between subordinates and superiors are not accentuated etc. This result is in accordance with previous work. It is often the case that managers and employees have different views (Harris *et al*, 2003). School leaders are probably also more informed about relationship orientation questions such as “in our school people know each other” because of their professional background.

School members over 53 years of age also gave higher estimations for both orientations of organisational culture. One reason for that could be that some of these respondents may have worked in a specific school for many years, and therefore, they are better informed about school matters compared to the younger and less experienced school members. Age and work experience was highly correlated in the sample in this study. This means that older participants have worked longer in this particular school. Therefore, another reason for higher estimations of organisational culture among older participants could be that if these school members have been working so long in one school they may have found a position and school that suits them best. Previous research confirms this opinion. For example, that job satisfaction (Liu, Ramsey, 2008) and commitment (Park, 2005) is higher among more experienced employees because unsatisfied organisational members have left. Additionally, the skills needed for working at the school may have been improved over the years in the more experienced school members. For example, how to communicate with

pupils and parents, how to solve problems and how to manage in stressful situations may improve with more experience.

Higher estimations of organisational culture were also given by primary school members. Previous research also indicates that primary school members are more committed to their work (Shaw, Reyes, 1992) and more satisfied with their work (Sharma, Jyoti, 2006; Mertler, 2002). One reason for that could be that primary schools are usually rather small in Estonia. Therefore, it is easier to know each other, discuss work related problems etc.

The school administration should take into account that the personnel in schools are more satisfied with interpersonal relationships than with task and management practices in an organisation (average estimations of relationship orientation are higher than those of task orientation). This proves that the latter area needs additional attention: employees need for example more recognition, encouragement, freedom of activity and acceptance. The relationship issues cooperation, communication, problem solving and so on, are also very important when the aim is higher academic performance.

To conclude, organisational culture may contribute to academic performance in large and urban schools where there is the potential for good results. In small and rural schools, the academic performance of pupils is lower and not dependant on the organisational culture of the school.

2.3.3. Organisational culture mediating the relationship between personality and academic performance in Estonian schools

The personality of school members contributes to academic performance in schools mediated through organisational culture. Although, hypotheses four was partly supported — extraversion, agreeableness and neuroticism do influence estimations of organisational culture, there is no relationship with conscientiousness and openness to experiences (see table 29).

School members with higher levels of extraversion gave higher estimations to orientations of organisational culture as hypothesised. In earlier studies it has been established that occupations that include communicating with other people are suitable for extroverted people (e.g. Kichuk, Wiesnen, 1997; Judge, Cable, 1997; Emmons *et al*, 1986). Work at school provides many possibilities for and even assumes a commitment to communication. Evidently, this situation is more favourable for extroverted people. In the author's opinion, this is the reason why people with an above average extroversion level working in the system, tend to give higher estimations to orientations of organisational culture — they have found a suitable occupation and consequently are more satisfied with their work as well as with their occupational environment.

Table 29. The influence of personality traits on estimations of organisational culture in Estonian schools

Hypotheses	Result
Hypothesis 4 Extraversion, agreeableness, conscientiousness and neuroticism influence estimations of task and relationship orientations of organisational culture	Partly supported
Sub-hypothesis H4a Organisational members with higher levels of extroversion give higher estimations to orientations of organisational culture	Supported
Sub-hypothesis H4b Organisational members with higher levels of agreeableness give higher estimations to orientations of organisational culture	Supported
Sub-hypothesis H4c Organisational members with higher levels of conscientiousness give higher estimations to orientations of organisational culture	Not supported
Sub-hypothesis H4d Organisational members with higher levels of neuroticism give lower estimations to orientations of organisational culture	Supported
Sub-hypothesis H4e There is no relationship between openness to experiences and orientations of organisational culture	Supported

Source: compiled by the author

The higher estimations given to organisational culture by extroverted people may also be explained by the fact that extroverted people can adapt well and have more positive experiences in their life than introverted people (e.g. Vakola *et al*, 2004; Judge, Higgins, 1999; Church, 1994; Watson *et al*, 1992). They are also more optimistic (Watson *et al*, 1992) and these features form a strong emotional basis for their estimations. So evidently, extroverted people give more positive answers to the questions presented in the questionnaire. Extroverted individuals have generally higher job satisfaction rates (e.g. Ilies, Judge, 2003; Judge *et al*, 2002a; Nikolaou, Robertson, 2001), and therefore, they may also be more satisfied with features of the organisational culture. The relationship orientation part of the organisational culture questionnaire includes several questions about how well people know each other, are informed of colleagues' personal problems and how well they get along with each other. As extroverts are very sociable (Barrick, Mount, 1991) and like teamwork (Kichuk, Wiesnen, 1997) and they like being with other people and communicating with them (Emmons *et al*, 1986), extroverted people give higher estimations to the respective statements in the questionnaire compared with the estimations given by less extroverted people.

More agreeable school members gave also higher estimations to orientations of organisational culture as hypothesised. On the basis of earlier studies it is possible to state that for agreeable people the occupations including communicating with other people are the most suitable ones (e.g. Kichuk, Wiesnen, 1997;

Judge, Cable, 1997; Emmons *et al*, 1986). As already mentioned, working at school offers many possibilities for communicating with other people. This situation is evidently more acceptable for people with a higher level of agreeableness. In the author's opinion, which can be one of the reasons why agreeable people give higher estimations to orientations of organisational culture — it may well be that they have found an occupation suitable for them. So they tend to be more satisfied with their work and their environment. Another reason for agreeable people giving higher estimations to organisational culture is evidently the fact that in agreeable people positive emotions also prevail (Graziano *et al*, 1996), analogically to extroverted people, so they may also tend to estimate situations more positively. Agreeable people can also adapt well to various circumstances (Lievens *et al*, 2001). Evidently, for people with a high level of agreeableness it is also easier to answer the relationship orientation part of the questionnaire, which are about how well people know each other, are informed of colleagues' personal problems and how they get along with each other. Good relationships with other people are very important for agreeable people (Lievens *et al*, 2001; Judge, Higgins, 1999; Konovsky, Organ, 1996), and they work hard to avoid conflict situations (Judge, Cable, 1997). Agreeable individuals also show higher job satisfaction rates compared to less agreeable persons (Matzler, Renzl, 2007; Mount *et al*, 2006; Vakola *et al*, 2004). This may also include the area of organisational culture.

It was hypothesised that conscientiousness is connected to estimations of organisational culture, but this sub hypothesis was not supported. Although previous research has found that conscientious individuals have higher job satisfaction (Mount *et al*, 2006; Ilies, Judge, 2003; Judge *et al*, 2002a; Nikolaou, Robertson, 2001; Judge, Higgins, 1999; Konovsky, Organ, 1996), they are successful in group work (Thoms *et al*, 1996), they are rather emotionally stable (Vakola *et al*, 2004) and so on, but there was no relationship between estimations of organisational culture and conscientiousness in this study. This could be explained by the understanding that conscientiousness as a trait characterises more practical matters like punctuality, thoroughness, adhering to the rules and so on and less with interpersonal relationships.

Organisational members with higher levels of neuroticism gave lower estimations to orientations of organisational culture. Analysing the causes for this result we should keep in mind that negative emotions prevail in neurotic people (Church, 1994), they are unsatisfied with their job (Matzler, Renzl, 2007; Mount *et al*, 2006; Ilies, Judge, 2003; Judge *et al*, 2002a; Nikolaou, Robertson, 2001), they adapt slowly (Judge, Cable, 1997), they have problems with interpersonal relationships (Bolger, Schilling, 1991), they have difficulties dealing with stress situations, etc (van der Berg, Feij, 2003). Therefore, neurotic people may estimate organisational culture lower than non-neurotic people.

Openness to experience and estimations of organisational culture were not related as hypothesised. Openness to experience is a controversial trait in the work context. In some organisations this trait may be very favourable due to its openness to innovation, creativity, fantasy and so on, but in some organisations not.

This analysis also included a comparison of the personality traits of employees in Estonian general education schools and the Estonian standard sample. The openness to experiences and extroversion levels of the members of the general education school sample are more or less equal to those of the standard sample. In comparison with the standard sample, the employees in general education schools are slightly less neurotic and more conscientious and agreeable. It is possible that the reason for this difference lies in the characteristics of work in schools. The author believes that working with children requires good self-control and stress tolerance. Also, accuracy, perseverance and adherence to rules are needed. Naturally, communication skills, empathy and helpfulness are necessary as well. Those who are not suitable for such work do not come to work at school or leave after a short while.

To sum up, we can say that school members that are more extroverted, agreeable and less neurotic are favourable in a more performance supporting organisational culture in schools. Individuals with these kinds of personality traits supported organisational tasks and relationships more.

2.4. Summary of factors influencing school academic performance and implications

The main conclusion of this study is that individual and organisational factors are related to academic performance in Estonian schools, but these relationships sometimes depend on the size and location of the schools. All four hypotheses were partly supported (see table 30).

Table 30. Summary of the validity of the hypotheses tested

No	Content	Result
H1	In schools where school administration has an attitude that school performance depends on non-academic factors of the school, the academic performance is higher	Partly supported Depending on size and location of the school
H2	In schools where organisational members support organisational task and interpersonal relationship orientations of organisational culture the academic performance is higher	Partly supported Valid in large and urban schools
H3	Organisational members support organisational task and interpersonal relationship orientations of organisational culture more in schools where the administration has an attitude that school performance depends on non-academic factors of the school	Partly supported Depending on size and location of the school
H4	Extraversion, agreeableness, conscientiousness and neuroticism influence estimations of task and relationship orientations of organisational culture	Partly supported Conscientiousness does not influence estimations of organisational culture

Source: compiled by the author

The individual and organisational factors influencing academic performance in Estonian schools are summarized in figure 27. Organisational culture is related to school academic performance, but only in large and urban schools. The attitudes of the school administration are connected to academic performance of schools both directly and indirectly mediated through organisational culture, but these relationships also depend on the size and location of schools.

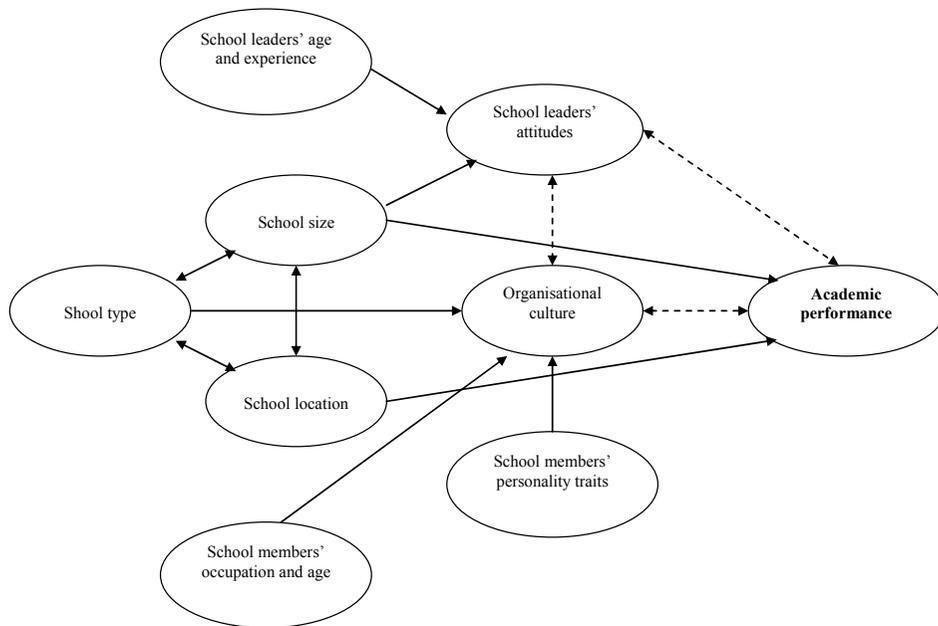


Figure 27. Individual and organisational factors influencing academic performance in Estonian schools

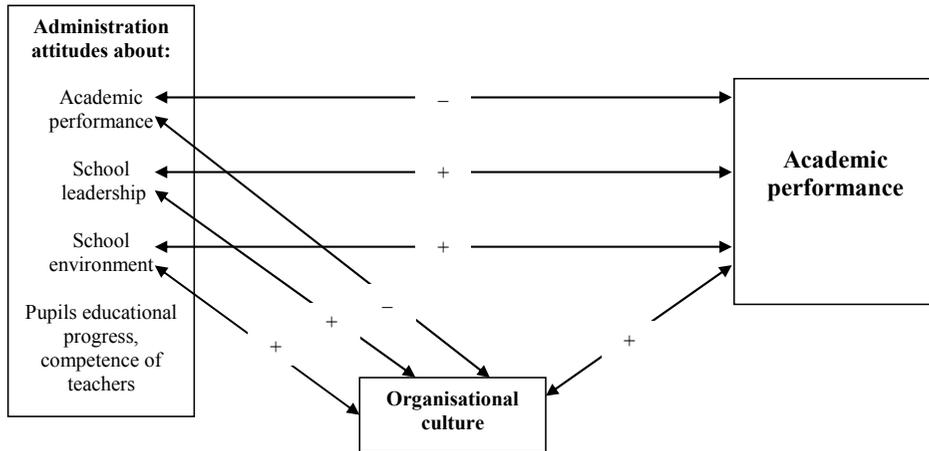
Note: Dashed line indicates that the relationship between these items depends on the size and location of the organisation

Source: compiled by the author

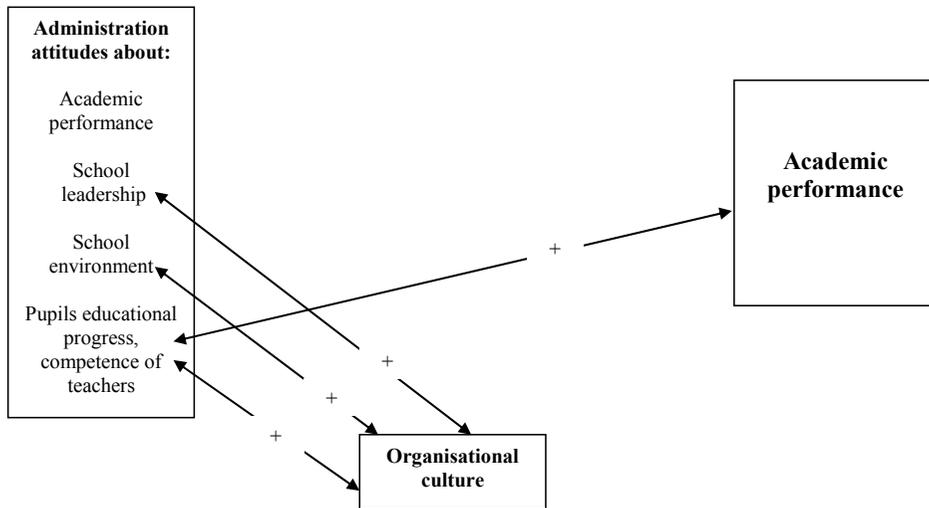
The relationships between administration attitudes, organisational culture and school academic performance depending on school size and location are more precisely specified in figure 28. In part A, the corresponding relationships for large and urban schools are presented. In part B, the results for small and rural schools are illustrated.

In large and urban schools where the school administration believes that pupil academic performance is an important predictor of school performance, the national examination results are lower. Estimations of organisational culture are also lower in this context. Valuing school leadership and school environment improves national examination results in large and urban schools. Estimations of organisational culture are also higher in this context. In small

and rural schools there is a connection between attitudes about the competence of teachers, pupil educational progress and national examination results. Estimations of organisational culture are also related to these attitudes.



Part A: Large and urban schools



Part B: Small and rural schools

Figure 28. Relationships between administration attitudes and organisational culture and school academic performance depending on school size and location
 Notes: “+” positive correlation, “-” negative correlation
 Source: compiled by the author

Organisational culture also mediates the relationships between personality traits and school academic performance. Above average extroverted, agreeable and less neurotic people gave higher estimations for the orientations of organisational culture. Openness to experiences and conscientiousness were not related to estimations of organisational culture. Regarding these results, the author suggests that in order to improve cooperation between individuals and the organisation it is necessary to take into consideration the personality traits of individuals, for example, to encourage the process of socialization among organisational members. Extrovert, agreeable and less neurotic people can better adapt to various circumstances, but we should not forget that not all people are so good at that (for example, less extroverted and less agreeable people). Another option is to minimize the number of stressful situations. Extroverted and agreeable people are optimistic and positively disposed, but others (e.g. neurotic people) can have problems in conflict and troublesome situations. Therefore, dissatisfaction with some fields of organisational culture can appear. Likewise, the communication between members of an organisation can be improved. If people associate with one another, there is a higher probability that they know one another better, discuss all important matters and help one another in job-related problems. This can help improve the organisational culture.

In training programmes, communication skills, coping with stress and competence to adapt can be trained and advanced. Also, the awareness of the importance of personality traits can be explained. If people know which personality traits are important from the perspective of the organisation functioning better, they can develop these characteristics in themselves or express existing qualities better. An understanding of the specifics of personality can be taken into account during personnel selection, too. If it is difficult to decide which candidate to choose, it is reasonable to prefer a candidate who has achieved higher results on the extraversion and agreeableness scales and lower results on the neuroticism scale.

School location and size have a direct impact on the school's national examination results. In large and urban schools, academic performance is higher. This also explains why there is no correlation between administration attitudes and organisational culture and performance in small and rural schools — there are other factors that influence exam results more. Usually these factors are beyond the control of the school administration (e.g. family background). School location and school size are also interrelated: large schools are mostly placed in urban areas and small schools in rural areas.

Organisational type influences school performance indirectly mediated through organisational culture. The estimations of organisational culture in primary schools are higher. School type is also related to the size and location of schools. Primary schools are usually very small and situated in rural areas. There are very few school members and it is easier to consider everybody's needs. School administrations in large collectives (secondary schools and basic education schools) should think more about how to improve cooperation

between organisational members, how to encourage teamwork and the feeling of belongingness.

The age and occupation of organisational members influences school academic performance indirectly mediated through organisational culture. The older participants, principals and head teachers are more satisfied with the situation in their school and consequently exert more effort. The school administration should therefore communicate with school personnel more, give more information about changes and goals, recognise their efforts etc. The school personnel may want to participate in decision-making and have more freedom of activity. Younger school members may be more demanding concerning, for example, freedom of activity, positive feedback, interpersonal relationships etc. The school administration should take these kinds of age specifics into consideration.

The age and experience of the school administration are also relevant for school academic performance because these factors influence their attitudes. Older and more experienced respondents value academic performance more as a predictor of school performance, which is not so favourable. Academic performance is also more valued in larger schools compared to smaller schools. On the other hand, the older and more experienced principals and head teachers value the school environment as an important area of school performance, which improves school academic performance.

The results of the study indicate that to improve school academic performance, it is not favourable to concentrate only on obtaining good results in the national examinations. On the contrary, focusing on training pupils to pass these tests may have an opposite effect. In spite of this, it is reasonable to pay attention to non-academic performance factors. School administrations need to admit the substantial role they play in school academic performance and to adopt an attitude that embraces leadership and school environmental issues as the key to an academically better performing school.

The following will offer some recommendations for school administrations in order to improve academic performance in their school (see table 31). The details of school size and location specifics illustrated in figure 28 are therefore considered because the influence of individual and organisational factors is different in various types of schools.

To increase the academic performance of their school, the administrations of large and urban schools should not only concentrate on striving towards good academic performance. Instead they should also improve the school leadership and the internal environment. For example, create good communication between teachers, parents, pupils and the administration; involve parents and school personnel in decision-making; offer extracurricular development opportunities for pupils; create a safe, pupil-friendly environment with a good spirit, good traditions and a positive reputation and so on, and increase satisfaction with school life among the members of the school.

Table 31. Recommendations to Estonian school administrations for improving academic performance in their school

Based on the following results	Recommendations to school administrations	
	Large and urban schools	Small and rural schools
<p>The national examination results are higher when the administration has an attitude that school performance:</p> <ul style="list-style-type: none"> • does not depend on pupil academic performance (valid in large and urban schools); • depends on school leadership (valid in large and urban schools); • depends on the school environment (valid in large and urban schools); • depends on the competence of teachers and pupil educational progress (valid in small and rural schools). 	<p>Do not only concentrate on striving towards good academic performance. Instead improve the school leadership and the school's internal environment.</p>	<p>Value the competence of teachers. Take care of pupil educational progress so that they do not drop out or repeat a year</p>
<p>The national examination results are higher when school members give higher estimations of task and relationship orientations of organisational culture (valid in large and urban schools).</p>	<p>Develop the organisational culture by supporting school tasks and interpersonal relationships.</p>	<p><i>Because estimations of organisational culture are not related to national examination results in small and rural schools, no recommendations can be made here.</i></p>
<p>The estimations of organisational culture are higher when the administration has an attitude that school performance:</p> <ul style="list-style-type: none"> • does not depend on pupil academic performance (valid in large and urban schools); • depends on the school leadership; • depends on the school environment. 	<p>Do not only concentrate on striving towards good academic performance. Instead improve the school leadership and the school's internal environment</p>	
<p>Organisational members with higher levels of extroversion and agreeableness and lower levels of neuroticism give higher estimations to orientations of organisational culture.</p>	<p>Consider personality specifics in school life</p>	

Source: compiled by the author

The academic performance of large and urban schools can also be improved by creating an organisational culture that supports organisational tasks and relationships, for example, by rewarding school members for good work, giving them freedom of activity, caring about their well being etc. Additionally, good

relationships between school members should be encouraged, for example, by assuring that they help each other and discuss problems and other important matters with each other and so on. When working with the organisational culture the specifics of the personality of school members should also be taken to account, for example, through the right training programmes, solving conflicts, socialization programmes, personnel selection etc.

To improve academic performance in small and rural schools valuing the competence of teachers and taking care of the educational progress of pupils may bring the desired results. For example, by creating efficient support programs for pupils with learning or behavioural problems so that they don't drop out or repeat a year. Although, the administration in small and rural schools valued the school leadership and the school environment as important performance criteria to the same degree as large and urban school administrations, these attitudes did not influence academic performance. In a similar way, the estimations of organisational culture among school members did not depend on the size and location of schools. Therefore, we cannot say that changing attitudes about the school leadership and the internal environment and also improving the organisational culture will help to achieve better academic performance in small and rural schools. But these are still very important matters in every type of school for other reasons. Achieving high academic performance is not the only responsibility of schools.

As said earlier, the efforts of the school administration, teachers, pupils and parents are unfortunately not always enough to improve academic performance in their school. There are other factors that influence the academic performance of pupils, especially in small rural schools. These are for example, economic and other related disadvantages in schools, and also family level issues in these types of schools. Therefore, some policy implications can also be offered for improving academic performance in Estonian schools (see table 32).

Firstly, equal learning opportunities for pupils should be created whether the pupils live in urban or rural places. The shortage of qualified teachers and low budgets are particular problems in rural schools. When the quality of the teaching staff is on similar level in all schools, then more talented and motivated pupils do not have to leave to urban schools. Transport to the nearest school for all pupils should be made available.

Secondly, there should be equal learning opportunities for pupils with different family backgrounds. Incomes are usually lower in rural families. Therefore, all teaching materials, transport to school, school meals, extra-curricular activities and excursions should be financed by the state.

Thirdly, the teaching profession and learning should be valued more in society. Therefore, ways should be found to attract more young people to choose the teaching profession and also to work in rural schools. Additionally, programmes for talented pupils should be created so that they can develop their skills even more. Support programs for pupils with learning or behavioural problems should be continued and made more efficient.

Table 32. Policy implications for improving academic performance in Estonian schools

Based on the following results	Policy implications
The national examination results are usually lower in rural schools	1) Create equal learning opportunities for pupils whether they live in urban or rural places. 2) Enable equal learning opportunities for pupils with different family backgrounds
The national examination results in rural schools and small schools do not depend on estimations of organisational culture and on the administration's attitudes about school leadership and the school internal environment as in urban and large schools	
The national examination results are higher when the administration has an attitude that school performance depends on the competence of teachers and pupil educational progress (valid in small and rural schools)	3) Value the teaching profession and learning in society
The national examination results are higher when the administration has an attitude that school performance: <ul style="list-style-type: none"> • does not depend on pupil academic performance (valid in large and urban schools); • depends on school leadership (valid in large and urban schools); • depends on the school environment (valid in large and urban schools). 	4) Support the development of an attitude in the society that school leadership and school internal environment are important for school academic performance
The national examination results are higher when school members give higher estimations of task and relationship orientations of organisational culture (valid in large and urban schools).	

Source: compiled by the author

Finally, new attitudes among members of society should be developed about school performance. So far it seems that the national examination results and international test results are overvalued by society. Instead, the attitude should be brought forward that the school internal environment (including organisational culture) and school leadership are also very important for school academic performance. This understanding could be applied in training programmes for school leaders and teachers. Newspaper articles and television debates on this theme should also be encouraged. Additional analyses and research about the role of school leadership and the internal environment in improving the academic performance of schools could be initiated by the state.

In the introduction, the goals of the Estonian general educational system according to the development plan for 2007–2013 was brought forward. This was: “In the General education system equal opportunities and conditions are created for all pupils for acquiring education according to their capability and interest, and an education of high quality which enables them to continue

studies and to cope with life in dignity” (Development plan..., 2009, approximate translation from Estonian). Three areas for realizing this goal are accentuated: 1) blending movement from one educational stage to next (e.g. from preschool to primary school); 2) competitive education (e.g. Estonian pupils PISA test²¹ results are in the first third among the participating countries) and 3) the accessibility of education (e.g. free school meals and materials). The second and third areas also cover some policy implication given in this dissertation. Although, the author of the present dissertation recommends that less attention should be given to pupil test results and more to school leadership and internal environmental issues and also to offering equal educational opportunities.

Although this research has been conducted on the example of Estonian schools, in author’s opinion, the results can be generalized for schools in other countries and also for other types of organisations. When for instance financial performance is the goal, energy should be directed to non-financial “soft” issues and this may help achieve financial gains. In a similar way, to achieve other performance goals, considering individual and organisational factors may also result in valuable advantage. Evidence presented in the theoretical part of the dissertation show that certain leadership styles are more favourable for performance. Also, organisational culture has been proven to contribute to the performance of various types of organisations. In a similar way, the personality traits of organisational members may contribute to organisational performance mediated through organisational culture.

The theoretical contribution of this dissertation is to bring together into one framework four areas of different issues in organisational studies related to personality traits, attitudes, organisational culture and organisational performance. Moreover, this dissertation aggregates individual level phenomena (personality traits of organisational members and attitudes of leaders) with organisational level phenomena (organisational culture and organisational performance) which is not a very frequent approach. This dissertation also presents a wide ranging and thorough analysis of these areas and their connections. Previous understandings are thereby systematized and analysed. The general view of the theme applicable in every type of organisation is presented and school specific understandings are also brought forward. Therefore, the theoretical materials are useful not only for the purposes of improving school academic performance, but the insights presented in this dissertation may also be relevant for performance management in other types of organisations.

The empirical contribution of this dissertation is proving that the attitudes of the school administration are related to the academic performance of schools and also that the administration’s attitudes influence school academic performance indirectly mediated through organisational culture. The attitudes about academic and non-academic areas of school performance were thereby distinguished. This kind of research task is novel, and provides valuable information

²¹ Programme for International Student Assessment.

for the field of education. Although, there have been some studies analysing the relationships between organisational culture and school academic performance, this dissertation's results provide additional information especially due to the use of different and broader-based method for measuring organisational culture compared to those used in previous studies. The indirect association between the personality traits of school members and school academic performance mediated through organisational culture is also a novel approach. Another empirical contribution of this dissertation is that all these relationships between the phenomena examined depend partly on the size and location of the organisation. This enabled us to give more precise recommendations to school administrations and also to draw up political implications for improving school academic performance.

Limitations of the study

The main limitation of the study is that the information about the attitudes of the administration, the personality traits of the school members and estimations of organisational culture is all based on the subjective opinion of the respondents. This may result in response biases because it could well be that for example the administration gave a more positive or negative picture about the situation in their school, about themselves etc. In a similar way, the school members may have been more positive or negative in their opinions. A response bias is a common problem in self reported surveys.

Another limitation of the study is that the relationships between administration attitudes, organisational culture and national examination results are two sided. For example, the attitudes of the school administration can influence performance, but good or bad performance may influence administration attitudes and the subsequent behaviour chosen. The relationships between administration attitudes and organisational culture are also two-sided. Thus, the attitudes can become cause and effect and it's hard to say what is influencing what. Similarly, organisational culture may influence performance, but the opposite tendency is also possible. When things are going well or badly in the organisation the organisational culture could reflect that.

One of the challenging topics in organisational research is to learn how the individual characteristics of organisational members affect organisational processes. The present dissertation analysed how the attitudes and personality traits of individuals can contribute to the performance of organisations. In a similar way, it discussed how organisational culture influences performance. Attitudes, personality and organisational culture as phenomena are soft, vague and difficult to define, measure and influence. In spite of that, analysing their specific details in the organisational context and implementing actions on the basis of the resulting understanding may provide substantial advantages for such organisations.

CONCLUSION

A good education is highly valued in society. The process of education begins in an institution of general education and its efficiency largely contributes to the learner's success in his or her later periods of life. One criterion that is often used for measuring school success is academic performance. Various test and exams for measuring academic performance are created at the international and national level. In many countries the results provide good reason to discuss why the scores in some countries or schools are not as good as in others and what should be done to improve the test results. Similarly, in Estonia, the national examination results of different schools are compared and discussed. However, an overemphasis on ranking the schools and training pupils to achieve good test results has caused dissatisfaction among many members of society in recent years. This encourages finding new ways to improve school academic performance. Therefore, the aim of the present dissertation was to find out how individual and organisational factors are related to academic performance in Estonian schools. In the first chapter of the dissertation the theoretical basis for the research was presented. In addition, four research hypotheses were set. The second chapter contains the empirical analysis.

Theoretical background for finding the relationships between individual and organisational factors and academic performance

The theoretical part of the dissertation discussed the factors that influence school academic performance and how school administrations can influence these by considering individual and organisational factors. More precisely, it analysed the possible impact that the attitudes of the administration, the personality traits of school members and the organisational culture may have on academic performance in schools.

Academic performance in schools depends on many factors, which can be broadly divided into pupil background factors and school background factors. Often pupils with a more affluent family background show better academic results, for example, parent income level and educational level are relevant here. Moreover, family investments in their children's learning, their expectations, support and involvement in school life are important. Additionally, pupils' peers also influence their learning. Pupils who have close friends with positive attitudes and values towards learning usually perform better academically. Naturally, the values, attitudes and motivation to learn among the pupils themselves influence their academic performance. Likewise pupil attachment, commitment and involvement with their school affect their academic performance. Furthermore, how pupils perceive themselves also influences their academic performance. Pupils with higher self-esteem usually get higher grades.

In addition, school characteristics like size and location influence academic performance in schools. Previous research shows that academic performance is usually higher in large schools located in cities, and that small schools in rural areas have a disadvantaged position in terms of academic performance. The reasons for that could be that rural schools have pupils with a less affluent family background compared to the urban schools. Small rural schools also usually have a lower budget and therefore fewer opportunities to offer diverse curricula and extracurricular activities. In addition, it is sometimes harder to find qualified teachers in rural areas. In terms of school characteristics, the internal environment also influences academic performance. Usually, academic performance is higher in schools with a warm, supportive and safe internal environment. Likewise, a good spirit, traditions and reputation in schools are relevant here. Furthermore, academic performance in schools depends on teacher education and experience, but even more on teachers' interpersonal skills, teaching abilities, commitment, motivation, job satisfaction etc.

Some of these factors can to some extent be influenced by the school administration and some not. For example, parents' education and income are clearly outside the school administration's sphere of influence, as is school size, location, budget, teacher salaries, and teacher basic education and previous experience. The intention of this dissertation was not so much to discuss factors that cannot be managed by the school administration, but to concentrate on what factors can be influenced. Research has proposed that the following non-academic areas mediate the school administration's influence on academic performance in the school:

- creating a vision, mission and goals for the school;
- involving teachers, parents and pupils in decision-making, encouraging communication and cooperation between the school administration and the teachers, between teachers, between teachers and pupils, between pupils and between parents and the school;
- offering training and development opportunities for teachers, pupils and parents;
- increasing commitment, motivation and job satisfaction;
- creating a suitable internal environment for teaching and learning which is safe, more disciplined and pupil-friendly, has a good spirit, reputation and traditions and a favourable organisational culture.

For example, creating a clear and shared vision, mission and goals for schools ensures that everyone knows where the organisation is going and what everyone in the organisation has to do. In a similar vein, involving parents in decision-making and creating good relationships with them may increase parental support for their child's learning. When teachers and other school members are involved in school decisions, they are more enthusiastic and engaged in implementing them. Pupil participation in decision-making is not wide spread in schools, but researchers argue that this is also necessary.

Many problems in schools are related to poor communication and co-operation between teachers and pupils; between teachers and the administration;

between teachers; between pupils and between the home and the school. Therefore, it is important for the school administration to support and create opportunities for communication and cooperation for teachers, parents and pupils. When the interpersonal relationships are problematic then it affects pupil academic performance. Alternatively, when these relationships are good the academic performance of pupils is also better.

One way to improve interpersonal relationships is to offer training and development opportunities for teachers, pupils and parents. For example, communication, cooperation, conflict and problem management skills can be advanced in teachers but likewise in pupils and parents. Extracurricular activities for pupils, such as sports, drama, journalism, music and so on, are a good way to develop skills, find friends, raise self-esteem and so on. Previous research shows that pupils who participate in extracurricular activities have better grades.

Other areas that require the attention of the school administration include teacher, parent and pupil commitment, motivation and satisfaction. These are problematic issues because different school individuals may be motivated by, committed to and satisfied by different things. For example, some teachers are more motivated by intrinsic rewards, but others by extrinsic conditions. Some find satisfaction in supervision, colleagues, working conditions, feedback, job variety and so on, but others are not. Commitment issues, such as acceptance of the organisation's goals and values; a willingness to invest effort on behalf of the organisation and loyalty also vary from person to person. The role of the school administration is to consider everybody's needs. Shaping the internal school environment so that it supports learning and teaching is another responsibility of the school administration. In addition, creating a safe, pupil-friendly school with a good spirit, traditions and reputation as well as specifics of organisational culture should also be considered.

Organisational culture expresses the extent to which members of the organisation are willing to support each other and the goals and development of their organisation. Previous research has shown that organisational culture exerts a considerable influence on employee behaviour and work results. Research has proposed that organisational culture is a valuable supplement to traditional tools like developing good strategies, structure etc. The author analysed 23 studies of how organisational culture influences organisational performance. The results showed that organisational culture usually has an impact on the financial and likewise on the non-financial performance of organisations. A strong organisational culture expressed through widely shared values usually contributes to performance. Additionally, more constructive and rational goal types of organisational culture are favourable for performance (also in the school context). The importance of an organisational culture that values interpersonal relationships depends on the type of organisation. In the school context this type of culture is usually favourable. Therefore, research has proposed that task oriented and relationship oriented organisational culture supports academic performance in schools.

When creating an organisational culture that favours performance, one should take into account that such a culture is created by all organisational members and it is a result of their interaction. As organisational members tend to hold on to their shared attitudes and behavioural patterns, it is quite difficult to change the organisational culture. Some researchers are even of the opinion that it is not possible to change the organisational culture. Conversely, many researchers think that it can be changed and that organisational leaders have a guiding role in the creation of organisational culture because leaders' attitudes and behaviours provide direction for their organisation. Two examples of successful changes to organisational culture in the school context were presented in this study. New attitudes and behaviours were adopted by the new school leaders and academic performance improved noticeably. Consequently, the attitudes and resulting behaviour of school leaders may influence organisational culture. In order to create an organisational culture that supports performance, more supportive, participative and transformational leadership styles are usually preferred. Additionally, the personality specifics should be thereby considered.

Personality and related details in the work context have been quite thoroughly analysed in the research literature. Some individuals are better at adapting to changes and new circumstances; communicate and cooperate more effectively with others; are better at coping with stress and problems; have a more positive perspective and so on, compared to other individuals. Consequently, the contributions that individuals with various personality traits make to help form the organisational culture and consequently to organisational performance are also different. Some of them support organisational tasks and relationships more compared to others. Therefore, the school administration should take advantage of specific aspects of the personality of each school member.

The school administration has less direct contact with pupils compared to teachers and parents. In spite of that, researchers propose that school leaders can influence pupil academic performance with their attitudes and resulting behaviour. The reason for this is that administration attitudes and behaviour may influence the attitudes and behaviours of teachers, pupils and parents and additionally the school's organisational culture. Researchers also argue that advancing the non-academic areas of the school, such as improving communication and cooperation, creating a positive internal environment and so on, contributes to academic performance in schools.

The data and research methodology

The empirical research involved forming a sample of Estonian schools, ensuring that schools of various sizes and locations were present in the sample. Only municipal or state-owned day schools that offered lessons in Estonian were examined. To create a more homogeneous sample, elite schools and schools in the capital of Estonia, Tallinn, were not included. Most of the participants were

teachers, followed by support personnel and school administration staff. The majority of the participants were female. Mostly rural and small schools agreed to participate in the study.

The data was collected from 2003 until 2006. Information about the attitudes of the school administration was gathered from 57 principals or head-teachers representing their school. In addition, individual estimations of organisational culture from 558 school members (principals, head-teachers, teachers and support personnel) were aggregated to find school-level estimations of organisational culture for each of 57 schools. Only secondary schools are represented here. The personality traits of school members and individual-level estimations of organisational culture were collected from 67 schools. Secondary schools, basic education schools, primary schools and schools for children with special needs participated in the study. All in all, 817 individuals participated in this study.

The following statistical methods were used to analyse the gathered empirical data: factor analysis, mean comparison methods (t-test and Analysis of Variances (ANOVA)), correlation analysis and regression analysis. The specifics and purposes of each method in the analysis were explained. The assumptions for these tests were discussed and taken into account in the analysis. Also, various opportunities to test the reliability and goodness of fit of the results were used.

Three questionnaires were used in the study — the first, to analyse the attitudes of the school administration; the second, to measure estimations of organisational culture; and the third, to find out the specific details of school members' personality traits. To measure academic performance, data about national examination results for every school were found from the homepage of the National Examinations and Qualification Centre.

To measure the attitudes of school administrations about school performance criteria, a new method was developed with the help of an expert group from the University of Tartu, two officials from the Estonian Ministry of Education and Research and school principals. This questionnaire consists of nine academic performance indicators, such as pupil results in national examinations, various contests, pupil grades and so on, and fifteen non-academic performance indicators, such as parental participation in school life, well coordinated communication between teachers, parents and pupils and so on. Factor analysis distinguished four factors – 1) pupil academic performance; 2) school leadership; 3) school environment; and 4) pupil educational progress, competence of teachers.

Organisational culture was analysed using the method created by Vadi *et al* (2002), where two orientations of organisational culture are distinguished: task orientation and relationship orientation. This questionnaire consists of 43 statements. The personality traits were measured using the *Five Factor Model* of personality (Costa *et al*, 1995). This questionnaire consists of 81 questions and distinguishes five personality traits: 1) extraversion, 2) agreeableness, 3) conscientiousness, 4) neuroticism and 5) openness to experiences.

In order to find out each school's average national examination results, data was gathered from the homepage of the National Examinations and Qualification Centre (NEQC) (Homepage of the National..., 2009). The exam results in mathematics, English, composition and history were considered for the comparison, and the six-year (2000–2005) average for these subjects were calculated for each school.

Hypotheses testing and validity

Four research hypotheses were compiled based on theoretical argumentations. The first of them was set to investigate how school administration attitudes are related to academic performance in schools. The second was set to find out whether organisational culture is connected to academic performance in schools. The third and fourth hypotheses are directed at specifying how administration attitudes and personality traits are related to academic performance mediated through organisational culture.

Hypothesis 1:

In schools where the school administration has an attitude that school performance depends on the non-academic factors of the school, the academic performance is higher.

The first hypothesis was partly supported depending on the size and location of the schools. In large and urban schools the academic performance is higher when the school administration has an attitude that school leadership and environmental issues are important for good performance in schools. For example, in large and urban schools where the administration values parent and school personnel participation in decision-making, good communication between teachers, parents and pupils and the non-academic development of the pupils, the national examination results are higher. The academic performance is lower when the school administration sees academic performance as important indicators of school performance in large and urban schools. In small and rural schools there were no such relationships. In these types of schools the academic performance was higher when the school administration held the attitude that the competence of teachers, few pupils repeating a year and few dropouts are important for good performing schools. Conversely, in large and urban schools these areas were not related to academic performance.

Hypothesis 2:

In schools where organisational members support organisational task and interpersonal relationship orientations of organisational culture, the academic performance is higher.

The second hypothesis was partly supported because the estimations of organisational culture estimations were related to academic performance only in large and urban schools. In this type of school the national examination results were higher when school members did support organisational tasks and relationships more. For example, when people feel proud of their school, think that positive changes are taking place and that people are concentrating on organisational goals, the national examination results are higher. In addition, when school members feel that people help each other, discuss important matters with each other and support each other, the academic performance is higher. In small and rural schools, there is no relationship between estimations of organisational culture and academic performance.

Hypothesis 3:

Organisational members support organisational task and interpersonal relationship orientations of organisational culture more in schools where the administration has an attitude that school performance depends on non-academic factors of the school.

The third hypothesis was partly supported depending on the size and location of the schools. The school members support organisational tasks and interpersonal relationships more in large and urban schools, but likewise in small and rural schools where the school administration has an attitude that school performance depends on school leadership and school environment. But when the school administration has an attitude that academic performance is important for school performance then the school members support organisational tasks and relationships less in large and urban schools. In small and rural schools there is no such relationship. Small and rural school members give higher estimations to organisational culture when their administration has an attitude that pupil educational progress and teacher competence are important for school performance. In large and urban schools there is no such relationship.

Hypothesis 4:

Extraversion, agreeableness, conscientiousness and neuroticism influence estimations of task and relationship orientations of organisational culture.

4a: *Organisational members with higher levels of **extroversion** give **higher** estimations to orientations of organisational culture;*

4b: *Organisational members with higher levels of **agreeableness** give **higher** estimations to orientations of organisational culture;*

4c: *Organisational members with higher levels of **conscientiousness** give **higher** estimations to orientations of organisational culture;*

4d: *Organisational members with higher levels of **neuroticism** give **lower** estimations to orientations of organisational culture;*

4e: *There is no relationship between **openness to experiences** and orientations of organisational culture.*

The fourth hypothesis was partly supported because four of the sub-hypotheses were supported and one not. Namely, conscientiousness was not related to organisational culture estimations (Sub-hypothesis 4c). School members with higher levels of extroversion give higher estimations to orientations of organisational culture as expected. This means that individuals characterized by warmth, gregariousness, assertiveness, positive emotions and so on, support organisational tasks and relationships more. In a similar way, more agreeable school members gave higher estimations to orientations of organisational culture as hypothesised. Therefore, individuals that are trusting, straightforward, modest and so on are favourable for the organisational culture. Conversely, organisational members with higher levels of neuroticism give lower estimations to organisational culture, which is in accordance with hypothesis four. Consequently, principals, head teachers, teachers and support personnel that are depressive, vulnerable, anxious and so on, are not favourable for the organisational culture. Openness to experiences and organisational culture were not statistically significantly related as hypothesised.

Generalizations of findings and implications

The results of the study show that individual and organisational factors are related to academic performance in Estonian schools, but this influence depends on the size and location of the schools. The four hypotheses set for the research were therefore all partly supported.

The national examination results are higher in large and urban schools where the school administration has an attitude that school leadership and school environment are important performance criteria. Conversely, the national examination results are lower when the school administration values academic performance as a performance criterion. The national examination results are higher in large and urban schools where organisational members support organisational tasks and relationships more (i.e. organisational culture estimations are higher). The attitudes of the administration and personality traits of school members influence national examination results indirectly mediated through organisational culture in large and urban schools. When the administration values school leadership and the school internal environment, the estimations of the organisational culture are higher and consequently the national examination results are higher. School members with certain personality traits gave higher estimations to the organisational culture, and consequently, the national examination results are higher. More extraverted, agreeable and less neurotic individuals are preferred here.

Based on these findings recommendations for school administrations were made. The author makes the following recommendations to large and urban school administrations wishing to improve their school academic performance:

- Do not concentrate only on striving towards academic performance. Instead improve the school leadership and the school internal environment. For

example, improve communication, cooperation and development for teachers, parents and pupils; create a safe and pupil-friendly environment.

- Develop an organisational culture that supports school tasks and interpersonal relationships, for example, by supporting, encouraging and rewarding school members and their relationships.
- Consider the specifics of personality in school life, for example, through the selection of personnel, training programs, socialization programs etc.

The national examination results are higher in small and rural schools where the school administration has an attitude that the competence of teachers and pupil educational progress are important school performance indicators. School administration attitudes about school leadership, the school environment and estimations of the organisational culture among school members were not related to national examination results. Therefore, the author makes the following recommendations to small and rural school administrations wishing to improve their school academic performance:

- value the competence of teachers;
- take care of pupil educational progress so that they do not drop out or repeat a year.

According to the study results some policy implications are also proposed:

- create equal learning opportunities for pupils whether they live in urban or rural communities;
- enable equal learning opportunities for pupils with different family backgrounds;
- value the teaching profession and learning in society;
- support the development of the attitude in society that school leadership and the school internal environment are important for school academic performance.

The national examination results are usually lower in small rural schools. In spite of this, these schools are very important for the local community and their closure could have serious social consequences. In addition, smaller schools enable more personal attention, better interaction between teachers and pupils and so on, which contributes to the development of pupils. Moreover, rural families are in an economically disadvantaged position compared to their urban counterparts. Therefore, all teaching materials, transport to and from school, school meals, extracurricular activities, excursions and so on, should be financed by the state or rural municipality.

The main problem for small rural schools is that sometimes there are not enough qualified teachers and their budgets are lower because funding in Estonia is allocated on the basis of the size of the school. Consequently, the teaching quality may be not as good as in schools that have opportunities to choose between candidates and more resources. Unfortunately, the teaching profession is not valued enough in Estonia. Therefore, solutions to these problems should also be found.

The results of the study indicate that to achieve higher academic performance in schools, it is reasonable to encourage an attitude among members of society that the school internal environment (including organisational culture) and school leadership are important for school success. So far it seems that some members of society overvalue various examinations and test results and behave accordingly. The knowledge gathered from this dissertation could be applied in training programmes for school administrations and teachers. Newspaper articles, television debates and additional research on this theme could also be encouraged.

The study showed that it is not always necessary to concentrate on getting better exam and test results in order to achieve better academic performance. However, dealing with the “soft” issues may bring the desired result. Considering the personality traits of school members, the attitudes of school administrations and the specifics of organisational culture may open up new perspectives for improving academic performance in schools. Although the study was made using the example of Estonian schools, the results may be generalized for schools in other countries and other types of organisations. In the author’s opinion, the performance of organisations may be increased by considering the individuality of organisational members and also the specifics of organisational culture.

Main theoretical contribution of this dissertation is creating a framework that connects personality traits, attitudes, organisational culture and organisational performance. Wide ranging and thorough analysis of these four areas and their relationships is thereby presented. Besides the school context, this knowledge is also applicable in other organisations. In terms of empirical contribution, the results of this dissertation support some previous findings, but also add entirely new conclusions to the theme.

Recommendations for future research

The impact of individual and organisational factors on performance was analysed in this study using the example of Estonian schools. Only schools where the language of instruction is Estonian were included in the study. Therefore, a sample of Estonian schools where the language of instruction is Russian could be compiled to find out whether there are national cultural differences that apply to this topic. In addition, schools from other countries could be involved because the results may vary depending on the education systems in different countries. This may provide valuable information about how individual and organisational factors influence academic performance. Furthermore, other performance criteria besides academic performance could be applied to schools. Also, in addition to the opinions of school administrations, teachers and support personnel about school performance, parents, pupils, educational officials and other members of society could also be questioned. Furthermore, similar studies could be made in other non-profit organisations

(e.g. higher educational institutions, health organisations, art and culture organisations etc.), and, of course, how individual and organisational factors influence performance in profit organisations could also be studied. The knowledge gathered from this study may also be complemented and deepened by using other methods such as case studies and interviews.

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APPENDICES

Appendix I. Types of organisational culture I

External orientation	Adaptability	Mission
Internal Integration	Involvement	Consistency
	Change and flexibility	Stability and direction

Adaptability is in the change/flexibility and external orientation quadrant reflecting responsiveness and a readiness to change in response to the changing external environment. Adaptable organisations take risks, learn from their mistakes etc. (Chan *et al*, 2004)

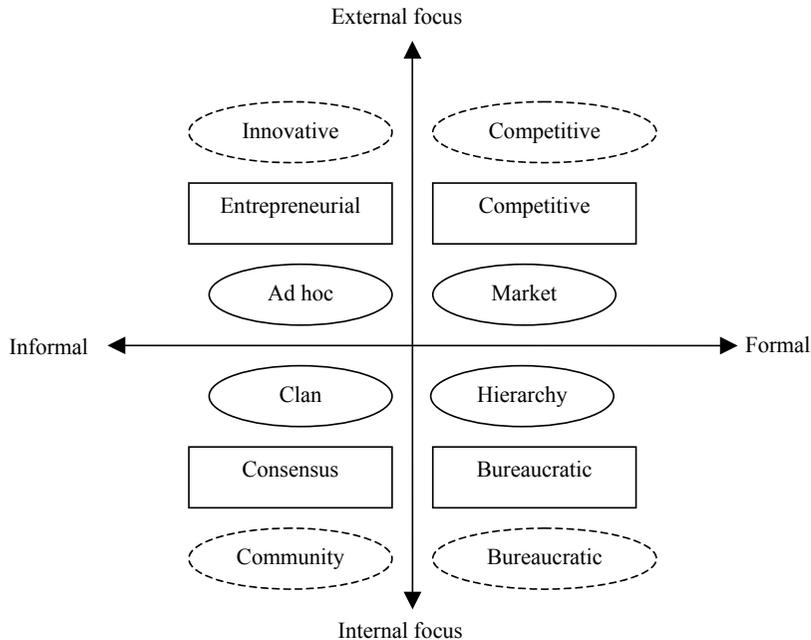
Mission emphasises the stability and purpose of an organisation, and is positioned in the ‘external orientation’ and ‘stability and direction’ quadrant of the matrix. It characterizes the company’s direction and stability as driven by external forces and interests. (Chan *et al*, 2004) Organisations have a clear sense of purpose and direction, defining goals and strategic objectives, and expressing a vision of the future (Fey, Denison, 2003).

Involvement is positioned in the ‘internal integration’ and ‘change and flexibility’ quadrant. Involving employees in the business by encouraging their participation in decisions, processes and routines provides them with an increased sense of ownership and responsibility (Chan *et al*, 2004). Effective organisations empower people, organise teams and develop human capability. Executives, managers, and employees are committed and feel a strong sense of ownership. People at all levels feel that they have input into decisions that will affect their work and see a direct connection to the goals of the organisation (Fey, Denison, 2003).

Consistency is positioned in the ‘internal integration’ and ‘stability and direction’ quadrant. Companies demonstrating a consistency trait usually have a high level of agreement on the way they work and their approach in doing business is consistent and predictable (Chan *et al*, 2004). Behavioural norms are rooted in core values, and leaders and followers are able to reach agreement even with diverse points of view. Consistency is a source of stability and internal integration resulting from a common mindset (Fey, Denison, 2003).

Source: compiled by the author based on Denison, Mishra, 1995; used also by Fey, Denison, 2003; Chan *et al*, 2004; Yilmaz, Ergun, 2008

Appendix 2. Competing Values Framework I



Compiled by the author based on below noted sources

Notes: Dwyer *et al* (2003); Øgaard *et al* (2005) (organisational culture types names in cycle)

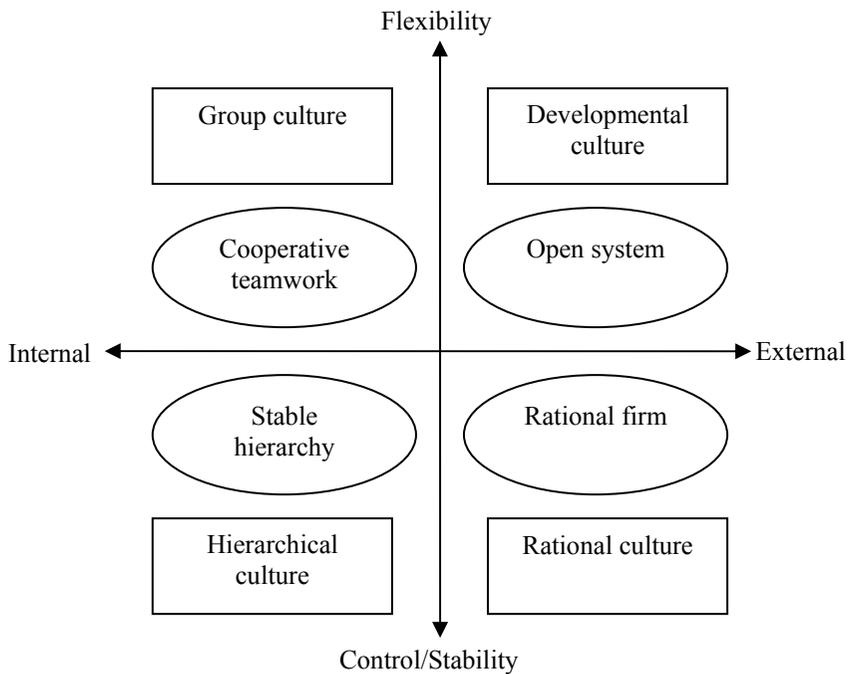
Desphande, Farley (2004); Rashid *et al* (2003) (organisational culture types names in square)

Ogbonna, Harris (2000) (organisational culture types names in dashed cycle)

The **informal–formal** dimension reflects preferences about the importance of organisational structure and involves a continuum from organic to mechanistic processes (Øgaard *et al*, 2005). The extremes of this axis reflect the competing demands of flexibility and spontaneity versus stability, control and order (Dwyer *et al*, 2003).

The **internal–external** dimension, describes whether the emphasis is on the maintenance of an organisation's internal socio-technical system or the improvement of its competitive position within the external environment. This axis reflects the conflicting demands created by the internal organisation and the external environment. One end of the axis represents a focus on integration and buffering to sustain the existing organisation, while the other represents a focus on competition, adaptation and interaction with the environment (Øgaard *et al*, 2005; Dwyer *et al*, 2003).

Appendix 3. Competing Values Framework II



Compiled by the author based on below noted sources

Notes: Mallak *et al* (2003) (names of types of organisational culture in circles);
 Škerlavaj *et al* (2007) (names of types of organisational culture in squares)

The **stability–flexibility** axis shows whether an organisation values control and predictability or individuality and spontaneity. Stability is a valid form when the business is stable and reliability and efficiency is paramount, but when environmental forces create a need for change, then flexibility becomes more important.

Appendix 4. Types of organisational culture II

Innovative cultures are exciting and dynamic. Entrepreneurial and ambitious people thrive in these environments. They are creative places to work, filled with challenge and risk. Stimulation is often constant. An individual well-suited to an innovative company is driven, enterprising, challenging, stimulating, creative, results-oriented and risk-taking. Innovative environments, however, are not easy places to work. Burnout and stress are routine occupational hazards of the constant pressure to achieve. It is hard to balance family-work-play time within the expectations of this cultural environment (Wallach, 1983, p. 32).

Bureaucratic cultures are hierarchical and compartmentalized. There are clear lines of responsibility and authority. The work is organised and systematic; these cultures are usually based on control and power. The companies are stable, careful and, usually, mature. A high score on bureaucracy means the organisation is power-oriented, cautious, established, solid, regulated, ordered, structured, procedural and hierarchical. This culture is appropriate for a company with a large market share in a stable market. A well-trained staff and sound structure with efficient systems and procedures make it work. A strong bureaucratic culture is not likely to attract and retain creative or ambitious people (Wallach, 1983, p. 32).

Supportive cultures are warm, “fuzzy” places to work. People are friendly, fair and helpful to each other. They are open, harmonious environments, almost like an extended family. A company has a highly supportive environment if it is trusting, safe, equitable, sociable, encouraging, open, relationship-oriented and collaborative (Wallach, 1983, p. 32).

Source: compiled by the author based on Wallach, 1983; used also by Berson *et al*, 2005 and Chow, Liu, 2007.

Appendix 5. Types of organisational culture III

Two subscales from the Cooke and Lafferty (1989) framework:

The **humanistic/helpful** subscale measures whether members are expected to be supportive in their dealings with one another, the organisation is managed in a participative and person-centred way, and an emphasis is put on cooperation and constructive interpersonal relations.

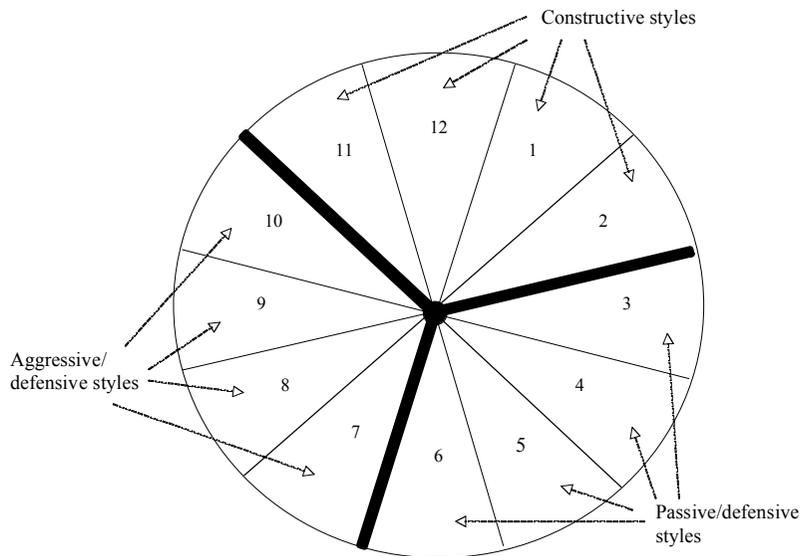
The **achievement** subscale contains items referring to behavioural norms that place a value on goal setting, the accomplishment of objectives and the pursuit of a standard of excellence.

One subscale from the Denison and Mishra (1995) framework:

Adaptability is in the change/flexibility and external orientation quadrant reflecting responsiveness and readiness to change in response to the changing external environment. Adaptable organisations take risks, learn from their mistakes etc. (Chan *et al*, 2004).

Source: compiled by the author based on Xenikou, Simosi (2006)

Appendix 6. Organisational Culture Inventory

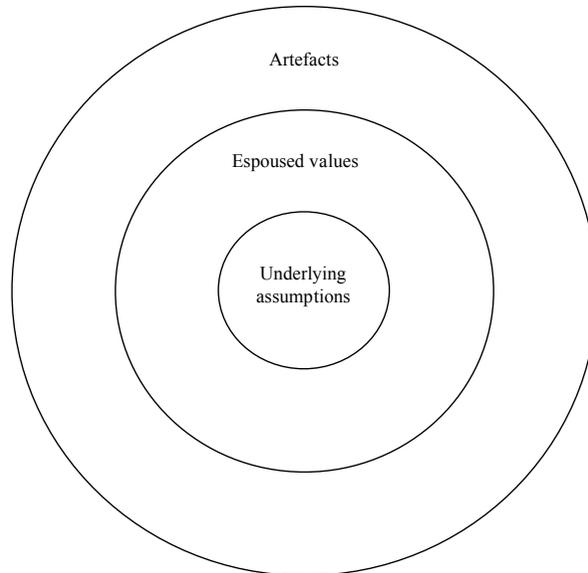


Notes: 1 – humanistic encouraging; 2 – affiliative; 3 – approval; 4 – conventional; 5 – dependent; 6 – avoidance; 7 – oppositional; 8 – power; 9 – competitive; 10 – perfectionist; 11 – achievement; 12 – self-actualisation

The Organisational Culture Inventory (OCI) describes twelve sets of behavioural norms associated with three general styles of organisational culture: 1) constructive culture, 2) passive/defensive culture and 3) aggressive/defensive culture. The behavioural norms characterised by the OCI are defined by two underlying dimensions. The norms on the right side of the OCI Circumplex reflect expectations for behaviours that are people-oriented; those on the left side reflect expectations for behaviours that are relatively task-oriented. Norms toward the top of the OCI Circumplex promote behaviours that are directed toward the fulfilment of higher-order satisfaction needs; those near the bottom promote behaviours directed toward the fulfilment of lower-order security needs (Balthazard *et al*, 2006). The keywords that characterise **passive/defensive** cultures are: avoidance, dependent, conventional and approval. These cultures usually have low levels of performance and employee well being (Corbett, Rastrick, 2000). **Aggressive/defensive** culture characteristics are: oppositional, power, competitive and perfectionist. These styles represent cultures that perform tasks sufficiently, but to the detriment of the people involved, through creating high stress levels. These cultures generally encourage a steady reliability rather than outstanding levels of performance and innovation (Corbett, Rastrick, 2000). **Constructive** culture is characterised by achievement, self-actualisation, humanistic encouraging and affiliative. These are the preferred or most desirable group of cultural expectations and norms. They are usually associated with high levels of performance and low levels of stress among the organisation's members (Corbett, Rastrick, 2000).

Source: compiled by the author based on Cooke, Lafferty (1989); used also by Corbett, Rastrick, (2000); Balthazard *et al*, 2006)

Appendix 7. Layers of organisational culture



There are three layers of organisational culture (Schein, 1992). The most visible layer is **artefacts**. These are verbal, behavioural, and physical manifestations of the organisational culture (Horenczyk, Tatar, 2002). For example, stories, arrangements, rituals, and language (Homburg, Pflesser, 2000). These are easily obtainable and can be used as a starting place to analyze organisational culture. The process of understanding the behaviour of organisational members, the factors that motivate its members and the sources of its behavioural norms is much more difficult (Zollers *et al*, 1999).

Espoused values are the next layer of organisational culture. Zollers *et al* (1999) discuss that if the intention is to know why organisational members behave the way they do one must identify the values that govern the behaviour of an organisation. Since these values are not readily observable, they must be derived through the process of interviewing members of the organisation and asking them about their motivating philosophies. These commentaries offer an insight into the less visible layer of organisational culture (Zollers *et al*, 1999) called **underlying assumptions**. These represent an unconscious level of culture, at which the espoused values have been transformed and are taken for granted as an organisationally acceptable way of perceiving the world.

Source: compiled by the author based on Nahm *et al*, 2004; Homburg, Pflesser, 2000; Horenczyk, Tatar, 2002; Zollers *et al*, 1999

Appendix 8. Questionnaire of school performance criteria

Ankeet koolide juhtkonnale

Koolide töö hindamisel kasutatakse mitmeid kriteeriume. Selleks, et teada saada, milliseid Teie nendest oluliseks peate ja milliseid sooviksite lisada, ongi koostatud käesolev ankeet. Palun hinnake 10-pallilisel skaalal, mil määral näitavad järgnevad valdkonnad Teie arvates **üldhariduskooli tulemuslikkust**? Palun märkige ära number 10, kui olete täiesti nõus sellega, et vastav valdkond näitab tulemuslikkust ja number 1, kui Te pole sellega üldse nõus. Palun märkige oma hinnang skaalal rasvase kirjaga (**boldis**).

Kooli tulemuslikkust näitab (näitavad):	Teie hinnang									
1. positiivne hinnang koolile linnas, vallas vm ümbruskonnas	1	2	3	4	5	6	7	8	9	10
2. kooli vaimsus ja traditsioonid	1	2	3	4	5	6	7	8	9	10
3. turvaline õpikeskkond	1	2	3	4	5	6	7	8	9	10
4. õpilasesõbralikkus	1	2	3	4	5	6	7	8	9	10
5. õpilaste head teadmised	1	2	3	4	5	6	7	8	9	10
6. õpilaste üldine areng (nt suhtlemis- ja esinemisoskus, koostöövõime, tolerantsus jms)	1	2	3	4	5	6	7	8	9	10
7. tunnivälise tegevuse aktiivsus (huviringid jms)	1	2	3	4	5	6	7	8	9	10
8. õpetajate kutsealane pädevus	1	2	3	4	5	6	7	8	9	10
9. õpetajatele koolitusvõimaluste tagamine	1	2	3	4	5	6	7	8	9	10
10. õpetajate aktiivsus (projektides osalemine jms)	1	2	3	4	5	6	7	8	9	10
11. koolitöötajate (sh õpetajate) rahulolu kooliga	1	2	3	4	5	6	7	8	9	10
12. koolitöötajate kaasamine otsustamisse	1	2	3	4	5	6	7	8	9	10
13. lapsevanemate kaasamine kooliellu	1	2	3	4	5	6	7	8	9	10
14. edukas juhtimistegevus	1	2	3	4	5	6	7	8	9	10
15. hästi koordineeritud suhted juhtkonna, õpetajate, õpilaste ja lapsevanemate vahel	1	2	3	4	5	6	7	8	9	10
16. õpilaste edaspidine käekäik	1	2	3	4	5	6	7	8	9	10
17. õpilaste hinded koolisisesele korraldatavatel eksamitel	1	2	3	4	5	6	7	8	9	10
18. õpilaste koondhinded tunnistustel	1	2	3	4	5	6	7	8	9	10
19. õpilaste tulemused olümpiaadidel ja konkurssidel	1	2	3	4	5	6	7	8	9	10
20. õpilaste edukus järgmistes kooliastmetes (nn keskkoolis, kõrgkoolis)	1	2	3	4	5	6	7	8	9	10
21. medaliga lõpetanute arv	1	2	3	4	5	6	7	8	9	10
22. õpilaste riigieksamitulemused	1	2	3	4	5	6	7	8	9	10
23. vähe klassikursuse kordajaid	1	2	3	4	5	6	7	8	9	10
24. väike väljalangevus koolist	1	2	3	4	5	6	7	8	9	10

Palun, et lisaksite mõned andmed, mis võimaldavad uurimustulemusi üldistada:

- vanus
- sugu
- haridus
- tööstaaž praeguses koolis

Suur tänu koostöö eest!

Lugupidamisega,

Anne Aidla

Source: compiled by the author

Appendix 9. Correlation matrix of 24 school performance criteria

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	x	0.47	0.42	0.37	0.51	0.57	0.41	0.34	0.46	0.35	0.52	0.34	0.43	0.52	0.34	0.36	0.44							
2	0.47	x	0.50	0.48	0.49	0.49	0.61	0.36	0.47	0.46	0.47		0.45	0.49		0.32	0.44			0.36	0.38			
3	0.42	0.50	x	0.83	0.39	0.41	0.37	0.58	0.33	0.49				0.35		0.34								
4	0.37	0.48	0.83	x	0.37	0.37	0.37	0.45	0.40	0.47			0.41	0.46										
5	0.51	0.49			x	0.66	0.50	0.50	0.36	0.58	0.57	0.36	0.63	0.51		0.42	0.59	0.46	0.56	0.50	0.40			
6	0.57	0.49	0.39	0.37	0.66	x	0.59	0.52	0.44	0.48	0.40		0.51	0.43	0.44		0.32		0.42					
7	0.41	0.61	0.41	0.37	0.50	0.59	x	0.39	0.63	0.39	0.52		0.48	0.46										
8	0.34	0.36	0.37		0.50	0.52	0.39	x	0.58	0.49	0.49		0.58	0.57	0.35	0.36	0.47		0.54			0.42	0.32	
9	0.46	0.47	0.58	0.45	0.36	0.44	0.63	0.58	x	0.45	0.53	0.57	0.42	0.52								0.40	0.46	
10	0.35	0.46	0.33	0.40	0.58	0.48	0.39	0.49	0.45	x	0.56		0.56	0.53	0.43	0.34	0.37		0.47	0.56				
11	0.52	0.47	0.49	0.47	0.57	0.40	0.52	0.49	0.53	0.56	x	0.52	0.37	0.71	0.75	0.49	0.56		0.40	0.43		0.51	0.46	
12	0.34								0.57		0.52	x	0.37	0.44	0.39			0.33						
13										0.36	0.37	0.37	x	0.66	0.51									
14	0.43	0.45		0.41	0.63	0.51	0.48	0.58	0.42	0.56	0.71	0.44	0.66	x	0.79	0.33	0.50		0.40					
15	0.52	0.49	0.35	0.46	0.51	0.43	0.46	0.57	0.52	0.53	0.75	0.39	0.51	0.79	x	0.32	0.37	0.52	0.34			0.45	0.50	
16	0.34					0.44			0.35		0.43				0.32	x			0.49				0.34	
17		0.32	0.34		0.42				0.36	0.34	0.49		0.33	0.37		x	0.74	0.41	0.43	0.36				
18	0.36	0.44			0.59	0.32	0.47			0.37	0.56		0.50	0.52			0.74	x	0.65	0.50	0.44	0.48		
19					0.46						0.33						0.41	0.65	x		0.41	0.49		
20					0.56	0.42			0.54	0.47	0.40		0.40	0.34	0.49	0.43	0.50		x	0.57	0.50			
21		0.36			0.50					0.56	0.43					0.36	0.44	0.41	0.57	x	0.65			
22		0.38			0.40												0.48	0.49	0.50	0.65	x			
23							0.42	0.40	0.41		0.51			0.45								x	0.78	
24							0.32	0.46	0.36	0.46	0.46			0.50	0.34							0.78	x	

Notes: only statistically significant correlations at 0.05 are presented

1 – Good reputation in the local community, 2 – Spirit and traditions of the school, 3 – Secure learning environment, 4 – Pupil friendliness, 5 – Good knowledge of pupils, 6 – Pupils’ overall maturity (e.g. interpersonal and public speaking skills, cooperation, tolerance, etc.); 7 – Extra-curricular activities (activity clubs, etc.), 8 – Competence of teachers, 9 – Enabling training opportunities for teachers; 10 – Activity of teachers (participating in various projects etc.), 11 – School personnel (e.g. teachers) satisfaction with school life, 12 – Participation by school personnel in decision-making, 13 – Parental participation in school life, 14 – Successful management, 15 – Well-coordinated communication between management, teachers, pupils and parents, 16 – Pupils’ success in further stages of life, 17 – Pupils’ grades for in-school examinations, 18 – Pupils’ results in final examinations, 19 – Pupils’ results in various contests, 20 – Pupils’ success in further stages of study (e.g. in secondary school, institutions of higher education), 21 – Number of excellent graduates, 22 – Pupils’ results in national examinations, 23 – Few pupils repeating a year, 24 – Few dropouts

Source: author’s calculations on the basis of collected database

Appendix 10. Questionnaire of Organisational Culture

Inimesed töötavad erinevates organisatsioonides. Organisatsioonidest võib rääkida kõigi ühenduste puhul, kus inimesed on kokku tulnud mingi eesmärgi saavutamiseks. Püüdke hinnata 10-pallilisel skaalal, millisel määral kehtivad Teie organisatsioonis järgmised väited. Kui nõustute väitega täiel määral, siis tehke palun märge (näiteks märk "+") number kümne juurde ja siis, kui väide Teie organisatsiooni jaoks üldse ei kehti, kasutage oma arvamuse väljendamiseks numbrit 1.

MEIE ORGANISATSIOONIS ...

... on palju allüksusi	1	2	3	4	5	6	7	8	9	10
... on meeldiv töökeskkond	1	2	3	4	5	6	7	8	9	10
... tuntakse üksteist	1	2	3	4	5	6	7	8	9	10
... korraldatakse ühisüritusi	1	2	3	4	5	6	7	8	9	10
... inimesed tunnevad uhkust oma organisatsiooni üle	1	2	3	4	5	6	7	8	9	10
... tuntakse hästi konkurente	1	2	3	4	5	6	7	8	9	10
... tunnustatakse inimesi hea töö eest	1	2	3	4	5	6	7	8	9	10
... teatakse, kuidas omavahel suhelda	1	2	3	4	5	6	7	8	9	10
... pääseb juhi jutule kui vaja	1	2	3	4	5	6	7	8	9	10
... teatakse, millised on organisatsiooni eesmärgid	1	2	3	4	5	6	7	8	9	10
... võetakse uusi töötajaid hästi vastu	1	2	3	4	5	6	7	8	9	10
... on traditsioonidel suur tähtsus	1	2	3	4	5	6	7	8	9	10
... arvestatakse iga inimesega	1	2	3	4	5	6	7	8	9	10
... arvavad inimesed ühtemoodi paljudest maailma asjadest	1	2	3	4	5	6	7	8	9	10
... on vajalik teave kõigile kättesaadav	1	2	3	4	5	6	7	8	9	10
... teatakse üksteise isiklikust elust	1	2	3	4	5	6	7	8	9	10
... langevad juhtide ja teiste töötajate arvamused sageli kokku	1	2	3	4	5	6	7	8	9	10
... on eksimuste korral piinlik teiste organisatsiooni liikmete ees	1	2	3	4	5	6	7	8	9	10
... on rasketes olukordades tugev ühtekuuluvustunne	1	2	3	4	5	6	7	8	9	10
... liikmed tahaksid rohkem teada oma organisatsioonist	1	2	3	4	5	6	7	8	9	10
... on igapähe suur tegevusvabadus	1	2	3	4	5	6	7	8	9	10
... ei karda inimesed eksida	1	2	3	4	5	6	7	8	9	10

MEIE ORGANISATSIOONIS ...

... toimuvad pidevalt positiivsed muutused	1	2	3	4	5	6	7	8	9	10
... lahendatakse omavahelised arusaamatused õigeaegselt	1	2	3	4	5	6	7	8	9	10
... ei rõhutata alluvate ja ülemuste erinevusi	1	2	3	4	5	6	7	8	9	10
... mõtlevad inimesed rohkem oma vajadustele kui organisatsiooni eesmärkidele	1	2	3	4	5	6	7	8	9	10
... tunnustatakse neid, kes on juhtkonnaga heades suhetes	1	2	3	4	5	6	7	8	9	10
... teatakse üksteise harrastustest ja töövälisest tegevusest	1	2	3	4	5	6	7	8	9	10
... on moodustunud mitmesuguseid sõprusgrupe	1	2	3	4	5	6	7	8	9	10
... suheldakse omavahel viisakalt	1	2	3	4	5	6	7	8	9	10
... on häbi tunnustada teistele oma töökohta	1	2	3	4	5	6	7	8	9	10
... tullakse tööle vastumeelselt	1	2	3	4	5	6	7	8	9	10
... peetakse lugu heast tujust	1	2	3	4	5	6	7	8	9	10
... abistatakse üksteist tööalastes probleemides	1	2	3	4	5	6	7	8	9	10
... tuntakse töördõmu	1	2	3	4	5	6	7	8	9	10
... arutatakse kõik olulised asjad omavahel läbi	1	2	3	4	5	6	7	8	9	10
... reageeritakse igale eksimusele rangelt	1	2	3	4	5	6	7	8	9	10
... mõeldakse inimeste heaolule	1	2	3	4	5	6	7	8	9	10
... täidavad kõik oma tööülesandeid hästi	1	2	3	4	5	6	7	8	9	10
... on ühisüritused populaarsed	1	2	3	4	5	6	7	8	9	10
... tahavad paljud töökohta vahetada	1	2	3	4	5	6	7	8	9	10
... töötavad paljud inimesed juba pikka aega koos	1	2	3	4	5	6	7	8	9	10
... selgitatakse ülesandeid täpselt	1	2	3	4	5	6	7	8	9	10

Palun, et lisaksite mõned andmed, mis võimaldavad uurimustulemusi üldistada.

Vanus

Sugu

Haridus

Rahvus

Töökoht ettevõttes

Suur tänu koostöö eest!

Source: Vadi, 2000

Appendix 11. Correlation matrix of relationships between school administration attitudes and national examination results

Attitudes about performance criteria	National examination results			
	Urban school	Rural school	Large school	Small school
Pupils' academic performance	-0.29*	-0.03	-0.32*	-0.02
School leadership	0.29*	0.17	0.27*	0.19
School environment	0.37*	0.11	0.37*	0.11
Competence of teachers, pupils' educational progress	-0.10	0.33*	-0.16	0.30*

* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

Appendix 12. Correlation matrix of relationships between school administration attitudes and organisational culture task orientation estimations

Attitudes about performance criteria	Organisational culture task orientation			
	Urban school	Rural school	Large school	Small school
Pupils' academic performance	-0.29*	0.06	-0.28*	-0.05
School leadership	0.40*	0.28*	0.50*	0.30*
School environment	0.56*	0.67*	0.50*	0.51*
Competence of teachers, pupils' educational progress	-0.14	0.38*	0.00	0.42*

* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

Appendix 13. Correlation matrix of relationships between school administration attitudes and organisational culture relationship orientation estimations

Attitudes about performance criteria	Organisational culture relationship orientation			
	Urban school	Rural school	Large school	Small school
Pupils' academic performance	-0.28*	0.02	-0.27*	0.04
School leadership	0.49*	0.28*	0.52*	0.29*
School environment	0.56*	0.71*	0.60*	0.60*
Competence of teachers, pupils' educational progress	-0.08	0.51*	0.15	0.42*

* correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

Appendix 14. Correlation matrix of orientations of organisational culture and national examination results (with respect to the location and size of schools)

National examination results with respect to the location and size of the school	Organisational culture orientations	
	Task orientation	Relationship orientation
Urban school	0.78**	0.54*
Rural school	0.13	0.27
Large school	0.84**	0.59*
Small school	0.05	0.09

** correlation is significant at the 0.01 level, * correlation is significant at the 0.05 level

Source: author's calculations on the basis of collected database

SUMMARY IN ESTONIAN

INDIVIDUAALSETE JA ORGANISATSIOONILISTE TEGURITE MÕJU ÕPISOORITUSELE EESTI ÜLDARIDUSKOOLOIDES

Töö aktuaalsus

Iga riigi huvides on, et tema kodanikud annaksid hea panuse riigi arengusse. See on eriti oluline väikestes riikides, kus konkurentsieelse saavutamiseks on mõistlik panustada teadmuspõhisele majandusele, millele on iseloomulik tööjõu kvaliteet mitte kvantiteet. Uued ideed ja nende rakendamisoskus on seejuures tähtsamad kui masstootmine. Riigi haridussüsteem peaks toetama oma kodanike arengut selliselt, et nende teadmised ja oskused võimaldaksid edendada teadmuspõhist majandust.

Eesti Haridus- ja Teadusministeeriumi 2007–2013 aasta arengukavas on juhitud pühimõttest: “Eesti riigi tulevik, ühiskonnaliikmete toimetulek ja rahulolu sõltuvad suuresti iga elaniku haritusest. Elanikkonna haritusele paneb aluse hea ja kvaliteetne üldharidus.” (Development plan..., 2009) Üldharidussüsteemi arendamise üldeesmärk on määratletud järgmiselt: “Üldharidussüsteemis luuakse kõigile õpilastele võrdväärsed võimalused ja tingimused võimete ja huvidekohase ja kvaliteetse hariduse omandamiseks, mis võimaldavad jätkata õpinguid ja elus väärikalt toime tulla.” (Development plan..., 2009) Samas on väga keeruline määratleda, mida tähendab kvaliteetne haridus ja kuidas selle saavutamiseks koolide tööd tõhustada.

Üheks kriteeriumiks koolide töö kvaliteedi hindamisel on sageli nende õpisooritus (ingl k *academic performance*²²) (nt Stewart, 2008; Griffith, 2004; Lan, Lantier, 2003; Roscigno, Crowley, 2001; Bradley, Taylor, 1998 jne). Koolide ja riikide õpisoorituse üle diskuteeritakse nii Eesti riigi siseselt kui ka rahvusvahelisel tasandil. Paljudes riikides (nt Ameerika Ühendriikides ja Suurbritannias) on olemas standardiseeritud riiklikud testid koolide õpisoorituse võrdlemiseks. Eestis on riigieksameid läbi viidud juba enam kui kümme aastat. Kuna tulemused on kõigile kättesaadavad, siis arutletakse aktiivselt selle üle, miks mõnedes koolides on paremad riigieksamitulemused kui teistes. Sageli arvatakse, et kõrgemate riigieksamitulemustega koolid on edukamad ja paljud lapsevanemad soovivad oma lapsi just niisugustesse koolidesse õppima panna. Kuna ka Eesti kõrgkoolidesse sissepääsemisel on ainukeseks või üheks oluliseks kriteeriumiks riigieksamitulemused, siis tekitab see veel enam riigieksami keskust.

²² Käesolevas töös kasutatakse inglisekeelse mõiste “*performance*” vastena eesti keeles mõistet “sooritus”. Inglisekeelses erialakirjanduses lisaks kõrgkoolidele ka üldhariduskoolide kontekstis kasutatava mõiste “*academic performance*” vastena eesti keeles kasutatakse mõistet “õpisooritus”.

Rahvusvahelisel tasemel rakendatakse kahte testi selleks, et võrrelda erinevate riikide õpilaste õpisooritust. Esimene neist on PISA (ingl. k. *Programme for International Student Assessment*) ja teine TIMSS (ingl. k. *Trends in International Mathematics and Science Study*). Saadud tulemused avaldatakse internetis, ajakirjanduses jm ning koostatakse seejuures riikide pingeridasid. Sellele järgneb tavaliselt ka diskussioon ajakirjanduses jm, et otsida riikide kõrgete või madalate testitulemuste põhjusi ning võimalusi tulemuste tõstmiseks. Hanushek (2005) arutleb, et rahvusvaheliste testide vastase huvi põhjuseks võib olla uskumus, et kõrgemate testitulemuste tagajärjeks on majanduslik kasu — paremaid tulemusi saavutavad õpilased on hiljem tööturul edukamad ja see tähendab kiiremat majanduskasvu.

Kui kõrge õpisooritus on riigi arengu seisukohast oluline, siis tekib järgnevalt küsimus, kuidas seda saavutada. Siin on kaks vastandlikku võimalust. Üks äärmus on nõ treenida õpilasi eksamitel kõrgeid tulemusi saama ja keskenduda peamiselt sellele. Samas on niisugune lähenemine tekitanud rahulolematust nii lapsevanemates, õpetajates, koolijuhtides²³, õpilasorganisatsioonide esindajates ja ka kogu ühiskonnas laiemalt (Piipuu, 2007; Koorits, Kuus, 2007; Tiit, 2006 jne). Esile tuuakse mitmeid probleeme. Muret tekitavad juhtumid, kus koolis on takistatud eeldatavasti nõrgemaid tulemusi saavaid õpilasi riigieksamitel osalemast selleks, et tõsta kooli kohta riigieksamitulemuste pingeridades (Raun, 2009). Samal põhjusel on ette tulnud ka pettuseid, kus õpetaja aitab õpilasi riigieksami sooritamisel või lubab kasutada keelatud abimaterjale (Aasmäe, Tammert, 2004). Samuti leitakse, et ainult riigieksamitulemustele keskendumine takistab laiapõhjalise hariduse andmist riigis (Kass, 2007). Näiteks muusika, kirjanduse, spordi vms süvaõppega koolidelt ei ole mõistlik nõuda sama kõrgeid matemaatikaeksamitulemusi kui reaalkoolidelt.

Nimetatud probleemide tõttu on mõistlik otsida täiendavaid võimalusi koolide õpisoorituse tõstmiseks. Üheks selliseks võimaluseks on välja selgitada, missugused individuaalsed²⁴ ja organisatsioonilised²⁵ tegurid aitavad kaasa koolide õpisoorituse saavutamisele ning keskenduda nendele. On ilmne, et kuigi Eesti koolidel on riiklikult paika pandud ühtsed õppekavad, on mõned koolid nende õppekavade realiseerimisel edukamad. Nad kasutavad paremini ära oma õpilaste, õpetajate ja lapsevanemate potentsiaali ning loovad kooli sisekeskkonna, mis toetab õpetamist ja õppimist.

²³ Käesolevas töös mõeldakse koolijuhtide all nii direktoreid kui ka õppealajuhatajaid.

²⁴ Individuaalsed omadused on näiteks indiviidi hoiakud, isiksuseomadused, motivatsioon, väärtused jne. Käesolevas doktoritöös käsitletakse kahte esimest aspekti.

²⁵ Organisatsioonilised tegurid on näiteks organisatsioonikultuur, organisatsiooni kliima, organisatsiooni väärtused jne. Käesolevas doktoritöös käsitletakse esimest aspekti.

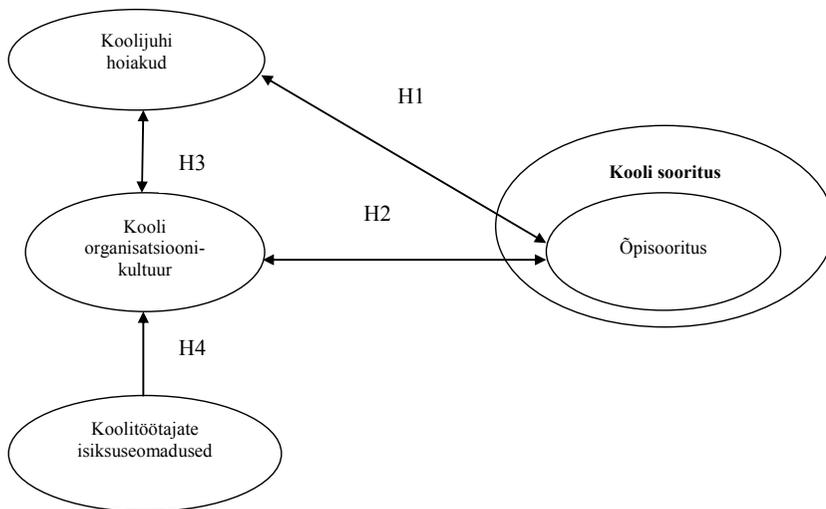
Uurimuse eesmärk ja ülesanded

Doktoritöö eesmärgiks oli välja selgitada, kuidas individuaalsed ja organisatsioonilised tegurid on seotud õpisooritusega Eesti koolides. See teadmused aitab koolijuhtidel ja teistel huvigruppidel kujundada strateegiaid koolide õpisoorituse tõstmiseks.

Eesmärgi saavutamiseks püstitatakse järgnevad uurimisülesanded:

- 1) anda teoreetiline ülevaade sellest, kuidas individuaalsed ja organisatsioonilised tegurid mõjutavad koolide õpisooritust;
- 2) töötada välja põhimõtted koolide õpisoorituse mõõtmiseks ja viia läbi empiiriline uurimus õpetajate, koolijuhtide ja toetava personali hulgas selleks, et koguda informatsiooni nende individuaalsete omaduste ja kooli kohta;
- 3) analüüsida, kuidas individuaalsed ja organisatsioonilised tegurid on seotud Eesti koolide õpisooritusega;
- 4) koostada ettepanekud Eesti koolide õpisoorituse tõstmiseks võttes arvesse individuaalseid ja organisatsioonilisi tegureid.

Doktoritöö põhiraamistik on esitatud joonisel 1. Individuaalsetest omadustest käsitletakse kõigepealt koolijuhtide hoiakuid, mille kohta eeldatakse, et need on seotud kooli õpisooritusega otseselt, aga ka organisatsioonikultuuri mõjutamise kaudu. Individuaalsetest omadustest analüüsitakse ka koolitöötajate isiksuseomaduste mõju organisatsioonikultuurile ning seeläbi eeldatavasti ka kooli õpisooritusele. Koolitöötajad on käesolevas töös jaotatud kolme gruppi: 1) koolijuhid (direktorid ja õppealajuhatajad), 2) õpetajad ja 3) toetav personal (psühholoogid, logopeedid, raamatukoguhoidjad jms). Organisatsioonitasandi muutjana analüüsitakse kooli organisatsioonikultuuri seost kooli õpisooritusega.



Joonis 1. Doktoritöö põhiraamistik

Märkused: H1 – hüpotees 1; H2 – hüpotees 2; H3 – hüpotees 3; H4 – hüpotees 4

Seega arutletakse töös järgneva nelja seose üle: 1) kuidas koolijuhtide hoiakud on seotud kooli õpisooritusega; 2) milline seos on organisatsioonikultuuri hinnangute ja kooli õpisoorituse vahel; 3) kuidas koolijuhtide hoiakud on seotud kooli organisatsioonikultuuri hinnangutega ning 4) milline mõju on koolitöötajate isiksuseomadustel kooli organisatsioonikultuuri hinnangutele.

Töö uudsus

Doktoritöö fookuses on kooli õpisooritust kujundavad tegurid, mida on võimalik mõjutada arvestades individuaalsete ja organisatsiooniliste tegurite spetsiifikat. Niisugune probleemipüstitus ja selle lahendus on uudne, sest väga paljudes teaduslikes artiklites arutletakse vaid selle üle, kuidas õpilaste sotsiaalmajanduslik tagapõhi ning kooli asukoht ja suurus mõjutavad kooli õpisooritust (nt. Tajalli, Ophein, 2004; Reeves, Bylund, 2005; Bradley, Taylor, 1998; Young, 1998 jne). See on autori arvates liialt ühekülgne lähenemine, sest neid tegureid ei ole koolijuhtidel võimalik mõjutada. Seetõttu tuleks vähem keskenduda probleemidele, mis takistavad õpilaste head õppeedukust ning rohkem mõelda sellele, mida saaks ette võtta, et nende õpisooritust tõsta. Käesolevas doktoritöös esitatakse kõigepealt põhjalik ülevaade koolide õpisooritust mõjutavatest teguritest, mis on jaotatud kahte suuremasse gruppi: õpilase taustaga ja kooli taustaga seotud tegurid. Seejärel eristatakse need tegurid, mida koolijuhtidel on võimalik mõjutada. Järgnevalt analüüsitakse, mil viisil täpsemalt saavad koolijuhid kooli õpisooritust mõjutada arvestades individuaalseid ja organisatsioonilisi tegureid. Sageli on teadusartiklites seda teemat küllalt kitsalt analüüsitud ning üldisemat pilti ei ole esitatud. Antud doktoritöös kogutakse erinevate uurimuste tulemused kokku, süstematiseeritakse need ja analüüsitakse neid.

Koolijuhtide käitumist mõjutavad nende hoiakud. Näiteks kui koolijuhtidel on hoiak, et kooli õpisooritus on kõige tähtsam kooli edukuse näitaja, siis teevad nad kõik selleks, et nende kooli õpilased saavutaksid häid tulemusi riigieksamil. Seega on koolijuhtide hoiakud oluline uurimisobjekt. Autori poolt töötati välja uus meetod selleks, et välja selgitada, mil määral koolijuhid väärtustavad õpisooritusega seotud ja mil määral õppetöövälise sooritusega seotud kooli soorituse näitajaid. Õpisoorituse näitajatena kajastuvad ankeedis riigieksamitulemused, lõpueksamitulemused, hinded tunnistusel jne. Õppetöövälise soorituse teguritena võeti arvesse kooli juhtimise, kooli sisekeskkonna jms seonduvat. Nii õpisoorituse kui ka õppetöövälise sooritusega seotud tegurid valiti ankeeti doktoritöö teoreetilises osas saadud teadmuse põhjal.

Kuigi koolijuhtide hoiakutel ja nende käitumisel on juhtiv roll kooli tegevuse suunamisel, pole nad üksi vastutavad kooli õpisoorituse eest. Teised koolitöötajad nagu õpetajad ja toetav personal on need, keda käesolevas töös vaadeldakse koolijuhtide peamiste abilistena kooli eesmärkide täitmisel. See on pigem uudne lähenemine, sest tavapäraselt kaasatakse kooliteemalistesse uurimistesse eelkõige õpilasi, õpetajaid ja koolijuhte (nt Stewart, 2008; Mulford *et al*, 2004; Levačić, Woods, 2002; Sawkins, 2002; Hallinger *et al*, 1996 jne), kuid mitte

toetavat personali nagu näiteks psühholooge, logopeede, raamatukogutöötajaid jms nagu käesolevas doktoritöös. Autori arvates on nii koolijuhtidel, õpetajatel kui ka toetaval personalil oluline roll õpilaste ja lapsevanemate kaasamisel kooli ellu, samuti on neil oluline roll omavaheliste heade suhete ja ka kooli sisekeskkonna kujunemisel.

Üheks oluliseks kooli sisekeskkonda iseloomustavaks nähtuseks on organisatsioonikultuur. Paljud mõjukad organisatsioonikultuuri uurijad arvavad, et organisatsioonikultuur mõjutab organisatsiooni sooritust (nt Deal, Kennedy, 1982; Peters, Waterman, 1982; Wilkins, Ouchi, 1983; Schein, 1985; Kotter, Heskett, 1992 jne). Antud töös pakub huvi, kuidas organisatsioonikultuur võib kaasa aidata kooli hea õpisoorituse saavutamisele. Seda, kuidas organisatsioonikultuur võib sooritust mõjutada, on teaduskirjanduses päris põhjalikult analüüsitud, kuid tavaliselt keskendutakse vaid ühele, konkreetse uurimisprobleemi lahendamiseks vajalikule, organisatsioonikultuuri käsitlusele. Antud doktoritöös on erinevate uurimuste tulemused koondatud ning tehtud põhjalik ülevaade ja üldistused sellest, missugune organisatsioonikultuur toetab organisatsiooni sooritust. Seda nii üldisemalt kui ka kooli kontekstis. Autori arvates kõige oluliseimate selleteemaliste uurimuste tulemused on koondatud kokkuvõtvasse tabelisse, milles kajastuvad valimi karakteristikud, soorituse ja organisatsioonikultuuri mõõtmisel kasutatud meetodid, rakendatud statistilised meetodid ning lühikokkuvõtte tulemustest. See tabel annab mitmekülgse ja põhjaliku ülevaate sellest, kuidas erinevad ja laiahaardelised on organisatsioonikultuuri ja organisatsiooni soorituse teemalised uurimused.

Kuigi organisatsioonikultuuri kujunemisel ja kujundamisel on oma osa kõigil organisatsiooniliikmetel, arvatakse, et organisatsiooni liidritel on sealjuures kõige olulisem roll (nt Kavanagh, Ashkanasy, 2006; Balthazard *et al*, 2006; Holbeche, 2005; DiPaola *et al*, 2004; Alvesson, 2002; Schein, 1992; Schein 1985 jne). Veelgi enam eeldatakse, et tegeledes organisatsioonikultuuri kujundamisega aitab organisatsiooni juht kaasa ka organisatsiooni heale sooritusele (nt Wilderom, van der Berg, 1998; Ogbonna, Harris, 2000; Xenikou, Simosi, 2006 jne). Seda, kuidas organisatsiooni juhid oma hoiakute, uskumuste, väärtuste ja käitumisega mõjutavad organisatsioonikultuuri ja seeläbi ka organisatsiooni sooritust, on teaduskirjanduses teataval määral käsitletud, kuid empiirilisi uurimusi on läbi viidud vähe. Käesolevas töös süstematiseeritakse olemasolevate uurimuste tulemused ning analüüsitakse neid.

Nagu eelpool öeldud, osalevad kõik organisatsiooni liikmed organisatsioonikultuuri kujunemisel. Organisatsioonid koosnevad erinevate individuaalsete omadustega indiviididest. Organisatsiooni tulemuslikuks tööks vajatakse organisatsiooniliikmeid, kes sobivad seal töötamiseks. Üheks oluliseks inimese ja organisatsiooni sobivust kujundavaks aspektiks on inimese isiksuseomadused. Näiteks koolis töötamine nõuab vastutustundlikkust, emotsionaalset stabiilsust, stressitaluvust, häid suhtlemisoskusi, esinemisoskusi, kohanemisvõimet jne. Veelgi enam, isiksuseomadustel on oluline roll ka organisatsioonikultuuri kujundamisel ja seega organisatsiooni hea soorituse taseme saavutamisel. Varasemates uurimustes ei ole sedalaadi isiksuseomaduste ja organisatsiooni soori-

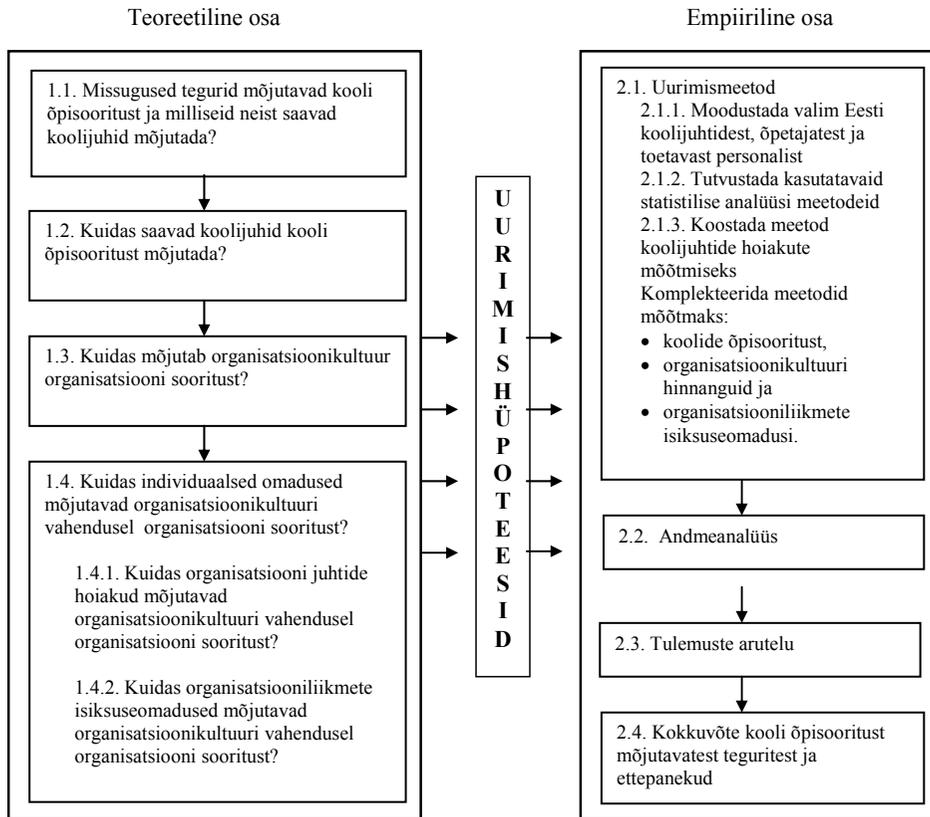
tuse kaudset (organisatsioonikultuuri kaudu) seostamist rakendatud. Ka isiksuseomaduste ja organisatsioonikultuuri vaheliste seoste kohta on tehtud vähe empiirilisi uurimusi. Olemasolevad tulemused on antud doktoritöös esitatud ja kontseptuaalse sidumise abil on välja toodud, missugused isiksuseomadused võivad toetada organisatsioonikultuuri ning seeläbi ka organisatsiooni sooritust. Otsest seost isiksuseomaduste ja õpisoorituse vahel ei analüüsita, sest tulemused võivad olla juhuslikud, kuna näiteks ühe koolitöötaja isiksuseomadustel on väike mõju kogu kooli sooritusele.

Seni ei ole nimetatud nelja valdkonda (organisatsioonikultuur, organisatsiooni juhi hoiakud, organisatsiooniliikmete isiksuseomadused ja organisatsiooni sooritus) koos analüüsitud. Põhjuseks võib olla, et need valdkonnad kuuluvad erinevatesse organisatsiooniuringute distsipliinidesse. Organisatsioonikultuuri uurivad tavaliselt teadlased, kes tegutsevad organisatsiooniteooria või organisatsioonikäitumise valdkonnas. Juhtide hoiakud ja käitumine on enamasti organisatsioonipsühholoogia või personalijuhtimise teemaks, isiksuseomadusi analüüsitakse isiksusepsühholoogide poolt ja organisatsioonide sooritus on strateegilise juhtimise uurimisvaldkonnaks. Käesoleva doktoritöö uudsus seisneb selles, et nimetatud nelja valdkonda seostatakse omavahel ehk on kujundlikult öeldes loodud sillad nelja erineva saare ühendamiseks. Antud uurimus viiakse läbi Eesti koolide näitel, kuid saadud informatsioon võib olla kasulik ka teiste riikide koolidele ja teist tüüpi organisatsioonidele.

Käesoleva doktoritöö uudsus seisneb ka selles, et saadud tulemuste analüüsimisel, nende üle arutlemisel ja ettepanekute tegemisel võetakse arvesse koolide suuruse ja asukoha eripärasid. Niisuguse lähenemise põhjuseks on, et õpisooritus on erineva suuruse ja asukohaga koolides erinev. Varasemates uurimistes analüüsitakse tavaliselt kas ainult kooli suuruse või ainult kooli asukoha probleematakat. Mõlemat korraga käsitletakse harva (nt Reeves, Bylund, 2005; Sawkins, 2002) ning tehtud ettepanekuid ei eristata kooli suuruse ja asukoha eripäradest lähtuvalt. Autori arvates annab niisugune kooli suuruse ja asukoha eripärade arvessevõtmine aga väärtuslikku lisainformatsiooni ja uusi ideid koolijuhtidele, haridusametnikele jt selleks, et tõhustada koolide õpisooritust arvestades seejuures koolitöötajate individuaalseid omadusi ning organisatsioonilisi tegureid.

Töö ülesehitus ja teoreetiline tagapõhi

Doktoritöö koosneb kahest osast. Esimene peatükk loob uurimuseks teoreetilise baasi, teine peatükk sisaldab empiirilist analüüsi. Doktoritöö ülesehitus on esitatud joonisel 2. Teoreetilise osa tutvustus on esitatud küsimustena, millele soovitakse vastavates alapunktides vastuseid leida. Teoreetiliste argumentide põhjal püstitatakse ka uurimishüpoteesid. Empiirilise osa tutvustus sisaldab tegevusi, mis aitavad kaasa hüpoteeside kontrollimisele ning kokkuvõtete, ettepanekute tegemisele.



Joonis 2. Doktoritöö ülesehitus

Doktoritöö teoreetilises osas analüüsiti koolide õpisooritust mõjutavaid tegureid eristades neid, mida koolijuht saab mõjutada arvestades individuaalsete ja organisatsiooniliste tegurite spetsiifikat. Täpsemalt, kuidas koolijuhtide hoiakute, koolitöötajate isiksuseomaduste ja organisatsioonikultuuri kaudu mõjutada koolide õpisooritust.

Alapunktis 1.1 käsitleti kooli õpisooritust mõjutavaid tegureid jaotades need kahte gruppi: 1) õpilase taustaga seotud tegurid (õpilase perekondlik tagapõhi, sõpruskond ja individuaalsed omadused) ja 2) kooli taustaga seotud tegurid (kooli suurus, asukoht jms; õpetajatega seotud karakteristikud ja koolijuhtimine). Õpisooritus on tavaliselt kõrgem nendel õpilastel, kelle vanemad on kõrgema haridusega ja kõrgema sissetulekuga. Põhjuseks peetakse seda, et kõrgema haridusega inimesed väärtustavad haridust rohkem ning oskavad oma lapsi ka paremini suunata. Samuti arvatakse, et kõrgema sissetulekuga lapsevanematel on rohkem raha õppimiseks vajalike võimaluste loomiseks (nt õppevahendite, entsüklopeediate, sõnaraamatute jms muretsemiseks, kontsertide, näituste jms külastamiseks, huviringides osalemiseks jms). Loomulikult ei piisa

siin lapsevanemate haridusest ja rahast, vaid oluline on nende ka huvi oma laste õppimise vastu, nende ootused ja seotus kooliga. Uurimused on näidanud, et kui lapsevanemad tegelevad oma lastega, aitavad neid õppimise juures, on kooli-asjadega kursis ja osalevad kooliüritustel, on laste õpisooritus kõrgem.

Lapsevanemate kõrval on õpilaste elus suur roll nende sõpruskonnal. Uurimuste tulemused näitavad, et koolis õpivad paremini need õpilased, kellel on rohkem sõpru, nad on sõprade poolt aktsepteeritud ning sõpradel on kooli ja õppimise suhtes positiivsed hoiakud, õppimist väärtustatakse ja sellele vastavalt ka käitatakse. Samamoodi on loomulikult olulised ka õpilase enda hoiakud, väärtused ja õpimotivatsioon. Uurimuste kohaselt aitab õppimisele kaasa ka tihe seotus kooliga ja pühendumine koolile. Need õpilased, kes osalevad kooliga seotud tegevustes (nt mitmesuguste ürituste korraldamine, õpilasomavalitsus jms), õpivad paremini. Õpilase hea õpisooritusega on seoses ka õpilase enesehinnang. Uurimused näitavad, et need õpilased, kes peavad ennast võimekateks, intelligentseteks jms, õpivad koolis paremini.

Kooli taustaga seotud teguritest mõjutavad õpisooritust kooli suurus ja asukoht. Tavaliselt on suuremates koolides ja linnakoolides õpisooritus kõrgem. Maakoolide ja väikeste koolide madalamate tulemuste põhjuseks peetakse peamiselt õpilaste sotsiaal-majanduslikku tagapõhja, väiksemat eelarvet ja kvalifitseeritud õpetajate puudust. Suuremates koolides on võimalik tegutseda kulu-efektiivsemalt, pakkuda rohkem erinevaid õppeaineid, õpetajatel on enam võimalik spetsialiseeruda jms.

Kooliiseseisukonna spetsiifikat arvestades on õpisooritus tavaliselt kõrgem koolides, kus on toetav, turvaline ja õpilasesõbralik sisekeskkond. Samuti peetakse oluliseks kooli vaimust, häid traditsioone, positiivset mainet, head organisatsiooni kliimat ja organisatsioonikultuuri. Õpetajatega seotud teguritest on tähtsad õpetajate haridus ja töökogemused ning nende suhtlemisoskused, õpetamisoskused, pühendumine, motivatsioon, tööga rahulolu jms.

Eelpoolnimetatud kooli õpisooritust mõjutavad tegurid on koondatud tabelisse 1. Eristatud on need, mida autori arvates koolijuhid teatud määral saavad/ei saa mõjutada.

Näiteks lapsevanemate haridus ja sissetulekud on selgelt koolijuhtide mõjuulatusest väljas. Võiks ju valida kooli lapsi selle järgi, missugused on nende vanemad, kuid enamasti ei ole see võimalik ega otstarbekas. Samamoodi ei saa koolijuht tavaliselt mõjutada kooli suurust, asukohta, eelarvet, klasside suurust, õpetajate palku jms. Ka õpetajate baasharidust ja töökogemusi ei ole koolijuhtidel sageli võimalik mõjutada, sest iseäranis maapiirkondades ei ole õpetajakohale kuigi palju kandideerijaid.

Antud doktoritöös peeti siiski tähtsamaks pakkuda välja võimalusi koolide õpisoorituse mõjutamiseks arvestades neid tegureid, mida koolijuhtidel on võimalik teataval määral mõjutada. Siia kuuluvad lapsevanemate huvi ja toetus, õpilaste motivatsioon ja seotus kooliga, kooli õpilasesõbralikkus ja head traditsioonid vms.

Tabel 1. Ülevaade kooli õpisooritust mõjutavatest teguritest, mida koolijuhid saavad/ ei saa mõjutada

		Tegurid, mida koolijuhid saavad teataval määral mõjutada	Tegurid, mida koolijuhid ei saa suures osas mõjutada
Õpilase taust	Perekondlik tagapõhi	Perekonna investeeringud kooliga seotud asjaoludesse, lapsevanemate ootused õppimisega seonduvalt, toetus ja seotus koolieluga	Lapsevanemate haridus ja sissetulek
	Sõpruskond	Aktsepteerimine sõprade poolt; sõprade arv; heade sõprade olemasolu; üksindus (-)	Sõprade kooliga seotud väärtused, hoiakud ja käitumine
	Individuaalsed omadused	Õpilase kooliga seotud väärtused ja hoiakud; õpimotivatsioon; seotus kooliga, pühendumine koolile, enesehinnang	Õpilase kaasasündinud võimekus
Kooli taust	Kooli tasand	Kooli turvalisus ja distsipliin; kooli sisekliima ja organisatsiooni-kultuur, huvitegevus	Kooli suurus ja asukoht, eelarve, õpetajate palgad, klassi suurus
	Õpetaja tasand	Õpetamisoskused, suhtlemisoskused, koolile pühendumine, motivatsioon ja tööga rahulolu	Õpetajate baasharidus, varasemad kogemused

Allikas: autori koostatud

Alapunktis 1.2 analüüsiti koolijuhtide võimalusi kooli õpisoorituse mõjutamiseks. Pakuti välja, et koolijuhid peaksid selleks tegelema järgnevate õppetööväliste valdkondadega:

- looma kooli visiooni, missiooni ja eesmärgid;
- kaasama koolitöötajaid (sh õpetajaid), lapsevanemaid ja õpilasi otsustamisse; soodustama juhtkonna, õpetajate, lapsevanemate ja õpilaste omavahelist suhtlemist ning koostööd;
- pakkuma koolitus- ja arenguvõimalusi õpetajatele, õpilastele ning lapsevanematele;
- suurendama huvigruppide pühendumist, motivatsiooni ja kooliga rahulolu;
- looma õppimiseks ja õpetamiseks soodsa sisekeskkonna, mis oleks turvaline, õpilasesõbralik, hea vaimuse, maine ja traditsioonidega ning sobiva organisatsioonikultuuriga.

Kooli visiooni, missiooni ja eesmärkide loomist oma rõhutatud väga paljudes koolijuhtimist käsitlevates teadusartiklites. Peetakse tähtsaks, et erinevad huvigrupid oleksid ühel meelel selles, millises suunas liigutakse ja samuti, et neid kaasataks otsuste tegemisse. Kui inimesed on otsuste tegemises osalenud, sel juhul on nad paremini kursis, miks on vaja teatud asju teha ning vastuseis võimalikele muutustele on väiksem. Samamoodi arvatakse, et ühiselt otsustatud asjad soodustavad omavahelist koostööd ja pühendumist jms. Õpetajate kaasa-

mine kooli otsuste tegemisse on küllaltki tavapärane. Samas teiste koolitöötajate, lapsevanemate ja õpilaste kaasamine on vähem levinud, kuid uurijate hinnangul väga vajalik.

Huvigruppide vaheline koostöö ja suhtlemine ei ole kooli spetsiifikat arvestades väga lihtne, sest näiteks õpetajad töötavad eraldi klassiruumides ja puutuvad omavahel vähe kokku. Lapsevanemaid ei ole aga üldse igapäevaselt kooli juures. Sellest hoolimata on uurimused näidanud, et koolides, kus juht suudab luua head omavahelised suhted ja koostöö, on õpisooritus kõrgem. Hea õpisooritusega koolides on nii õpetajate kui ka õpilaste omavahelised suhted paremad ning samuti on kodu ja kooli vaheline koostöö parem võrreldes halvema õpisooritusega koolidega. Vastupidiselt, enamik probleeme koolielus saab sageli alguse just nimelt pingelistest suhetest ja arusaamatustest. Seetõttu on koolijuhtidel vajalik luua ühiseid väärtuseid, hoiakuid ja käitumisviise, mis aitavad konfliktide taset suunata ja probleeme lahendada.

Üheks võimaluseks omavahelist suhtlemist ja koostööd edendada on pakuda vastavaid koolitusi nii õpetajatele kui ka õpilastele ja lapsevanematele. Näiteks edendada inimeste konfliktide ja probleemide lahendamise oskusi jms. Õpilaste arendamisel on heaks võimaluseks huvitegevus ehk sportimise, muusika, näitlemise jms seonduv. Arvatakse, et need tegevused aitavad õpilastel parandada enesehinnangut, leida sõpru jne. Varasemad uuringud näitavad, et huvitegevusega seotud õpilased on õppimises edukamad.

Organisatsiooniliikmete motiveeritus, tööga rahulolu ja organisatsioonile pühendumine on valdkonnad, millel on leitud olevat seos organisatsiooni sooritusega. Mida motiveeritumad, rahulolevamad ja pühendumad on organisatsiooni liikmed, seda enam nad pingutavad organisatsiooni eesmärkide nimel. Sama kehtib ka koolides. Päris sageli arutletakse selle üle, kas näiteks õpetajaid motiveerivad sisemised motivaatorid nagu tunnustus, eneseteostus jms või hoopis välised tegurid nagu raha jms. Samuti võib inimeste rahulolu mitmesuguste organisatsiooni valdkondadega (töötingimused, tagasiside, suhted kolleegidega ja juhiga jms) olla erinev. Koolijuhi ülesandeks on leida võimalusi nii õpetajate, õpilaste kui ka lapsevanemate motiveerimiseks ja nende kooliga rahulolu suurendamiseks. Üheks oluliseks kooliga rahulolu mõjutavaks valdkonnaks, millega koolijuhil tuleb tegeleda, on ka kooli sisekeskkond, mille hulka kuulub lisaks turvalisusele, õpilasesõbralikkusele jms ka kooli organisatsioonikultuur.

Alapunktis 1.3 käsitleti organisatsioonikultuuri eripärasid nii kooli kontekstis kui ka üldisemalt. Autor analüüsis 23 uurimust organisatsioonikultuuri ja organisatsiooni soorituse seoste kohta. Tulemused näitasid, et enamikul juhtudest mõjutas organisatsioonikultuur organisatsiooni sooritust olenemata, missuguste kriteeriumide järgi organisatsioonikultuuri ja sooritust hinnati. Seega oli organisatsioonikultuuril mõju nii finantsnäitajatele nagu kasum, käibemaht jms, kui ka mittefinantsnäitajatele nagu organisatsiooniliikmete rahulolu, tarbijate rahulolu jms. Sooritusele soodsalt mõjus tavaliselt tugev organisatsioonikultuur, mis väljendub organisatsiooniliikmete poolt jagatud väärtustes, hoiakutes ja käitumisviisides. Samuti on sooritusele kasuks konstruktiivsemat ja ratsionaalsemat tüüpi organisatsioonikultuurid, seda ka kooli kontekstis. Tihti oli organi-

satsiooni soorituse juures oluline ka omavahelisi suhteid väärtustav organisatsioonikultuur. Viimane on eriti tähtis kooli kontekstis.

Järgnevalt tekib küsimus, kuidas on võimalik organisatsioonikultuuri soovitud suunas muuta. Sellel teemal arutleti alapunktis 1.4. Kõigepealt, kuidas juhi hoiakud, väärtused ja käitumised võivad mõjutada organisatsioonikultuuri (punktis 1.4.1) ja seejärel, kuidas organisatsiooniliikmete isiksuseomadused on organisatsioonikultuuri kujunemisega seotud (punktis 1.4.2). Mõned uurijad on seisukohal, et kuigi organisatsioonikultuur on pidevas muutumises, on selle sihilik muutmine raske või isegi võimatu. Põhjuseks on see, et organisatsiooniliikmed ei soovi oma väljakujunenud hoiakuid, väärtusi ja käitumisviise muuta. Siiski on piisavalt uurimusi, mis näitavad, et organisatsioonikultuuri on võimalik organisatsiooniliikmete koostöös muuta. Juhte peetakse siin suunavaks osapoolteks. Uurimuste kohaselt on sooritust soodustava organisatsioonikultuuri mõttes kõige sobivamad juhtide koostööle ja organisatsiooniliikmete toetamisele suunatud käitumisviisid. Doktoritöös esitati ka kaks näidet selle kohta, kuidas uus koolidirektor oma uute hoiakute ja käitumisviisidega muutis organisatsioonikultuuri ning tagajärjeks oli kõrgem õpisooritus.

Organisatsioonikultuuri kujunemist ja seeläbi samuti kooli sooritust mõjutavad ka organisatsiooniliikmete isiksuseomadused. Isiksuseomaduste eripärasid tööalases kontekstis on küllalt palju analüüsitud. On leitud, et teatud tüüpi inimesed kohanevad võrreldes teistega paremini, on osavamad suhtlejad ja meeskonnatöö tegijad, tulevad paremini toime stressi ja probleemidega, on positiivsema ellusuhtumisega jms. Sellest tulenevalt on erinevate inimeste panus organisatsioonikultuuri kujunemisse erinev. Kui soovitakse saavutada omavahelist edukat suhtlemist ja koostööd soodustavad organisatsioonikultuuri, siis on eelistatud inimesed, kellel vastavad omadused on hästi esindatud. Näiteks ekstraverstsed inimesed on edukamad suhtlejad kui introvertsed inimesed; neurootilisemad inimesed tulevad stressi ja probleemidega halvemini toime kui vähem neurootilised inimesed jne. Seega tuleb koolijuhtimisel arvestada ka isiksuseomaduste eripärasid.

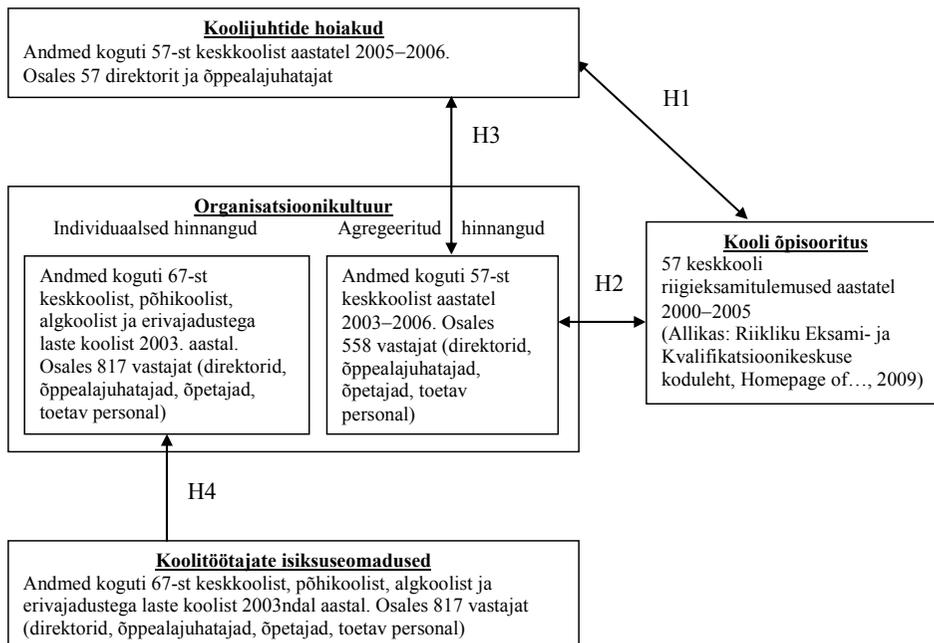
Koolijuhtidel on enamasti õpilastega vähem otseseid kontakte võrreldes õpetajate ja lapsevanematega. Seega selleks, et suurendada kooli õpisooritust tuleb koolijuhil oma hoiakute ja käitumistega erinevaid huvigruppe soovitud suunas mõjutada. Uurimused näitavad, et juhtide hoiakud ja käitumine võivad mõjutada nii õpetajate, õpilaste kui ka lapsevanemate hoiakuid ja käitumist ning järelikult käesoleva uurimuse näitel ka kooli õpisooritust. Sealjuures oletatakse, et õppetööväliste koolivaldkondadega nagu omavaheliste suhete ja koostöö soodustamine, koolikeskkonna kujundamine jms võib aidata saavutada ka õpisooritust.

Andmed ja uurimismetoodika

Empiiriline uurimus viidi läbi Eesti üldhariduskoolides. Valimisse kaasati erineva suuruse ja asukohaga päevast õpet pakkuvad eesti õppekeele munit-sipaal- või riigikoolid. Valimi ühtsuse huvides ei kaasatud Tallinna koole ega

eliitkool. Enamik vastajatest olid õpetajad, järgnesid toetav personal (psühholoogid, logopeedid, raamatukoguhoidjad jms) ja koolijuhid (direktorid ja õppealajuhatajad). Kuna enamasti töötavad Eesti koolides õpetajatena naised, siis olid ka uurimuses osalenutest enamik naised. Enamasti nõustusid osalema väiksemad maakoolid.

Andmed koguti aastatel 2003 kuni 2006. Ülevaade erinevatest kogutud andmetest on esitatud joonisel 3. Informatsiooni koolijuhtide hoiakute kohta saadi 57-lt direktorilt või õppealajuhatajalt. Lisaks sellele koguti samadest koolidest kokku 558 koolitöötaja ehk nii juhtkonna, õpetajate kui ka toetava personali arvamused kooli organisatsioonikultuuri kohta. Individuaalsed arvamused koondati, et saada iga kooli (n = 57) kohta organisatsioonikultuuri üldhinnang. Siinkohal kaasati ainult keskkoolid. Koolitöötajate isiksuseomaduste ja indiviidi tasandi organisatsioonikultuuri hinnangud koguti 67-st koolist. Siin kaasati keskkoolid, põhikoolid, algkoolid ja ka erivajadustega laste koolid. Kokku osales 817 koolijuhti, õpetajat ja toetava personali liiget.



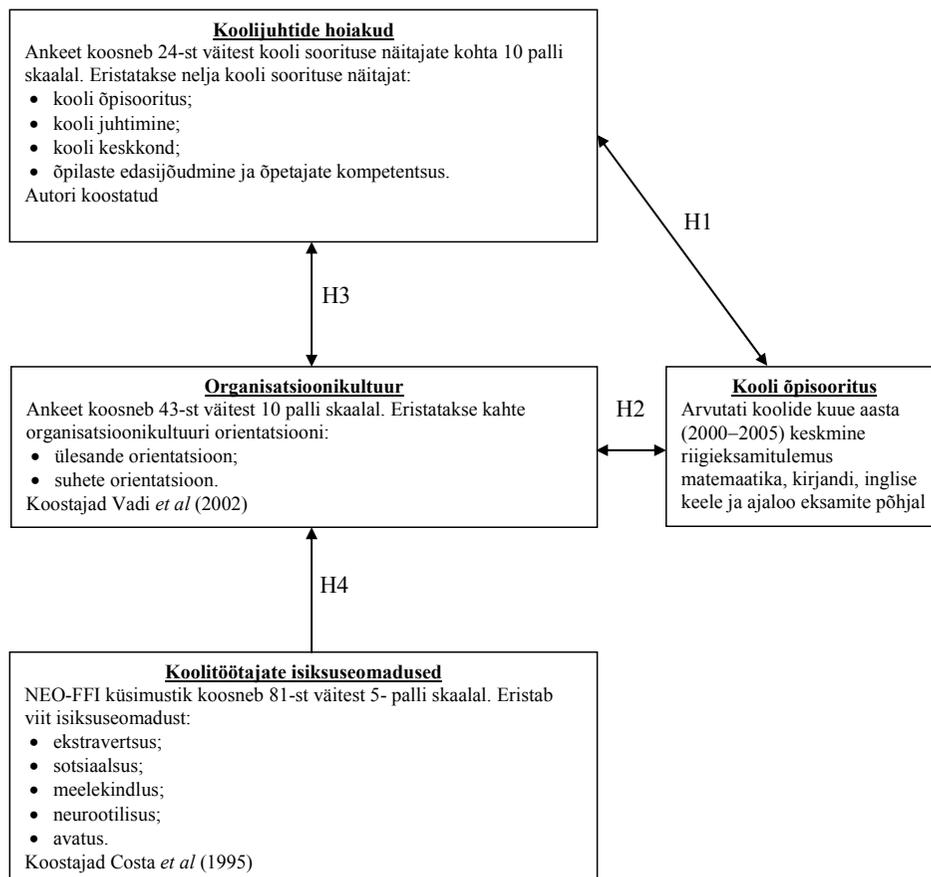
Joonis 3. Hüpoteeside testimiseks kasutatud andmestikud

Märkused: H1 – hüpotees 1; H2 – hüpotees 2; H3 – hüpotees 3; H4 – hüpotees 4

Allikas: autori koostatud

Empiiriliste andmete kogumisel kasutati kolme ankeeti (vt joonis 4): esimest selleks, et teada saada koolijuhtide hoiakuid, teist selleks, et mõõta organisatsioonikultuuri hinnanguid ja kolmandat selleks, et teada saada andmeid kooli-

töötajate isiksuseomaduste kohta. Riigieksamitulemuste kohta saadi informatsiooni Riikliku eksami- ja kvalifikatsioonikeskuse kodulehelt.



Joonis 4. Hüpoteeside testimiseks kasutatud küsimustikud

Märkused: H1 – hüpotees 1; H2 – hüpotees 2; H3 – hüpotees 3; H4 – hüpotees 4

Allikas: autori koostatud

Koolijuhtide hoiakute mõõtmiseks loodi uus meetod kaasates eksperte Tartu Ülikoolist, Haridus- ja Teadusministeeriumist ning koolidirektorite hulgast. Ankeet koosneb 24 väitest, millest üheksa on erinevad õpisoorituse näitajad nagu õpilaste tulemused riigieksamil, lõpueksamil, olümpiaadidel jms ning viisteist õppetöövälise soorituse näitajad, milleks on lapsevanemate kaasamine kooliellu, head suhted lapsevanemate, õpetajate ja koolijuhtide vahel jne. Faktoranalüüsi tulemusena jagati 24 väidet nelja faktorisse: 1) õpisooritus, 2) koolijuhtimine, 3) kooli keskkond ja 4) õpilaste edasijõudmine ja õpetajate kompetentsus.

Organisatsioonikultuuri hinnangute analüüsimiseks kasutati Vadi *et al* (2002) poolt välja töötatud meetodit, mille järgi iseloomustab organisatsioonikultuuri kaks orientatsiooni: 1) ülesande orientatsioon ja 2) suhete orientatsioon. Ankeet koosneb 43 väitest. Isiksuseomaduste mõõtmiseks kasutati Suure Viisiku meetodit (Costa *et al*, 1995), mille järgi iseloomustab isiksust viis isiksuseomadust: 1) ekstraversus, 2) sotsiaalsus, 3) meelekindlus, 4) neurootilisus ja 5) avatus. Ankeet koosneb 81-st väitest.

Andmed koolide riigieksamitulemuste kohta saadi nagu eelpool öeldud Riikliku eksami- ja kvalifikatsioonikeskuse kodulehelt. Iga kooli kohta arvutati välja matemaatika, inglise keele, kirjandi ja ajaloo eksamite kuue aasta (2000–2005) keskmine tulemus. Statistilise analüüsi meetoditest kasutati faktoranalüüsi, korrelatsioonanalüüsi, regressioonanalüüsi, ANOVA-t (ingl k. *Analysis of Variances*), t-testi ja LSD-testi (ingl k. *Least Significant Difference*).

Töös püstitatud hüpoteesid ja nende paikapidavus

Doktoritöös püstitati teoreetilistest argumentidest lähtuvalt neli hüpoteesi. Esimene neist püstitati selleks, et teada saada, kuidas koolijuhtide hoiakud on seotud koolide õpisooritusega. Teine selleks, et välja selgitada, kuidas organisatsioonikultuur on seotud koolide õpisooritusega. Kolmas ja neljas aga selleks, et teada saada, kuidas koolijuhtide hoiakud ja koolitöötajate isiksuseomadused annavad organisatsioonikultuuri kaudu oma panuse kooli õpisooritusele.

1. hüpotees:

Õpisooritus on kõrgem koolides, kus koolijuhtidel on hoiak, et kooli sooritus sõltub õppetöövälisest teguritest.

Esimene hüpotees leidis osalist kinnitust sõltuvalt kooli suurusest ja asukohast. Suurtes koolides ja linnakoolides on õpisooritus kõrgem kui koolijuhtidel on hoiak, et koolijuhtimine ja kooli keskkond on olulised koolide tulemuslikuks tööks. Näiteks nendes suurtes koolides ja linnakoolides, kus koolijuhid väärtustavad lapsevanemate ja koolitöötajate kaasamist otsustamisse; lapsevanemate, õpetajate ja õpilaste häid suhteid ning õpilaste õppetöövälisest arendamist, on riigieksamitulemused kõrgemad. Õpisooritus on aga madalam, kui koolijuhid peavad õpisooritust ehk eksamitulemusi jms tähtsaks kooli edukuse näitajaks. Väikestes koolides ja maakoolides niisuguseid seoseid ei leitud. Seevastu on viimati nimetatud tüüpi koolides õpisooritus kõrgem juhul kui koolijuhtidel on hoiak, et kooli tulemuslikuks tööks on tähtsad õpetajate kompetentsus ning õpilaste hea edasijõudmine (st vähe koolikursuse kordajaid ja koolist väljalangejaid). Suurtes koolides ja linnakoolides sellist seost ei leitud.

2. hüpotees:

Õpisooritus on kõrgem koolides, kus koolitöötajad toetavad enam organisatsioonikultuuri ülesande ja suhete orientatsiooni.

Teine hüpotees leidis samuti osalist kinnitust, sest tõendus sellele leiti ainult suurtes koolides ja linnakoolides. Nendes koolides on õpisooritus kõrgem, kui koolitöötajad annavad organisatsioonikultuuri orientatsioonile kõrgemaid hinnanguid. Näiteks koolides, kus inimeste arvates ollakse oma kooli üle uhked, toimub pidevalt positiivseid muutusi ja inimesed keskenduvad kooli eesmärkidele, on riigieksamitulemused kõrgemad. Samuti kui inimeste arvates nende koolis aidatakse üksteist, arutatakse omavahel tähtsaid asju ning toetatakse teineteist, on õpisooritus kõrgem. Väikestes koolides ja maakoolides ei olnud organisatsioonikultuuri hinnangute ja õpisoorituse vahel statistiliselt olulist seost.

3. hüpotees:

Organisatsiooniliikmed toetavad organisatsioonikultuuri ülesande ja suhete orientatsiooni enam koolides, kus koolijuhtidel on hoiak, et kooli sooritus sõltub õppetöövälisest teguritest.

Kolmas hüpotees leidis osalist kinnitust, sõltuvalt kooli suuruselt ja asukohast. Koolide töötajad toetavad organisatsioonikultuuri ülesande ja suhete orientatsiooni rohkem siis, kui koolijuhtide arvates sõltub koolide sooritus koolijuhtimisest ja kooli keskkonnast. Seda nii väikestes kui ka suurtes koolides ning maakoolides ja linnakoolides. Samas kui koolijuhil on hoiak, et õpisooritus on tähtis kooli edukuse mõõdupuu, siis on organisatsioonikultuuri hinnangud madalamad. Väikestes koolides ja maakoolides niisugust seost ei leitud. Väikestes koolides ja maakoolides annavad koolitöötajad organisatsioonikultuurile kõrgemaid hinnanguid aga juhul, kui koolijuhid peavad tähtsaks õpilaste edukat edasijõudmist ning õpetajate kompetentsust. Vastupidiselt eelnevale linnakoolides ja suurtes koolides niisugust seost ei leitud.

4. hüpotees:

Ekstraversus, sotsiaalsus, meelekindlus ja neurootilisus mõjutavad organisatsioonikultuuri ülesande ja suhete orientatsiooni hinnanguid.

4a: Kõrgema ekstraversuse tasemega organisatsiooniliikmed annavad organisatsioonikultuuri orientatsioonidele kõrgemaid hinnanguid;

4b: Kõrgema sotsiaalsuse tasemega organisatsiooniliikmed annavad organisatsioonikultuuri orientatsioonidele kõrgemaid hinnanguid;

4c: Kõrgema meelekindluse tasemega organisatsiooniliikmed annavad organisatsioonikultuuri orientatsioonidele kõrgemaid hinnanguid;

4d: Kõrgema neurootilisuse tasemega organisatsiooniliikmed annavad organisatsioonikultuuri orientatsioonidele madalamaid hinnanguid;

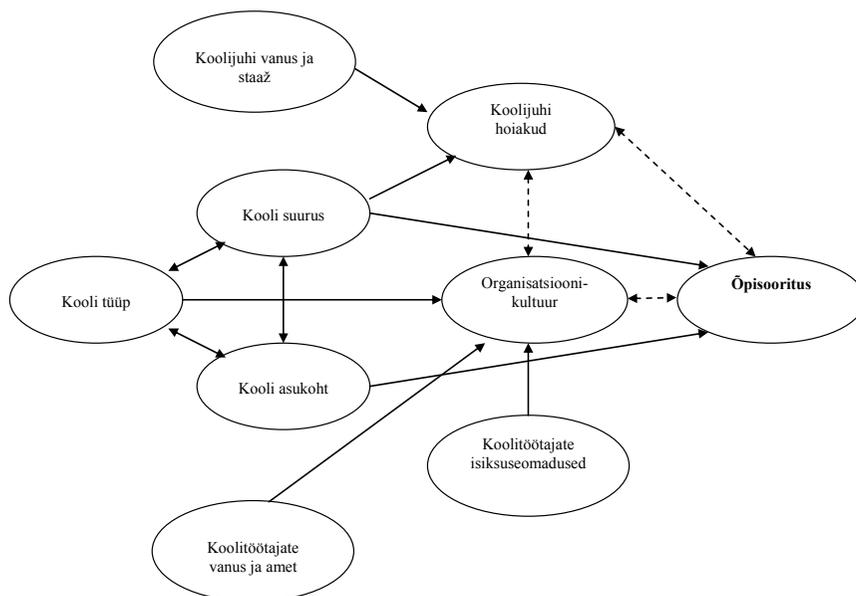
4e: Avatuse ja organisatsioonikultuuri orientatsioonide vahel seos puudub.

Neljas hüpotees leidis osalist kinnitust, sest neli alamhüpoteesi leidsid kinnitust, kuid üks mitte. Nimelt meelekindluse ja organisatsioonikultuuri vahel ei leitud seost, kuigi vastav alamhüpotees oli püstitatud. Kõrgema ekstraversuse määraga organisatsiooniliikmed andsid aga organisatsioonikultuuri orientatsioonidele kõrgemaid hinnanguid nagu eeldati. See tähendab, et soojad, selts-

kondlikud, enesekindlad, aktiivsed, positiivsete emotsioonidega jne kooli töötajad toetavad enam organisatsiooni ülesanded ja suhteid. Samamoodi andsid ka kõrgema sotsiaalsuse tasemega koolitöötajad organisatsioonikultuurile kõrgemaid hinnanguid. Seega usaldavad, otsekohesed, omakasupüüdmatud, vastutulelikud, tagasihoidlikud jms inimesed toetavad enam organisatsiooni ülesandeid ja suhteid. Seevastu kõrge neurootilisus ei soodusta organisatsioonikultuurile kõrgete hinnangute andmist ehk depressiivsed, vihased, ärrituvad, haavatavad jne inimesed annavad organisatsioonikultuurile madalamaid hinnanguid. Avatus ei olnud organisatsioonikultuuri orientatsioonidega statistiliselt oluliselt seotud, mis vastab püstitatud alahüpoteesile.

Individuaalsete ja organisatsiooniliste tegurite seosed Eesti koolide õpisooritusega

Doktoritöö tulemused näitasid, et individuaalsed ja organisatsioonilised tegurid on seotud Eesti koolide õpisooritusega, kuid see seos sõltub koolide asukohast ja suurusest. Joonisel 5 on esitatud saadud tulemuste kokkuvõte. Organisatsioonikultuur on seotud õpisooritusega, kuid see seos sõltub kooli suurusest ja asukohast. Koolijuhtide hoiakud on õpisooritusega seotud nii otseselt kui ka kaudselt, kuid ka need seosed sõltuvad kooli suurusest ja asukohast.



Joonis 5. Individuaalsete ja organisatsiooniliste tegurite mõju Eesti koolide õpisooritusele

Märkus: Katkendliku joonega märgitud seos sõltub kooli asukohast ja suurusest

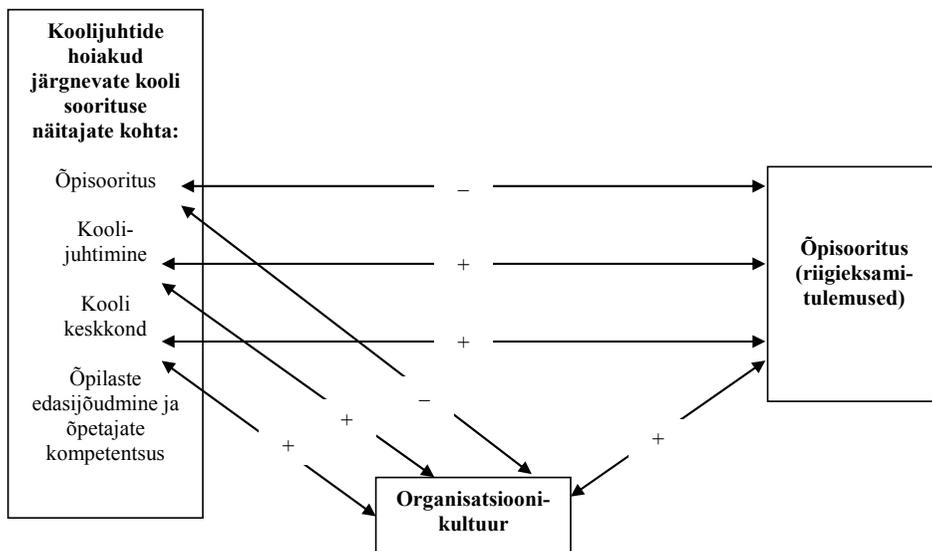
Allikas: autori koostatud

Koolijuhtide hoiakute, organisatsioonikultuuri ja koolide õpisoorituse omavahelised seosed koolide suuruse ja asukoha spetsiifikat arvestades on esitatud joonisel 6. Suurtes koolides ja linnakoolides on organisatsioonikultuuri hinnangud seotud kooli õpisooritusega. Juhul kui nimetatud tüüpi koolides koolitöötajad arvavad, et pidevalt toimub positiivseid muutusi, inimesed peavad kooli eesmärke tähtsaks, omavahel suheldakse palju ja toetatakse teineteist, on riigieksamitulemused kõrgemad. Seega on õpisoorituse jaoks tähtis, et koolitöötajad toetaksid kooli ülesandeid ja omavahelisi suhteid.

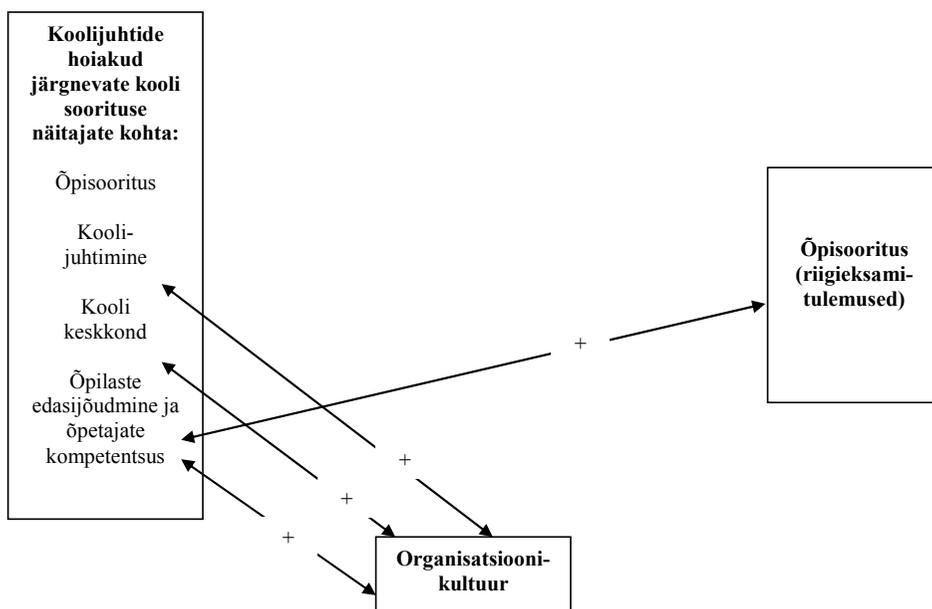
Nagu eelpool öeldud, mõjutavad koolijuhtide hoiakud kooli õpisooritust nii otseselt kui ka kaudselt (organisatsioonikultuuri kaudu), kuid see seos sõltub kooli suurusest ja asukohast. Suurtes koolides ja linnakoolides, kus koolijuhid tähtsustavad koolijuhtimist ja koolikeskkonda oluliste kooli soorituse näitajatenäna, on riigieksamitulemused kõrgemad. Sel juhul on kõrgemad ka organisatsioonikultuuri hinnangud, mis omakorda mõjutavad soodsalt õpisooritust. Samas kui juhid tähtsustavad õpisooritust ehk mitmesuguseid testide- ja eksamitulemusi vms, on linnakoolides ja suurtes koolides õpisooritus madalam. Sellisel juhul on madalamad ka organisatsioonikultuuri hinnangud, mis omakorda mõjub õpisooritusele ebasoodsalt. Väikestes koolides ja maakoolides on ainult üks hoiakute grupp õpisooritusega seotud ehk koolides, kus koolijuht väärtustab õpetajate kompetentsust ja õpilaste edasijõudmist, on riigieksamitulemused kõrgemad. Organisatsioonikultuuri ja riigieksamitulemuste vahel väikestes koolides ja maakoolides seost ei leitud.

Koolitöötajate isiksuseomadused mõjutavad organisatsioonikultuuri kaudu koolide õpisooritust, kuid seda linnakoolides ja suurtes koolides. Keskmisest ekstravertsemad, sotsiaalsemad ja vähem neurootilised inimesed on siin eelistatud. Avatuse ja meelekindlusega seost ei leitud. Ekstravertsemad, sotsiaalsemad ja vähem neurootilised inimesed on head suhtlejad, sobivad meeskonnatöök, kohanevad kiiremini, taluvad paremini stressi, oskavad lahendada konflikte ja on positiivse suhtumisega asjadesse. Vähem ekstravertsed, sotsiaalsed ja enam neurootilised inimesed ei ole neis asjus nii edukad. Seetõttu tuleks isiksuseomaduste eripärasid arvesse võtta näiteks koolitusprogrammide kujundamisel, et arendada inimestel vastavaid omadusi, samuti inimeste omavaheliste suhete arendamisel, uute töötajate kohendamisel, personalivalikul jms.

Koolide õpisooritust mõjutavad ka kooli suurus ja asukoht. Tavaliselt on suuremates koolides ja linnakoolides riigieksamitulemused kõrgemad. Siin võib olla ka põhjus, miks maakoolides ja väikestes koolides ei ole koolijuhtide hoiakud koolijuhtimise ja koolikeskkonna kohta ning samamoodi ka organisatsioonikultuuri hinnangud õpisooritusega seotud — teatud kooli suuruse ja asukoha spetsiifilised tegurid mõjutavad õpisooritust enam (nt maapiirkonna perekondade madalamad sissetulekud, kvalifitseeritud õpetajate puudus, koolide madalamad eelarved jms). Kooli suurus ja asukoht on omavahel seotud näitajad. Linnakoolid on tavaliselt suuremad kui maakoolid.



A: Suured koolid, linnakoolid



B: Väikesed koolid, maakoolid

Joonis 6. Seosed koolijuhtide hoiakute, organisatsioonikultuuri ja õpisoorituse vahel sõltuvalt kooli suurusest ja asukohast

Märkused: “+” positiivne korrelatsioon, “-” negatiivne korrelatsioon

Allikas: autori koostatud

Koolitöötajate vanus ja amet on koolide õpisooritusega seotud kaudselt, organisatsioonikultuuri kaudu. Vanemad koolitöötajad andsid organisatsioonikultuurile kõrgemaid hinnanguid. Seega tuleb koolijuhtidel tähelepanu pöörata noorematele koolitöötajatele, kes vajavad enam tunnustust, kaasamist otsustamisse, tegevusvabadust positiivset tagasisidet jms. Koolijuhtide organisatsioonikultuuri hinnangud olid kõrgemad kui õpetajate ja toetava personali hinnangud. Seega näevad koolijuhid asju positiivsemalt kui need on teiste kooliliikmete meelest. Ka seda asjaolu peaks koolijuhtimises arvesse võtma, inimestega rohkem suhtlema, neid otsustamisse kaasama jms. Algekoolide töötajate organisatsioonikultuuri hinnangud olid kõrgemad võrreldes keskkoolide, põhikoolide ja erivajadustega koolide töötajatega. Seega tuleb viimati mainitud koolides enam organisatsioonikultuuri eripäradele tähelepanu pöörata.

Koolijuhtide vanus ja tööstaaž konkreetses koolis on samuti seotud kooli õpisooritusega, sest need tegurid on seotud koolijuhtide hoiakutega. Õpisooritust peavad tähtsamaks vanemad ja suuremate kogemustega koolijuhid. Seega tuleb just nendel kujundada hoiakuid, et ka õppetöövälised tegurid võivad kooli õpisooritusele kaasa aidata. Samas peavad vanemad ja kogenumad koolijuhid koolikeskkonda tähtsaks kooli soorituse näitajaks, mis on positiivne. Seega peaksid nooremad ja väiksemate kogemustega koolijuhid kujundama hoiaku, et kooli sisekeskkond on oluline.

Ettepanekud koolide õpisoorituse tõstmiseks

Koolijuhtidele mõeldud ettepanekud nende kooli õpisoorituse tõstmiseks on esitatud tabelis 2. Sealjuures on arvesse võetud, et individuaalsete ja organisatsiooniliste tegurite mõju õpisooritusele on erinev sõltuvalt kooli suurusest ja asukohast.

Suurte koolide ja linnakoolide juhid ei tohiks liigselt keskenduda õpisoorituse saavutamisele, vaid tegelema enam koolijuhtimise ja koolikeskkonna edendamisega. Näiteks parandama suhteid lapsevanemate, õpetajate, õpilaste ja koolijuhtide vahel; kaasama vanemaid ja koolitöötajaid otsustamisse; pakkuma õpilastele huvitegevust; looma turvalise, õpilasesõbraliku koolikeskkonna, milles tähtsustatakse traditsioone ja head mainet jne. Samamoodi saab suurtes koolides ja linnakoolides suurendada õpisooritust arvestades organisatsioonikultuuri eripärasid. Siinkohal on oluline võimaldada inimestele tegevusvabadust, tunnustada neid, hoolida neist ja toetada neid. Sealjuures võiks võtta arvesse inimeste isiksuseomaduste eripärasid.

Väikeste koolide ja maakoolide õpisoorituse edendamiseks tuleks väärtustada õpetajate kompetentsust ja õpilaste edasijõudmist. Selleks võiks luua edukaid programme õpi- ja käitumisraskustega õpilaste toetamiseks, et oleks võimalikult vähe koolist väljalangejaid ja koolikursuse kordajaid. Kuigi väikeste koolide ja maakoolide juhid väärtustasid suurte koolide ja linnakoolide juhtidega samaväärselt koolijuhtimise ja koolikeskkonna tähtsust kooli edukuse juures, ei olnud need hoiakud riigieksamitulemustega seotud. Samamoodi olid

koolitöötajate organisatsioonikultuuri hinnangud sõltumata kooli suurusest ja asukohast samaväärsed, kuid polnud riigieksamitulemustega seotud. Seega ei pruugi koolijuhtimise ja koolikeskkonna edendamine väikestes koolides riigieksamitulemusi parandada, kuid need on siiski muudel põhjustel kooli töös väga tähtsad valdkonnad, sest õpisoorituse saavutamine ei tohiks olla kooli ainus eesmärk.

Tabel 2. Ettepanekud Eesti koolijuhtidele nende kooli õpisoorituse parandamiseks

Ettepanekud põhinevad järgnevatel tulemustel	Ettepanekud koolijuhtidele	
	Suured koolid ja linnakoolid	Väikesed koolid ja maakoolid
Riigieksamitulemused on kõrgemad kui koolijuhtidel on hoiak, et kooli sooritus: <ul style="list-style-type: none"> • ei sõltu õpilaste õpisooritusest (kehtib suurtes koolides ja linnakoolides); • sõltub koolijuhtimisest (kehtib suurtes koolides ja linnakoolides); • sõltub koolikeskkonnast (kehtib suurtes koolides ja linnakoolides); • sõltub õpetajate kompetentsusest ja õpilaste edasijõudmisest (kehtib väikestes koolides ja maakoolides). 	Selle asemel, et liigselt keskenduda heade õppetulemuste saavutamisele, võiks tegeleda koolijuhtimise ja koolikeskkonna edendamisega	Tuleks väärtustada õpetajate kompetentsust ja õpilaste edasijõudmist
Riigieksamitulemused on kõrgemad, kui koolitöötajad annavad kõrgemaid hinnanguid organisatsioonikultuuri ülesande ja suhete orientatsioonile (kehtib suurtes koolides ja linnakoolides)	Tuleks arendada kooli ülesannet ja suhteid toetavat organisatsioonikultuuri	<i>Kuna väikestes koolides ja maakoolides ei olnud organisatsioonikultuuri hinnangud seotud riigieksamitulemustega, siis ei ole siin võimalik ettepanekuid teha</i>
Organisatsioonikultuuri hinnangud on kõrgemad kui koolijuhtidel on hoiak, et kooli sooritus: <ul style="list-style-type: none"> • ei sõltu õpilaste õpisooritusest (kehtib suurtes koolides ja linnakoolides); • sõltub koolijuhtimisest; • sõltub koolikeskkonnast. 	Selle asemel, et liigselt keskenduda heade õppetulemuste saavutamisele, võiks tegeleda koolijuhtimise ja koolikeskkonna edendamisega	
Kõrgema ekstraverstsuse ja sotsiaalsuse ning madalama neurootilisuse määraga koolitöötajad andsid kõrgemaid hinnanguid organisatsioonikultuuri orientatsioonidele	Koolijuhtimises tuleks arvesse võtta isiksuseomaduste eripärasid	

Allikas: autori koostatud

Arvestades seda, et maakoolides on õpisooritus madalam kui linnakoolides, tuleks koolide võimaluste võrdsustamiseks riiklikul tasandil meetmed kasu-

tusele võtta. Ettepanekud selleks on koondatud tabelisse 3. Võrdsed õppimisvõimalused tuleks luua nii maal kui ka linnas elavatele õpilastele. Kõige suuremateks probleemideks on kvalifitseeritud õpetajate vähesus maal, samuti koolide väiksusest tingitud madalam eelarve. Kui koolide tase oleks samaväärne, siis poleks andekamatel ja motiveeritumatel õpilastel tarvis linnakoolidesse õppima minna. Samuti peaks maal elavatel õpilastel olema head transpordivõimalused lähima koolini.

Tabel 3. Ettepanekud Eesti koolide õpisoorituse tõstmiseks riiklikul tasandil

Ettepanekud põhinevad järgnevatel tulemustel	Ettepanekud riiklikul tasandil
Riigieksamitulemused on väikestes maakoolides enamasti madalamad	1) Luua võrdsed õppimisvõimalused sõltumata sellest, kas õpilased elavad linnas või maal 2) Võimaldada võrdsed õppimisvõimalused erineva perekondliku taustaga õpilastele
Väikestes maakoolides ei ole riigieksamitulemused seotud organisatsioonikultuuri hinnangute ning juhtide hoiakutega koolijuhtimise ja kooli keskkonna kohta nagu suurtes linnakoolides.	
Riigieksamitulemused on kõrgemad kui koolijuhtidel on hoiak, et kooli sooritus sõltub õpetajate kompetentsusest ja õpilaste edasijõudmisest (kehtib väikestes koolides ja maakoolides).	3) Väärtustada ühiskonnas õpetajate elukutset ja õppimist
Riigieksamitulemused on kõrgemad kui koolijuhtidel on hoiak, et kooli sooritus: <ul style="list-style-type: none"> • ei sõltu õpilaste õpisooritusest (kehtib suurtes koolides ja linnakoolides); • sõltub koolijuhtimisest (kehtib suurtes koolides ja linnakoolides); • sõltub koolikeskkonnast (kehtib suurtes koolides ja linnakoolides) 	4) Toetada ühiskonnas hoiakut, et koolide õpisoorituse edendamiseks on vajalik väärtustada koolijuhtimist ja kooli sisekeskkonda (sh organisatsioonikultuuri)
Riigieksamitulemused on kõrgemad, kui koolitöötajad annavad kõrgemaid hinnanguid organisatsioonikultuuri ülesande ja suhete orientatsioonile (kehtib suurtes koolides ja linnakoolides)	

Allikas: autori koostatud

Samamoodi peaks võimaldama võrdväärseid õppimisvõimalusi erineva majandusliku taustaga õpilastele. Rahapuudus on just maapiirkondades tõsine probleem ning osa õpilasi peab isegi tööl käima, et pere hakkama saaks. Seetõttu peaks riiklikul tasandil finantseerima kõik õppevahendid, koolitranspordi, koolitoidu, huvitegevused, ekskursioonid jms. Õpetajate elukutset ja õppimist peaks Eestis enam väärtustama. Näiteks tuleks leida võimalusi andekate laste arenda-

miseks ja jätkata programme õpi- ja käitumisprobleemidega õpilastele. Ühiskonnas tuleks enam soodustada hoiakut, et koolide õpisoorituse suurendamiseks on väga olulised ka koolijuhtimine ja kooli sisekeskkond (sealhulgas organisatsioonikultuur). Seda teadmust võiks rakendada koolijuhtidele ja õpetajatele korraldatavate koolituste korraldamisel. Samuti võiks toetada vastavateemalisi arutelusid ajakirjanduses ja televisioonis. Riiklikul tasandil võiks algatada ka edasiste uurimuste korraldamist koolijuhtimise ja kooli sisekeskkonna rollist kooli õpisoorituse kontekstis.

Doktoritöö tulemused näitavad, et koolide õpisoorituse edendamiseks ei ole tarvis liigselt keskenduda just eksamitulemuste parandamisele, sest see võib anda hoopis vastupidise efekti. Selle asemel tuleks tegeleda koolijuhtimise ja kooli sisekeskkonna parandamisega. Kuigi uurimus viidi läbi Eesti koolide näitel, võivad saadud tulemused kehtida ka teiste riikide koolides ning võimalik, et ka teist tüüpi organisatsioonides. Näiteks kui organisatsiooni eesmärgiks on head finantsnäitajad, siis tuleks energia samamoodi suunata nõ "pehmetele", mittefinantsilistele teguritele. Varasemad uurimused näitavad, et organisatsiooniliikmeid toetavad ja koostööle suunatud eestvedamisstiilid aitavad enim kaasa heade finantsnäitajate saavutamisele. Samamoodi on tõestatud, et organisatsioonikultuur mõjutab soodsalt finantsnäitajaid. Kuna isiksuseomadused mõjutavad organisatsioonikultuuri kujunemist, siis tuleks siinkohal ka nende eripära arvesse võtta. Seega, olenemata sellest, missugune on organisatsiooni soorituse kriteerium, organisatsiooniliikmete individuaalsete omaduste ja organisatsiooni sisekeskkonna eripärade arvesse võtmine võib parema soorituse saavutamisele kaasa aidata.

Soovitusi tulevasteks uuringuteks

Käesolevas doktoritöös analüüsiti individuaalsete ja organisatsiooniliste tegurite seoseid õpisooritusega eesti õppekeelega koolide näitel. Järgnevates uurimustes võiks valimisse kaasata ka vene õppekeelega koole, et teada saada, kuid võrd rahvuskultuurilised eripärad mõjutavad nimetatud seoseid. Lisaks sellele võiks uurimusi läbi viia teiste riikide koolides, et teada saada, kuid võrd leitud seosed kehtivad väljaspool Eestit. Samuti saab õpisoorituse asemel rakendada teisi kooli soorituse kriteeriume. Käesolevas doktoritöös kaasati uurimusse ainult koolitöötajad (koolijuhid, õpetajad ja toetav personal), edaspidistes uurimustes võiks küsitleda ka õpilasi, lapsevanemaid, haridusametnikke jne. Samaladseid uurimusi võiks läbi viia ka teist tüüpi organisatsioonides. See annaks väärtuslikku informatsiooni, kuidas individuaalsed ja organisatsioonilised tegurid mõjutavad kultuuri, kunsti, kõrghariduse, terviseteenuste, erinevate kasumit taotlevate jt organisatsioonide sooritust. Käesolevas doktoritöös saadud tulemuste edasiarendamiseks võiks kasutada ka täiendavaid uurimismeetodeid, näiteks korraldada intervjuusid või teha juhtumianalüüse.

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2009 Artikli käsikirja retsenseerimine ajakirja “Education Management Administration and Leadership” jaoks
2009 IV rahvusvahelise konverentsi “Management Theory and Practice: Synergy in Organisations” (toimus 3.–4. aprillil 2009 Tartus) artikli retsensent
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- 2007 III rahvusvahelise konverentsi “Management Theory and Practice: Synergy in Organisations” (toimus 3.–4. aprillil 2007 Tartus) korralduskomitee liige, konverentsikogumiku toimetaja ja retsensent.
- 2006 Artiklitekogumiku “National and International Aspects of Organizational Culture” retsensent
- 2004 II rahvusvahelise konverentsi “Juhtimisteooria ja -praktika sünergia organisatsioonides” (toimus 26.–28. mail 2004 Tartus) korralduskomitee liige, konverentsikogumiku toimetaja ja retsensent
- 2004 Rahvusvahelise konverentsi “Töö- ja koostöökultuur koolis” (toimus 27. oktoobril 2004 Pärnus) korralduskomitee liige, konverentsikogumiku toimetaja, retsensent ja sektsioonijuht.
- 2003 Artiklitekogumiku “Organisational Culture in Estonia: Manifestations and Consequences” retsensent
- 2003–2006 Uurimisprojekti „Organisatsioonikultuur Eestis: rahvuslikud ja rahvusvahelised aspektid” liige Eesti Teadusfondi granti 5527 raames, granti aruannete koostaja
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DISSERTATIONES RERUM OECONOMICARUM UNIVERSITATIS TARTUENSIS

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